# Upgrading the MG 9000

This document contains upgrade and downgrade information and procedures for the MG 9000 cards and the MG 9000 Manager.

## When to use this document

Use this document when it is necessary to upgrade the MG 9000 Manager and the MG 9000. Separate upgrade procedures are provided in this document that fit different upgrade scenarios as noted below:

- upgrading the MG 9000 Manager and MG 9000 from SN06.2 or SN06 to SN07. Throughout this document, substitute SN06 or SN06.2 for SN06.x as appropriate depending on the release from which you are upgrading.
- downgrading the software in the MG 9000 Manager and MG 9000
- upgrading the MG 9000 Manger software to a maintenance release
- upgrading the MG 9000 cards individually
- upgrading the MG 9000 cards by card type
- upgrading all the MG 9000 cards

When upgrading the MG 9000 Manager and MG 9000 from SN06.x to SN07, the following list provides an overview of upgrade activities which occur in the following order:

- upgrade the MG 9000 Manager master server and mid-tier software
- upgrade the OM Collector
- install the GUI client application
- provision userids
- export SN06.2 data to XML file
- upgrade MTA and xDSL cards
- upgrade software in MG 9000 cards
- import SN06.2 data from XML file
- remove SN06.2 software packages

Before proceeding to the upgrade checklist and any upgrade procedures, ensure all the information in this section is read and understood. The order for upgrading the MG 9000 and the MG 9000 Manager is presented in the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) on page 13 or MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) on page 26. This checklist provides the required order and refers to specific procedures in this document and other documents while also providing simple steps for activities that must be performed at that time.

***Note:*** The above referenced checklist provides a high level procedure that provides the steps required for the upgrade of both the MG 9000 Manager and the MG 9000 from SN06.x to SN07. Specific upgrade procedures are provided for the MG 9000 Manager and the MG 9000 later in this document.

## Upgrade strategy

The following provides a high-level strategy for software upgrades of the MG 9000 Manager and the MG 9000 to SN07 which are accomplished in the following order in relation to other components in the solution:

1. The Communication Server 2000 (CS2000) Management Tools must be upgraded to SN07 to ensure node and line provisioning applications are updated. Refer to *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.
2. The Succession Server Platform Foundation Software (SSPFS) must be upgraded to SN07. Refer to “Upgrading SSPFS Software” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. This includes the SSPFS on the MG 9000 Manager master and mid-tier servers.

   ***Note:*** After the SSPFS platform software is upgraded to SN07 and the MG 9000 Manager restarts in SN06.x (step 1), and CS2000 Management Tools have been upgraded to SN07, the MG 9000 Manager server and mid-tier software can be upgraded (step 3).

3. The MG 9000 Manager software must be upgraded in the following order: server, mid-tier.
4. All the MG 9000 intelligent cards are upgraded to SN07 from an image received on CD using the Software Upgrade tool accessible from the Frame View.

5. The newly updated MG 9000 network element must be added to SN07.
6. Delete the MG 9000 network element being updated from SN06.x in the SN06.x Subnet View.
7. Once the MG 9000 is in the SN07 Subnet View, and the network element is deleted from the SN06.x Subnet View, any new hardware can be added into the system.
8. Remove old SN06.x packages.

## Service impacts

The following are the service impacts to consider when proceeding with the upgrade:

- Warnings for all components and services impacted during upgrade
  - — No data provisioning should be performed during upgrades.
  - — PM collection cannot be performed during the time between stopping the mid-tier server and starting the OM Collector. During the time when the DCC cards have been upgraded to SN07 but the NE still resides in the SN06.x Subnet View, the SN06.x OM Collector will not collect any OMs because of security features added in the MG 9000 card software.
  - — During the time when the DCC cards have been upgraded to SN07 but the NE still resides in the SN06.x Subnet View, the node is not being managed. Alarms are going to the SN06.x MG 9000 Manager but any alarms specific to SN07 MG 9000 card loads are being dropped. Once the NE is moved to SN07, all alarms even those dropped, will be shown in SN07.
  - — Call processing should not be impacted during the MG 9000 Manager upgrade.
  - — During the time when the DCC cards have been upgraded to SN07 but the NE still resides in the SN06.x Subnet View, ESA data download should not be performed. ESA data download cannot work because of a security functionality added in the SN07 MG 9000 card load. The SN06.x MG 9000 Manager does

not have this security functionality. Once the MG 9000 is imported into SN07, ESA downloads can be performed.

— During a downgrade, the GWC cannot be downgraded until all MG 9000s that subtend it are downgraded.

— OC3 carriers must not be in split-mode, refer to procedure "Recovery from APS Split-mode" in *MG 9000 Fault Management*, NN10074-911.

— Prior to downgrading to SN06.x, the hardware versions should be checked to ensure that the PEC codes are not for the new SN07 hardware. If the new hardware is not removed, the SN06.x loads will be FTP'd to the boards but they will not run. Also, if the OC3 ports have been channelized, they must be manually provisioned to OC-3 concatenated prior to downgrading. Refer to the following table to identify the PEC codes for SN07 cards.

**SN07 upgrade PEC codes**

| Card type | Pre-SN07 PEC codes | SN07 new hardware PEC codes |
|---|---|---|
| ITP | NTNY30AA or NTNY30BA (IP) | NTNY30BA or NTNY30CB |
| ITX | NTNY41AA | NTNY41BA |
| DS-512 ABI | NTNY43AA | NTNY43BA or NTNY43BB |
| DCC-OC3 (SCO) | NTNY45AA | NTNY45CA |
| Hybrid DCC-OC3 (OC3) | NTNY45AA | |
| DCC-DS1IMA (SCI hybrid) | NTNY45BA | NTNY45BA |

- Recommendations for limiting service impact: none

## Upgrade and downgrade time factors

When preparing for an upgrade from SN06.x to SN07, time is a consideration. The factors affecting the upgrade and the amount of time involved are provided in the following table. In addition, formulae for computing upgrade and downgrade times for the MG 9000 Manager are provided in the table.

Upgrade procedure information:

- datafill changes required during upgrade: none required
- recommended soak time: 24 hours
- total upgrade time, high level estimates (worst case):

  ***Note:*** The following estimates are based on MG 9000s with 55,000 lines maximum.

  — upgrade - 182 minutes, 16 NEs

  — downgrade - 160 minutes, 16 NEs

  Use the information in the following table to compute the upgrade and downgrade activities.

**Computing upgrade and downgrade times**

| Activity | Variables | Formula | Value (in minutes) |
|---|---|---|---|
| **Upgrade** | | | |
| | MG 9000 Manager upgrade time = | | |
| | (n x X) + ED + ER + EA + EeP + (n x I) + (n x P) | | |
| | where: | | |
| | n | is the number of network elements (assumes worst case of an 8 shelf NE) | |
| | X | is the time to export an 8 shelf NE | 1:20 |
| | I | is the time to import a single 8 shelf NE | 6:30 |
| | ED | is the time to take the MG 9000 Manager down | 1:21 |
| | ER | is the time to perform the SUN package remove | 1:00 |
| | EA | is the time to perform the SUN package add | 4:00 |
| | EeP | is the time to edit the Subnet Persistence file | 1:00 |
| | ES | is the time to start the MG 9000 Manager | 1:21 |
| | P | is the time to persist a single 8 shelf NE | 3:00 |

**Computing upgrade and downgrade times**

| Activity | Variables | Formula | Value (in minutes) |
|---|---|---|---|
| | SC | is the static components = sum of ED = ER + EA + EeP + ES | 8:42 |
| | Example computation:<br>MG 9000 Manager upgrade time for 16k line network (all 8 shelves) =<br>(4 x 1:20) + SC + (4 x 6:30) + (4 x 3:00) =<br>(5:20) + (8.42) + (26) + (12:00) = 52 minutes | | |
| **Downgrade** | | | |
| | MG 9000 Manager downgrade time =<br>ED + ER + EA + EeP + ES + (n x I) + (n x P)<br>***Note:*** If an export is performed for one or more NEs between the MG 9000 Manager upgrade and the abort, no data will be available from the MG 9000 Manager for the downgraded NEs. | | |

## Tools and utilities

The MG 9000 and the MG 9000 Manager software support software upgrades and downgrades. Procedures in this document support these activities. The MG 9000 and MG 9000 Manager support patching through the network patch manager (NPM). Procedures for patching the MG 9000 and the MG 9000 Manager are provided in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

The MG 9000 Manager provides a tool to upgrade the software in the intelligent DCC, ITX, ITP, DS-512 (ABI), and DS1 cards. A single card or multiple cards can be upgraded using this tool.

In addition, the software in the xDSL and MTA cards can be downloaded into the cards using the Software Download tool available from the xDSL and MTA Card Views in the MG 9000 Manager. Procedures for downloading software into the xDSL and MTA cards are provided in this document.

## MG 9000 Manager client system requirements

Recommended minimum configurations for the MG 9000 Manager client are provided in the following table.

### MG 9000 Manager client minimum configurations

| Client platform | Configuration |
|---|---|
| Windows client | • Windows NT 4.0 (SP5 or later), Windows 2000 (SP2 or later), or Windows XP<br>• Pentium III 1 GHz or higher<br>• display resolution of 1280 x 1024 with 256 colors<br>• 256 MB RAM<br>• 200 MB hard drive space<br>• 10BaseT/100BaseT Ethernet network connection<br>• Java Web Start (JWS) 1.2.0_02 and higher<br><br>If the Windows PC supports more Succession client applications than just the MG 9000 Manager client application, the following minimum configuration is required:<br>• Windows 2000 (SP2 or later), or Windows XP<br>• Pentium III 2.5 GHz or higher<br>• display resolution of 1280 x 1024 with 256 colors<br>• 1 Ghz RAM<br>• 30 Gb hard drive space<br>• 10BaseT/100BaseT Ethernet network connection<br>• Java Runtime Environment (JRE) 1.4.1_02 and higher<br>• Java Web Start (JWS) 1.4.2_05 and higher |
| Solaris client | • Solaris 7 or Solaris 8 with Sun recommended patches for Java Runtime Environment (JRE) 1.4.1_02<br>• Ultra 5 400 MHz or higher<br>• display resolution of 1280 x 1024 with 256 colors<br>• 256 MB RAM<br>• 200 MB hard drive space<br>• 10BaseT/100BaseT Ethernet network connection |

**MG 9000 Manager client minimum configurations**

| Client platform | Configuration |
|---|---|
| Windows or Solaris client | Third party software<br>• Netscape 6.0 and higher or Internet Explorer 5.5, 6.0 and higher<br>• Java Web Start (JWS) 1.2.0_02 and higher |

***Note:*** Access to some functions requires the use of SSH compatible client software for access to secure telnet and ftp services (using SSH standard). SSH clients are supplied bundled with some operating systems, but may need to be obtained separately. Sources for SSH clients include, but are not limited to the following:

- PUTTY - freeware
- OpenSSH - freeware
- SSH Inc. - commercial
- Secure CRT - commercial
- WinSCP - freeware

Nortel Networks does not supply or recommend a particular supplier.

## Pre-upgrade requirements

Ensure the CS 2000 Manager has been upgraded to SN07 before upgrading any MG 9000s to SN07.

The MG 9000 Manager must be upgraded to SN07 first. This means the MG 9000 Manager is capable of managing an MG 9000 operating at SN07. However, this does not mean an MG 9000 at the SN06.x release is managed by an MG 9000 Manager at SN07. The MG 9000 is upgraded to SN07 and the network element (NE) representing the MG 9000 is moved from the SN06.x subnet to the SN07 subnet. An SN07 subnet/MG 9000 Manager cannot manage an MG 9000 at SN06.x.

***Note:*** All alarms on the MG 9000 Manager and MG 9000 network element must be cleared prior to proceeding with the SN06.x to SN07 upgrade process.

Do not provision any new data to the NEs during upgrade activities.

### Entry criteria

The following are the criteria for entering the SN06.x to SN07 upgrade process:

- host names and IP addresses required for:
  - the MG 9000 Manager mid-tier server
  - the MG 9000 Manager server
  - the CS 2000 Manager (Oracle database), required
  - the Security Authentication Host, typically the mid-tier IP address
  - the Imaging FTP Server Host, typically the SDM
- user id and password for the Imaging FTP Server Host, must have overwrite privileges
- hardware and software baseline:
  - MG 9000 card loads must be at SN06.x with all patches applied
  - MG 9000 Manager software must be at SN06.x with all patches applied and enabled
- tools required: database browser (optional)
- upgrade interdependency:
  - SSPFS on MG 9000 Manager master and mid-tier servers must be upgraded to SN07. SSPFS upgrades are covered in *ATM*

*Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

— CS 2000 Management Tools must be upgraded to SN07 prior to upgrading the MG 9000 Manager to SN07.

— MG 9000 card upgrades are addressed in Upgrading software in MG 9000 cards on page 97

— ensure MG 9000 PSEs are configured correctly before the upgrade starts. This requires the following steps:

***Note:*** If this is an N240 server, configure PSE on the workstation. If this is a t1400 server, configure PSE on the master and mid-tier servers.

– telnet to the specific machine to be upgraded by typing

```
> telnet <server ip address>
```

– change to the root directory by typing

```
$ su - root
```

– Access the command line interface by typing

```
> cli
```

– To select Configurations, type

```
> 2
```

– To select Succession Element Configuration, type

```
> 14
```

– To select PSE Configurations, type

```
> 1
```

– To select View PSE Configuration, type

```
> 1
```

– Ensure the PSE application is pointing to the CS 2000 Management Tools machine where NPM is running. If it is not configured correctly, reconfigure the PSE to point to the CS 2000 Management Tools machine where the NPM is running. Refer to “Upgrading the SSPFS Software” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

• datafill changes required prior to upgrade: All NEs which are being upgraded to SN07 may have their SN06.x data exported prior to upgrading. This is optional. However, no provisioning including OSSGate should occur between the point where the SN06.x data is exported and the node is imported in SN07. If data provisioning does occur, the SN06.x data can be exported again and this will

overwrite the old SN06.x data. Refer to step 9 in the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) on page 13 or step 14 in MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) on page 26.

- if this is an SN06x to SN07 Sun Netra cluster (two-server) upgrade, run a getpatch to retrieve all SN07 patches before the upgrade starts. Refer to "Transferring patches to the NPM database manually" in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

**Exit criteria**

The following are the criteria for exiting from the SN06.x to SN07 upgrade process:

- The upgrade was successful
  - — after the MG 9000 Manager mid-tier server and server applications are running in SN07
  - — after the NE is successfully discovered in SN07
- Recommended testing
  - — Make sure alarms are received (temporarily set a cooling unit breaker on the IBIP to off).
  - — Select a VMG from the Switched Line Services View. Select a termination and make sure that the termination properties show correctly.
  - — Select a Private lines service, if provisioned, and get the properties for it. Make sure the Svc OperStatus from the Service Properties View is connected for full and active endpoint services
- Log reports or operational measurements (OM): check the customer logs for audit messages indicate clean up failures.
- Equipment state verification: access the Oracle database and verify the same number of terminations exists (optional).

### Applying software fixes

When it is necessary to apply software fixes, the following methods are available:

- Maintenance Release upgrade process: refer to the procedure Upgrading the MG 9000 Manager software to a maintenance release on page 76
- Patching
  - SN07 patching of the MG 9000 Manager is handled as noted in Patching MG 9000 Manager software on page 87

# MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklists

## SN06.x to SN07 t1400/N240 one-server (simplex) upgrade checklist

Use the following table as a checklist for upgrading the MG 9000 Manager and MG 9000 from SN06.x to SN07 in a t1400/N240 single-server (simplex) configuration. Enter a check mark (√) in the √ column as each step or procedure is completed.

**MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **1** | Upgrade the MG 9000 Manager to SN07. | 1. The following steps are part of the procedure Upgrading MG 9000 Manager software from SN06.x to SN07 on page 41. Refer to that procedure and those referenced in the following steps to complete the MG 9000 Manager upgrade.<br>a. Configure the MG 9000 Manager master server by performing procedure Configuring the MG 9000 Manager master server software on page 57.<br>b. Configure the MG 9000 Manager mid-tier server by performing procedure Configuring the MG 9000 Manager mid-tier server software on page 62.<br>c. Install the MG 9000 Manager client software<br>• For Windows PC client installation, refer to Installing the MG 9000 Manager Windows PC client software on page 64<br>• For Sun workstation client installation, refer to Installing the MG 9000 Sun client software on page 66<br>d. Provision any new users, if required. Refer to *MG 9000 Security and Administration*, NN10162-611.<br><br>***Note:*** Previous SN06.x users are maintained through the upgrade. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| 1 | Upgrade the MG 9000 Manager to SN07. (continued) | e. Start the SN06.x MG 9000 Manager client. Refer to *MG 9000 MG 9000 Security and Administration*, NN10162-611.<br>f. Start the SN07 MG 9000 Manager client. Refer to *MG 9000 MG 9000 Security and Administration*, NN10162-611<br><br>***Note 1:*** During the upgrade process, when the user clicks on the SN07 link in the Application Launch Point, the SN07 application launches. At that point, the user must login. This allows the user into the SN07 application. However, when the SN06.x link is selected, a second and different login box appears, meaning the user must log in again to access the SN06.x application. This only occurs during this upgrade session.<br><br>***Note 2:*** SN06.x and SN07 can run simultaneously. | |
| | ***Note 1:*** This is a safe stopping point<br>***Note 2:*** Before proceeding, ensure the GWC has been upgraded by referring to the “Overall upgrade procedure” in *Upgrading the GWC*, NN10196-461. | | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **For each network element in SN06.x** | | | |
| **2** | Ensure all MG 9000 Patch Image (9PI) load files have been copied to the CS2000 Core Manager (SDM) to support upgrade / downgrade activity from DAT tape or CD-ROM. | Refer to "*Upgrading the CS S2000 Core Manager*, NN10060-461."<br>Refer to Installing MG 9000 loads into the CS 2000 Core Manager from DAT tape on page 90 or Installing MG 9000 loads into the CS 2000 Management Tools Manager from CDROM on page 92. | |
| **3** | Provisioning a floating IP address. | Refer to Provisioning a floating IP address on page 94. | |
| **4** | Upgrade the MTA card, if equipped. | Perform the procedure Downloading software into the MTA card on page 141. | |
| **5** | Upgrade the xDSL cards, if equipped | Perform the procedure Downloading software into the xDSL card on page 143. | |
| **6** | Determine if the sync reference/ timing signal source is correct. This must be correct to prevent alarms on the DCC and ITP cards when the upgrade is complete. | If the BITS cable was connected to the DCC card BITS connector during the hardware installation, using the Local Craft Interface (LCI) access the master shelf in the network element being upgraded, and select the active ITP card. From the menu, select Clock Sync->Provisioning. Ensure the MG 9000 is synched to the correct timing source, BITS or network:<br>• ITXBITS - if syncing to the ITX card<br>• DCCBITS - if syncing to the DCC cards and the cable is connected to the DCC card BITS connector<br>• Network - if syncing to the upstream network connection<br>Refer to *MG 9000 Configuration Management*, NN10096-511. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **7** | Perform a card upgrade in the SN06.x subnet on the following cards on the NE: all DS1s, ABIs, ITPs, ITXs, and DCCs. | Perform the procedure Upgrading the MG 9000 from SN06.x to SN07 on page 135. | |
| **8** | Determine if the DCC cards software version is at 7. | From the Frame view, click on Actions->Software Upgrades in the menu bar. From the Software Upgrades view, click on Version List. Check the version of the DCC cards or click on the frame, shelf, card to view each DCC and make sure the software version indicates 7. Both DCC cards must be at the SN07 software version.<br><br>***Note 1:*** Upgrade should not progress until both DCC card versions are SN07.<br><br>***Note 2:*** Once the MG 9000 has been upgraded to SN07, no further provisioning should occur. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **9** | Export data to XML file.<br><br>Wait for the Export To XML File window to indicate that the export is complete. | In the SN06.x Subnet View, select the MG9000 menu and click on Export NE. From the ExportNE Contents to XML File window, select an NE and click on Export. Refer to Performing an Export NE on page 71.<br><br>Look for: Completed XML Export of NE: <ne number><br><br>***Note 1:*** After the exports are complete, tar the entire persistdata directory, located on the MG 9000 master server, and place the exported data onto another machine for vaulting purposes. The following files and directories may be present in the persistdata directory:<br>• LoadFilesPersistData.dat<br>• xml<br>• ESA_SYSTEM_SD_V1.0.DTD<br><br>***Note:*** ESA_SYSTEM_SD_V1.0.DTD is generated only for SN06.2 MG 9000 Manager data, not for the SN06 MG 9000 Manager data.<br><br>• SubnetPersistData06_2.dat<br><br>Use the following information to tar the persistdata files and directories<br><br>tar cvf <filename>.tar /data/mg9kem/persistdata<br><br>It is recommended that the filename use the following format:<br><br><date.hostname_filename>.tar<br><br>for example,<br><br>OCT23.rtpd_persistdatabackup.tar<br><br>***Note 2:*** Keep a backup copy of the SN06.x XML file in case a downgrade is required. | |
| | ***Note:*** This is a safe stopping point. | | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **10** | Remove the NE from the SN06.x OMC collection list. | Once the DCC cards are at SN07, no OMs can be collected until the NE is imported to the SN07 Subnet View.<br>1. To remove the NE from the SN06.X OMC collection list perform the following steps at the MG 9000 Manager mid-tier workstation:<br>a. To configure the OM collector, type<br>**# /opt/nortel/omcltr_06_2/bin/OMCollector config**<br>The system responds<br>`Starting OM Configuration Tool ...`<br>`**********`<br>`**********`<br>`*  Welcome to the Nortel Networks *`<br>`*`<br>`*  OM Collection Configuration Tool *`<br>`**********`<br>`**********`<br>`Please pick one of the following options:`<br>`[C]reate a new device collection list`<br>`[A]dd device(s) to the collection list`<br>`[R]emove device(s) from the collection list`<br>`[D]isplay the existing collection list`<br>`[S]how this menu again`<br>`[P]assword configuration`<br>`[H]elp menu`<br>`e[X]it`<br>`Enter your selection:`<br>b. To display the NEs the OM Collector is supporting, type<br>**> D**<br>Identify the NE to be removed from the collection list. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **10** | Remove the NE from the SN06.x OMC collection list. (Contd) | c. To remove the NE from the OM Collector, type **> R**<br>The system responds with:<br>`Enter IP address (X.X.X.X) or <ENTER> to end:`<br>d. Type the IP address of the NE to remove.<br>The system responds with:<br>`Enter IP address (X.X.X.X) or <ENTER> to end:`<br>***Note:*** Each NE should be removed as it is upgraded.<br>e. Press <ENTER> to end.<br>The system responds with:<br>`Deletion of device(s) is complete.`<br>`Please pick one of the following options:`<br>`[C]reate a new device collection list`<br>`[A]dd device(s) to the collection list`<br>`[R]emove device(s) from the collection list`<br>`[D]isplay the existing collection list`<br>`[S]how this menu again`<br>`[P]assword configuration`<br>`[H]elp menu`<br>`e[X]it`<br>`Enter your selection:`<br>f. To exit the tool, type X.<br>The system responds with:<br>`**********`<br>`*** OM Collection Configuration Tool is closing... ***`<br>`**********` | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **11** | Create patched images of all MG 9000 loads | 1. After the MG 9000 cards have been upgraded to SN07 and all other MG 9000 Manager workstations have been upgraded to SN07, perform the following procedure to image the network element (NE) cards for use in upgrading the cards in other NEs.<br><br>***Note 1:*** Perform the following steps after the following conditions are met:<br>• the NPM is at SN07<br>• the suite of MG 9000 Manager servers are running SSPFS07, with both SN06.x and SN07 MG 9000 Managers are resident<br>• the old SN06.x MG 9000 Manager is not in control of the MG 9000 devices which are running SN07<br><br>***Note 2:*** The following steps will create patched images of all MG 9000 loads. This will be accomplished by upgrading, patching, and then imaging two MG 9000s (one DCC-OC3 MG 9000 and one DCC-DS1-IMA MG 9000). Ensure the NEs selected include all MG 9000 intelligent card types in the office.<br><br>First the user will upgrade all the intelligent cards on a DCC-OC3 MG 9000 using the latest available PI loads. After the upgrade, the user will patch all intelligent cards on the DCC-OC3 MG 9000 with any available patches that were not included on the PI load tape. After patching is complete, the user will take an image of the DCC-OC3 MG 9000 using the NPM.<br><br>Next, the user will upgrade a DCC-IMA MG 9000 using the PI loads just created. After the upgrade, the user will apply any available patches for any remaining intelligent card types (including the DCC-DS1-IMA) that were not patched during the DCC-OC3 MG 9000 upgrade. After patching is complete, the user will take an image of the DCC-DS1-IMA MG 9000 using the NPM.<br><br>a. Use the following to determine the next step.<br>• if there were additional patches added to the pre-patched image loadfile, go to step c<br>• if there were no additional patches added to the pre-patched image loadfile, go to step b | |

**MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **11** | Create patched images of all MG 9000 loads (contd) | b. Apply remaining SN07 patches to all cards on this NE with DCC OC3 cards.<br>c. Import this NE with DCC OC3 cards to the SN07 MG 9000 Manager.<br><br>***Note:*** Make sure an audit is not in progress and is not scheduled for this NE.<br><br>Go to the SN07 Subnet View and click on the MG9000 menu and click on Import NE.<br>From the Import From XML File window, select the SN06.x import path<br><br>**/data/mg9kem/persistdata/xml/SN06/<ne_number>** for SN06,<br><br>or<br><br>**/data/mg9kem/persistdata/xml/SN06_2/<ne_number>** for SN06_2<br><br>which is to be upgraded.<br><br>Select Import. This will import and convert all the SN06.2 data which was previously exported. The NE icon will be created and a discovery/recovery process is started.<br>Refer to Performing an Import NE on page 69.<br>d. Take an image of the inactive cards on this NE with DCC-OC3. Refer to the “Performing a device image using the NPM” in *ATM Solutions Upgrade*, NN10261-450 or *IP Solutions Upgrade*, NN10344-450 for steps on performing a device image. Select SmartImage->MG9KDEVICES.<br>e. Upgrade one NE with DCC-DS1-IMA cards with the SN07 MG 9000 patched images just created in the previous step. Load all cards on this NE with the supplied image. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **11** | Create patched images of all MG 9000 loads (contd) | f. Import this NE with DCC DS1-IMA cards to the SN07 MG 9000 Manager.<br><br>***Note:*** Make sure an audit is not in progress and is not scheduled for this NE. Observe the Audit Tasks tab in the Frame View.<br><br>Go to the SN07 Subnet View and click on the MG9000 menu and click on Import NE.<br><br>From the Import From XML File window, select the SN06.x import path<br><br>**/data/mg9kem/persistdata/xml/SN06/<ne_number>** for SN06,<br><br>or<br><br>**/data/mg9kem/persistdata/xml/SN06_2/<ne_number>** for SN06_2<br><br>which is to be upgraded.<br><br>Select Import. This will import and convert all the SN06.2 data which was previously exported. The NE icon will be created and a discovery/recovery process is started.<br><br>Refer to Performing an Import NE on page 69.<br><br>g. Apply the remaining patches to all cards on this NE with DCC DS1-IMA cards.<br><br>h. Take an image of the inactive cards on this NE with DCC DS1-IMA cards that were not imaged in step d above. Refer to the “Performing a device image using the NPM” in *ATM Solutions Upgrade*, NN10261-450 or *IP Solutions Upgrade*, NN10344-450 for steps on performing a device image. Select SmartImage->MG9KDEVICES.<br><br>i. Use the images created in the previous steps to upgrade all the of the cards on all the remaining NEs to be upgraded to SN07 | |

**MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **12** | Enable OM collection for NEs in SN07 | If this is the first NE to be upgraded, configure the OMCollector using the "Configuring OM Collector software" in *MG 9000 Performance Management*, NN10140-711.<br><br>As each NE is upgraded, OM Collection for that NE must be enabled by clicking the OMCollection checkbox in the MG 9000 Provisioning View which is accessed from Configuration->View/Modify NE Properties from the menu bar of the Subnet View for OM Collection to be enabled for an NE. For more information refer to *MG 9000 Performance Management*, NN10140-711. | |
| **13** | Delete the NE which was just upgraded. | Go to the SN06.x Subnet View. Select the NE to be deleted and from the menu bar, select Configuration->Delete NE. Click on Apply, OK as needed and exit.<br><br>Refer to the "Deleting an MG 9000 network element" procedure in *MG 9000 Configuration Management*, NN10096-511. | |
| **14** | Configure Enhanced ESA, if applicable (only applies to North America) | Go to the Switched Lines Services GUI and change the VMGs to support Enhanced ESA.<br><br>Refer to the "Provisioning ESA" procedure in *MG 9000 Configuration Management*, NN10096-511. | |
| | ***Note:*** This is a safe stopping point. | | |

After all NEs are at SN07 and there is no need to downgrade to SN06.x proceed to the next step:

***Note:*** If it is necessary to downgrade the MG 9000 and MG 9000 Manager, perform the Downgrading the MG 9000 Manager from SN07 to SN06.x on page 73 procedure, otherwise proceed to the next step.

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **15** | Run the pkgrm script on each server (master server and mid-tier server) to stop the SN06.x server application and uninstall the server application. The OM Collector software is located on the mid-tier server.<br><br>***Note:*** Once the packages have been removed, it will not be possible to downgrade without re-importing a saved data image and a resulting loss of service. | 1.<br>Perform the following steps:<br>a. Login as root.<br>b. To stop the SN06.x mid-tier server, type<br>for SN06<br>**> /opt/nortel/mg9kmtr_06/bin/mg9kmidtier stop**<br>for SN06.2<br>**> servstop MG9KMIDTIER_06_2**<br>c. To stop the SN06.x master server, type<br>for SN06<br>**> /opt/nortel/mg9ksrv_06/bin/mg9kserver stop**<br>for SN06.2<br>**> servstop MG9KSERVER_06_2**<br>d. To stop the SN06.x OM collector, which is located on the mid-tier server, type<br>for SN06<br>**> /opt/nortel/OMCollector/bin/OMCollector stop**<br>for SN06.2<br>**> servstop MG9KOMC_06_2**<br>e. To remove the master server SN06.x software, type<br>for SN06<br>**> pkgrm NTmg9ks06**<br>for SN06.2<br>**> pkgrm NTmg9ks62**<br>To continue, respond to the two prompts with Y. | |

## MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **15** | Run the pkgrm script on each server (continued) | f. To remove the mid-tier server SN06 software, type<br>for SN06<br>**> pkgrm NTmg9km06**<br>for SN06.2<br>**> pkgrm NTmg9km62**<br>To continue, respond to the prompt with Y.<br>g. To remove the OM collector SN06.2 software from the mid-tier server, type<br>for SN06<br>**> pkgrm NTomcltr**<br>for SN06.2<br>**> pkgrm NTomclt62**<br>To continue, respond to the two prompts with Y. | |
| | ***Note:*** After step 15 is performed, the MG 9000s cannot be downgraded to SN06 without service data loss. | | |
| | ***Note:*** Proceed to the next step only after the one night process (ONP) is complete. | | |
| **16** | After each node is upgraded to SN07, FTP the ESA data to database. | To ensure ESA data is correct, FTP the ESA data to the database. Refer to “Downloading ESA data from the Core” in *MG 9000 Configuration Management, NN10096-511*. | |
| **17** | Clean up old data in the NPM database. | Perform the procedure “Cleaning up old data in the NPM database” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| **18** | This procedure is complete. | | |

## SN06.2 to SN07 N240 two-server (cluster) upgrade checklist

Use the following table as a checklist for upgrading the MG 9000 Manager and MG 9000 from SN06.2 to SN07in a two-server (cluster) configuration. Enter a check mark (√) in the √ column as each step or procedure is completed.

**MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **On the Inactive node** | | | |
| | ***Note:*** Ensure getpatch has been run on all SN07 patches that are applicable for the new SN07 applications prior to proceeding with the upgrade to SN07<br>Refer to "Transferring patches to the NPM database manually" in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | | |
| **1** | Upgrade the Succession Server Platform Foundation Software (SSPFS). | Perform procedure Upgrading SSPFS software in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| **2** | Install any SSPFS MNCLs.<br><br>***Note:*** Only perform this step if you received a notification bulletin that an SSPFS MNCL is available for the release you just upgraded. | Refer to the instructions provided with the MNCLs. | |

**MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **3** | Upgrade the MG 9000 Manager to SN07. | 1. Perform the following steps to complete the MG 9000 Manager upgrade.<br>a. Telnet to the specific machine to be upgraded by typing<br>**`> telnet <server ip address>`**<br>b. Login as root<br>c. To verify you are on the inactive node, type<br>**`> bash`**<br>d. To verify all applications have stopped, type<br>**`> servquery -status all`**<br>e. To verify if the node in the cluster is active or standby unit, type<br>**`> ubmstat`**<br>f. To verify the unit is in standby and is in a normal state<br>**`> udstat`**<br>g. Perform procedure Upgrading MG 9000 Manager software from SN06.x to SN07 on page 41.<br>h. Configure the MG 9000 Manager master software by performing procedure Configuring the MG 9000 Manager master server software on page 57.<br>i. Configure the MG 9000 Manager mid-tier software by performing procedure Configuring the MG 9000 Manager mid-tier server software on page 62.<br>j. Configure the network elements with the OM collector. Refer to the “Installing OM Collector software” in *MG 9000 Performance Management*, NN10140-711.<br>k. Provision any new users, if required. Refer to *MG 9000 MG 9000 Security and Administration*, NN10162-611.<br><br>***Note:*** Previous SN06.2 users are maintained through the upgrade. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **On the Active node** | | | |
| **4** | Stop the cluster. | Perform procedure “Stopping a cluster in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| **On the newly Active node with SN07 software** | | | |
| **5** | Verify the node is the active unit and the health of the unit | To verify the node is the active unit by typing<br>**> ubmstat**<br>To check the health of the unit, type<br>**> servquery -status all** | |
| **6** | Launch client software from active node | 1. Install the MG 9000 Manager client software<br>• For Windows PC client installation, refer to Installing the MG 9000 Manager Windows PC client software on page 64<br>• For Sun workstation client installation, refer to Installing the MG 9000 Sun client software on page 66<br>2. Start the SN06.2 MG 9000 Manager client. Refer to *MG 9000 Security and Administration*, NN10162-611.<br>3. Start the SN07 MG 9000 Manager client. Refer to *MG 9000 Security and Administration*, NN10162-611.<br>***Note 1:*** During the upgrade process, when the user clicks on the SN07 link in the Application Launch Point, the SN07 application launches. At that point, the user must login. This allows the user into the SN07 application. However, when the SN06.2 link is selected, a second and different login box appears, meaning the user must log in again to access the SN06.2 application. This only occurs during this upgrade session.<br>***Note 2:*** SN06.2 and SN07 can run simultaneously. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **7** | Clone the image of the upgraded node onto the other node | Perform procedure "Cloning the image of one node in a cluster to the other node" in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| | ***Note 1:*** This is a safe stopping point<br>***Note 2:*** Before proceeding, ensure the GWC has been upgraded by referring to the "Overall upgrade procedure" in *Upgrading the GWC*, NN10196-461. | | |
| **For each network element in SN06.2** | | | |
| **8** | Ensure all MG 9000 Patch Image (9PI) load files have been copied to the CS2000 Core Manager (SDM) to support upgrade / downgrade activity from DAT tape or CD-ROM. | Refer to "*Upgrading the CS S2000 Core Manager*, NN10060-461."<br>Refer to Installing MG 9000 loads into the CS 2000 Core Manager from DAT tape on page 90 or Installing MG 9000 loads into the CS 2000 Management Tools Manager from CDROM on page 92. | |
| **9** | Provisioning a floating IP address. | Refer to Provisioning a floating IP address on page 94. | |
| **10** | Upgrade the MTA card, if equipped. | Perform the procedure Downloading software into the MTA card on page 141. | |
| **11** | Upgrade the xDSL cards, if equipped | Perform the procedure Downloading software into the xDSL card on page 143. | |
| **12** | Perform a card upgrade in the SN06.2 subnet on the following cards on the NE: all DS1s, ABIs, ITPs, ITXs, and DCCs. | Perform the procedure Upgrading the MG 9000 from SN06.x to SN07 on page 135. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **13** | Determine if the DCC cards software version is at 7. | From the Frame view, click on Actions->Software Upgrades in the menu bar. From the Software Upgrades view, click on Version List. Check the version of the DCC cards or click on the frame, shelf, card to view each DCC and make sure the software version indicates 7. Both DCC cards must be at the SN07 software version.<br><br>***Note 1:*** Upgrade should not progress until both DCC card versions are SN07.<br><br>***Note 2:*** Once the MG 9000 has been upgraded to SN07, no further provisioning should occur. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **14** | Export data to XML file.<br><br>Wait for the Export To XML File window to indicate that the export is complete. | In the SN06.2 Subnet View, select the MG9000 menu and click on Export NE. From the ExportNE Contents to XML File window, select an NE and click on Export. Refer to Performing an Export NE on page 71.<br><br>Look for: Completed XML Export of NE: <ne number><br><br>***Note 1:*** After the exports are complete, tar the entire persistdata directory, located on the MG 9000 master server, and place the exported data onto another machine for vaulting purposes. The following files and directories may be in the persistdata directory:<br>• LoadFilesPersistData.dat<br>• xml<br>• ESA_SYSTEM_SD_V1.0.DTD<br><br>***Note:*** ESA_SYSTEM_SD_V1.0.DTD is generated only for SN06.2 MG 9000 Manager data, not for the SN06 MG 9000 Manager data.<br><br>• SubnetPersistData06_2.dat<br><br>Use the following information to tar the persistdata files and directories<br><br>tar cvf <filename>.tar /data/mg9kem/persistdata<br><br>It is recommended that the filename use the following format:<br><br><date.hostname_filename>.tar<br><br>for example,<br><br>OCT23.rtpd_persistdatabackup.tar<br><br>***Note 2:*** Keep a backup copy of the SN06.2 XML file in case a downgrade is required. | |
| | ***Note:*** This is a safe stopping point. | | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **15** | Determine if the sync reference/ timing signal source is correct. This must be correct to prevent alarms on the DCC and ITP cards when the upgrade is complete. | If the BITS cable was connected to the DCC card BITS connector during the hardware installation, using the Local Craft Interface (LCI) access the master shelf in the network element being upgraded, and select the active ITP card. From the menu, select Clock Sync->Provisioning. Ensure the MG 9000 is synched to the correct timing source, BITS or network:<br>• ITXBITS - if syncing to the ITX card<br>• DCCBITS - if syncing to the DCC cards and the cable is connected to the DCC card BITS connector<br>• Network - if syncing to the upstream network connection<br>Refer to *MG 9000 Configuration Management*, NN10096-511. | |
| **16** | Remove the NE from the SN06.2 OMC collection list. | Once the DCC cards are at SN07, no OMs can be collected until the NE is imported to the SN07 Subnet View. Refer to the “Configuring OM Collector software” in *MG 9000 Performance Management*, NN10140-711 to remove the NE from the SN06.2 OMC collection list. The NE OM Collection checkbox must be checked in the MG 9000 Provisioning View which is accessed from the Subnet View Configuration menu for OM Collection to be enabled for an NE. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **17** | Create patched images of all MG 9000 loads | 1. After the MG 9000 cards have been upgraded to SN07 and all other MG 9000 Manager workstations have been upgraded to SN07, perform the following procedure to image the network element (NE) cards for use in upgrading the cards in other NEs.<br><br>***Note 1:*** Perform the following steps after the following conditions are met:<br>• the NPM is at SN07<br>• the suite of MG 9000 Manager servers are running SSPFS07, with both SN06.x and SN07 MG 9000 Managers are resident<br>• the old SN06.x MG 9000 Manager is not in control of the MG 9000 devices which are running SN07<br><br>***Note 2:*** The following steps will create patched images of all MG 9000 loads. This will be accomplished by upgrading, patching, and then imaging two MG 9000s (one DCC-OC3 MG 9000 and one DCC-DS1-IMA MG 9000). Ensure the NEs selected include all MG 9000 intelligent card types in the office.<br><br>First the user will upgrade all the intelligent cards on a DCC-OC3 MG 9000 using the latest available PI loads. After the upgrade, the user will patch all intelligent cards on the DCC-OC3 MG 9000 with any available patches that were not included on the PI load tape. After patching is complete, the user will take an image of the DCC-OC3 MG 9000 using the NPM.<br><br>Next, the user will upgrade a DCC-IMA MG 9000 using the PI loads just created. After the upgrade, the user will apply any available patches for any remaining intelligent card types (including the DCC-DS1-IMA) that were not patched during the DCC-OC3 MG 9000 upgrade. After patching is complete, the user will take an image of the DCC-DS1-IMA MG 9000 using the NPM. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **17** | Create patched images of all MG 9000 loads (contd) | a. Use the following to determine the next step.<br>• if there were additional patches added to the pre-patched image loadfile, go to step d<br>• if there were no additional patches added to the pre-patched image loadfile, go to step b<br>b. Apply remaining SN07 patches to all cards on this NE with DCC OC3 cards.<br>c. Import this NE with DCC OC3 cards to the SN07 MG 9000 Manager.<br>***Note:*** Make sure an audit is not in progress and is not scheduled for this NE.<br>Go to the SN07 Subnet View and click on the MG9000 menu and click on Import NE.<br>From the Import From XML File window, select the SN06.x import path<br>**/data/mg9kem/persistdata/xml/SN06/<ne_number>** for SN06,<br>or<br>**/data/mg9kem/persistdata/xml/SN06_2/<ne_number>** for SN06_2<br>which is to be upgraded.<br>Select Import. This will import and convert all the SN06.2 data which was previously exported. The NE icon will be created and a discovery/recovery process is started.<br>Refer to Performing an Import NE on page 69.<br>d. Take an image of the inactive cards on this NE with DCC OC3 cards. Refer to the “Performing a device image using the NPM” in *ATM Solutions Upgrad*e, NN10261-450 or *IP Solutions Upgrade*, NN10344-450 for steps on performing a device image. Select SmartImage->MG9KDEVICES.. | |

**MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **17** | Create patched images of all MG 9000 loads (contd) | e. Upgrade one NE with DCC-DS1-IMA cards with the SN07 MG 9000 patched images just created in the previous step. Load all cards on this NE with the supplied image.<br>f. Import this NE with DCC DS1-IMA cards to the SN07 MG 9000 Manager.<br><br>***Note:*** Make sure an audit is not in progress and is not scheduled for this NE. Observe the Audit Tasks tab in the Frame View.<br><br>Go to the SN07 Subnet View and click on the MG9000 menu and click on Import NE.<br>From the Import From XML File window, select the SN06.x import path<br><br>**/data/mg9kem/persistdata/xml/SN06/<ne_number>** for SN06,<br><br>or<br><br>**/data/mg9kem/persistdata/xml/SN06_2/<ne_number>** for SN06_2<br><br>which is to be upgraded.<br><br>Select Import. This will import and convert all the SN06.2 data which was previously exported. The NE icon will be created and a discovery/recovery process is started.<br>Refer to Performing an Import NE on page 69.<br>g. Apply the remaining patches to all cards on this NE with DCC DS1-IMA cards.<br>h. Take an image of the inactive cards on this NE with DCC DS1-IMA cards that were not imaged in step d above. Refer to the “Performing a device image using the NPM” in *ATM Solutions Upgrade*, NN10261-450 or *IP Solutions Upgrade*, NN10344-450 for steps on performing a device image. Select SmartImage->MG9KDEVICES.<br>i. Use the images created in the previous steps to upgrade all the of the cards on all the remaining NEs to be upgraded to SN07 | |

**MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)**

| | Activity | Procedure | √ |
|---|---|---|---|
| **18** | Delete the NE which was just upgraded. | Go to the SN06.2 Subnet View. From the menu bar, select Configuration->Delete Node. Click on Apply.<br>Refer to the “Deleting an MG 9000 network element” procedure in *MG 9000 Configuration Management*, NN10096-511. | |
| **19** | Configure Enhanced ESA, if applicable (only applies to North America) | Go to the Switched Lines Services GUI and change the VMGs to support Enhanced ESA.<br>Refer to the “Provisioning ESA” procedure in *MG 9000 Configuration Management*, NN10096-511. | |
| | ***Note:*** This is a safe stopping point. | | |
| After all NEs are at SN07 and there is no need to downgrade to SN06.2 proceed to the next step:<br><br>***Note:*** If it is necessary to downgrade the MG 9000 and MG 9000 Manager, perform the Downgrading the MG 9000 Manager from SN07 to SN06.x on page 73 procedure, otherwise proceed to the next step. | | | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **20** | Run the pkgrm script on each server (master server and mid-tier server) to stop the SN06.2 server application and uninstall the server application.<br><br>***Note:*** Once the packages have been removed, it will not be possible to downgrade without re-importing a saved data image and a resulting loss of service. | 1. Perform the following steps:<br>a. Login as root.<br>b. To stop the SN06.2 mid-tier server, type<br>**> servstop MG9KMIDTIER_06_2**<br>c. To stop the SN06.2 master server, type<br>**> servstop MG9KSERVER_06_2**<br>d. To stop the SN06.2 OM collector, type<br>**> servstop MG9KOMC_06_2**<br>e. To remove the master server SN06.2 software, type<br>**> pkgrm NTmg9ks62**<br>To continue, respond to the prompt with Y.<br>f. To remove the mid-tier server SN06 software, type<br>**> pkgrm NTmg9km62**<br>To continue, respond to the prompt with Y.<br>g. To remove the OM collector SN06.2 software, type<br>**> pkgrm NTomclt62**<br>To continue, respond to the prompt with Y. | |
| | ***Note:*** Proceed to the next step only after the one night process (ONP) is complete. | | |
| **21** | Clone the image of the upgraded node onto the other node | Perform procedure “Cloning the image of one node in a cluster to the other node” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| | ***Note:*** After step 21 is performed, the MG 9000s cannot be downgraded to SN06 without service data loss. | | |
| **22** | After each node is upgraded to SN07, FTP the ESA data to database. | To ensure ESA data is correct, FTP the ESA data to the database. | |

## MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server)

| | Activity | Procedure | √ |
|---|---|---|---|
| **23** | Clean up old data in the NPM database. | Perform the procedure “Cleaning up old data in the NPM database” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. | |
| **24** | This procedure is complete. | | |

# Upgrading the MG 9000 Manager

The following procedures are included in this section:

# Upgrading MG 9000 Manager software

## When to use this procedure

Use these procedures for upgrading the server, mid-tier, and client portions of the MG 9000 Manager. A procedure for upgrading software on a PC client is also provided.

***Note:*** The software must be installed in the order presented in Upgrading MG 9000 Manager software from SN06.x to SN07 on page 41.

The following procedures are included in this section:

- Upgrading MG 9000 Manager software from SN06.x to SN07
- Upgrading the MG 9000 Manager server
- Upgrading the MG 9000 Manager mid-tier
- Installing the MG 9000 Manager Sun client software
- Uninstalling the MG 9000 Manager Sun client software
- Installing the MG 9000 Manager Windows PC client software
- Removing an MG 9000 Manager JWS application from cache

## Prerequisites

There are no prerequisites.

## Action

### Upgrading MG 9000 Manager software from SN06.x to SN07

***At the MG 9000 Manager***

**1** Stop the SN06.x MG 9000 client applications.

**2** Use the information in the following table to determine the next step.

| If the MG 9000 Manager software to be upgraded runs on | Do |
|---|---|
| an N240 cluster (two-server) configuration | step 9 |
| a t1400/N240 simplex (one-server) configuration | step 3 |

**3** Stop the SN06.x mid-tier server application by typing

for SN06

```
> /opt/nortel/mg9kmtr_06/bin/mg9kmidtier stop
```

for SN06.2

```
> servstop MG9KMIDTIER_06_2
```

**4** Stop the SN06.x server application

for SN06

```
> /opt/nortel/mg9ksrv_06_2/bin/mg9kserver stop
```

for SN06.2

```
> servstop MG9KSERVER_06_2
```

***Note:*** Before moving to the next step to upgrade the SSPFS platform, perform a backup of the SSPFS file system using the "Full backup of file system procedure" in *ATM/IP Security and Administration*, NN10402-600.

**5** To verify the MG 9000 mid-tier and server applications have stopped, type

```
> servquery -status all
```

**6** Stop the OM Collector by typing

for SN06

```
> /opt/nortel/OMCltr_06/bin/OMCollector stop
```

for SN06

```
> servstop MG9KOMC_06_2
```

7 Use the information in the following table to determine the next step.

| If the MG 9000 Manager software to be upgraded runs on | Do |
|---|---|
| an N240 cluster (two-server) configuration, the SSPFS has already been upgraded | step 9 |
| a t1400/N240 simplex (one-server) configuration | step 8 |

8 Upgrade both the mid-tier server and the master server to the SN07 SSPFS platform.

***Note 1:*** Ensure the master server is restarted before mid-tier server.

***Note 2:*** If the mid-tier server comes up before the master server, it will go through a restart loop until the master server comes up.

Details about upgrading the SSPFS platform are provided in procedure “Upgrading SSPFS software” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

9 Install any patches for SSPFS using the NPM.

***Note:*** If this is an N240 cluster configuration, install the patches using the NPM on the inactive side.

10 Verify that the DB Host IP address is correct. Perform the following steps:

**a** Change the directory by typing

for SN06

```
cd /opt/nortel/mg9ksrv_06/bin
```

for SN06.2

```
cd /opt/nortel/mg9ksrv_06_2/bin
```

**b** Enter the following command:

**`./mg9kserver config`**

The system responds with

```
WARNING: Server is currently running, its
recommended that the server be shutdown
before making any configuration setting
changes.
Main Configuration Menu

1) Change Distribution Policy
2) Change SESM IP Address
3) Change Oracle IP Address
4) Change Debug Level for logs
5) Change Persistence settings
6) Change ESA data download settings
7) Change EM Factory Sleep
8) Display current settings
9) Exit from Main Menu

Please make a selection =>
```

**c** Enter 6 (for SN06) or 8 (for SN06.2) to display current setting.

The system responds with the following:

```
            CURRENT SETTINGS
Package Name              :NTmg9ks62
Version                   :NTMG9KS_6_2_481_0
Server Mode               :MASTER
Master Server IP Address :47.xxx.xx.98
SESM IP Address           :47.xxx.xx.66
Oracle IP Address       :47.xxx.xx.66
Maintenance Release Upgrade  :No
Initialize Database     :YES
Security Authentication Host  :47.xxx.xx.98
ESA data download time  :1:30 AM
ESA data device name    :/SFDEV
ESA data file name         :ESA_SYSTEM_SD$XML
```

**d** Enter 7 (for SN06) or 9 (for SN06.2) to exit from the Configuration menu.

**e** Verify that the Oracle IP address is correct

**f** Enter the following command by typing

**# echo $DB_HOST**

The system responds with DB Host IP address

```
# 47.xx.xx.66
```

This IP address should match the Oracle IP address above.

**11** The next step is determined by the information in the following table.

| If the DB Host IP address is | Do |
|---|---|
| correct | Step 13 |
| not correct | Step 12 |

**12** To change the DB Host IP address, perform the following steps:

**a** Enter the following command

**#./mg9kserver config**

The system responds with

```
Main Configuration Menu

1) Change Distribution Policy
2) Change SESM IP Address
3) Change Oracle IP Address
4) Change Debug Level for logs
5) Change Persistence settings
6) Change ESA data download settings
7) Change EM Factory Sleep
8) Display current settings
9) Exit from Main Menu

Please make a selection=>
```

**b** To change the Oracle IP address, enter 3.

The system responds with the following:

```
Oracle IP Address Configuration Menu

1) Enter new Oracle IP Address
2) Exit to Main Menu

Please make a selection [Current:
47.xxx.xx.66 ] => 1

WARNING: Changing the Database Host will
effect all applications! Improper database
configuration will result in loss of service
and possible loss of data. Applications which
use the database server must be shutdown
before continuing.

Oracle Server is currently: 47.xxx.xx.66

Do You Want To Change the Oracle Server, Type
"yes" or "no":
```

**c** To change the Oracle server, type

**> Yes**

**d** Enter the IP Address of the Oracle Server

**> 47.xxx.xx.100**

The system responds with the following:

```
Database change successful

Please quit this shell and login again to
inherit the new settings.

Applications need to be reconfigured with the
new database host.
```

**e** The MG 9000 mid-tier GUI banner now displays the CM_CLLI. This needs to be configured by performing the following steps while logged into the MG 9000 master server. Once this is complete, log into the MG 9000 mid-tier and perform the same steps. If the MG 9000 master server and mid-tier reside on the same IP, you only need to perform this once.

**i** Log in as root by typing

**$ su - root**

The system responds with the following:

```
Password:
<enter the root password>
```

The system responds with the following:

```
# cli
Command Line Interface
 1 - View
 2 - Configuration
 3 - Other

 X - exit
```

**ii** Enter 2 to access the Configuration menu.

The system responds with the following:

```
Configuration
 1 - NTP Configuration
 2 - Apache Proxy Configuration
 3 - DCE Configuration
 4 - OAMP Application Configuration
 5 - CORBA Configuration
 6 - IP Configuration
 7 - DNS Configuration
 8 - Syslog Configuration
 9 - Database Configuration
10 - NFS Configuration
11 - Bootp Configuration
12 - Restricted Shell Configuration
13 - Security Services Configuration
14 - Login Session
15 - Location Configuration
16 - Cluster Configuration
17 - Succession Element Configuration
18 - snmp_poller (SNMP Poller
Configuration)

 X - exit
```

**iii** Enter 4 to access the OAMP Application Configuration menu.

The system responds with the following:

```
OAMP Application Configuration
 1 - sdm_conf (Configure SDM IP Address and
User)
 2 - sdm_unconf (Unconfigure SDM IP Address
and User)
```

```
 3 - cmClli_conf (Configure CM_CLLI
Address)
 4 - cmClli_unconf (Unconfigure CM_CLLI IP
Address)
 5 - cm_conf (Configure CM IP Address)
 6 - cm_unconf (Unconfigure CM IP Address)

 X - exit
```

**iv** Enter 3 to configure the CM CLLI address.

The system responds with the following:

```
=== Executing "cmClli_conf"
Enter CM_CLLI:  <site CM_CLLI>
CM CLLI :          <site CM_CLLI>
```

**v** Enter "ok" to accept current settings.

```
ok

Processing values....

CM_CLLI Configured
Please perform a logout and login so your
shell will reflect CLLI environment
settings

=== "cmClli_conf" completed successfully
```

**vi** Quit this shell and login again to inherit the new settings.

**13** Install the SN07 master server application by performing the procedure Upgrading the MG 9000 Manager master server on page 52.

**14** Use the following table to determine the next step.

| If the server being upgrade is | Do |
|---|---|
| an N240 cluster configuration | step 17 |
| an N240 one-server or t1400 configuration | step 15 |

**15** Start the SN07 master server application by typing

```
> /opt/nortel/mg9ksrv_07/bin/mg9kserver start
```

***Note:*** Messages may appear indicating that a "<file_name>_patch failed to stay up." These messages can be ignored.

**16** Ensure the SN06.2 server application is running by typing

for SN06

```
> /opt/nortel/mg9ksrv_06/bin/mg9kserver status
```

***Note:*** If the SN06.2 server application is not running, type

**> /opt/nortel/mg9ksrv_06/bin/mg9kserver start**

for SN06.2

```
> servquery -status all
```

and verify the following is output

```
MG9KSERVER_06_2 RUNNING
```

***Note:*** If the SN06.2 server application is not running, type

**> servstart MG9KSERVER_06_2**

**17** Install the SN07 mid-tier server application by performing the procedure Upgrading the MG 9000 Manager mid-tier server on page 55.

**18** Use the following table to determine the next step.

| If the server being upgrade is | Do |
|---|---|
| an N240 cluster configuration | step 21 |
| an N240 one-server or t1400 configuration | step 19 |

**19** Start the SN07 mid-tier server application by typing

```
> /opt/nortel/mg9kmtr_07/bin/mg9kmidtier start
```

***Note:*** Messages may appear indicating that a "<file_name>_patch failed to stay up." These messages can be ignored.

**20** Ensure the SN06.x mid-tier application is running by typing

for SN06

```
> /opt/nortel/mg9kmtr_06/bin/mg9kmidtier
status
```

***Note:*** If the SN06 mid-tier application is not running, type

**> /opt/nortel/mg9kmtr_06/bin/mg9kmidtier start**

for SN06.2

```
> servquery -status all
```

and verify the following is output

```
MG9KMIDTIER_06_2 RUNNING
```

***Note:*** If the SN06.2 mid-tier application is not running, type

**> servstart MG9KMIDTIER_06_2**

**21** Install the SN07 performance collector and formatter (PCF) software. Refer to *MG 9000 Performance Management*, NN10140-711 for the PCF software installation procedure. Configure the PCF software after the installation is complete.

If this is an N240 cluster configuration, install the software on the inactive side.

**22** Apply any MG 9000 Manager software patches. Refer to Patching MG 9000 Manager software on page 87.

**23** Use the following table to determine the next step.

| If the server being upgrade is | Do |
|---|---|
| an N240 cluster configuration | step 24 |
| an N240 one-server or t1400 configuration | step 27 |

**24** Patch the inactive node of the cluster by performing the procedure “Patching the inactive side of a cluster during an upgrade” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

**25** Telnet to the cluster IP address, login to the active unit and perform a failover of the system by typing

```
> init 6
```

**26** Perform the procedure “Cloning the image of one node in a cluster to the other node” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

**27** Install the SN07 GUI client application by performing the installation procedure based on the platform type used for the client, PC or Sun workstation. Refer to the Installing the MG 9000 Sun client software on page 66 or Installing the MG 9000 Manager Windows PC client software on page 64 procedure.

**28** Provision a userid with appropriate privileges for the upgrade process. Add a new user to group “succssn” and “emsadm.” To allow access to the GUI, from the mid-tier server type

```
> useradd -g succssn -G emsadm [userid]
```

where emsadm is the privilege to be assigned to the userid. Refer to *MG 9000 Administration and Security* for details.

**29** To enter the password for this userid, type

```
>passwd [userid]
```

***Note:*** The password must be entered twice.

**30** Start any SN07 3rd party application(s), especially those using the OSS alarm interface.

**31** Configure the network elements with the OM collector. Refer to the “Installing OM Collector software” in *MG 9000 Performance Management*, NN10140-711.

**32** Start the SN07 OM Collector by typing

```
> servstart MG9KOMC_07
```

**33** Start the OM Collector by typing

for SN06

```
> /opt/nortel/OMCltr_06/bin/OMCollector start
```

for SN06.2

```
> servstart MG9KOMC_06_2
```

**34** Restart the master server application by typing

for SN06

```
> /opt/nortel/mg9ksrv_06/bin/mg9kserver start
```

for SN06.2

```
> servstart MG9KSERVER_06_2
```

**35** Restart the mid-tier server application by typing

for SN06

```
/opt/nortel/mg9kmtr_06/bin/mg9kmidtier start
```

for SN06.2

```
> servstart MG9KMIDTIER_06_2
```

**36** Start the SN06.x GUI client application.

**37** Start the SN07 GUI client application.

***Note 1:*** Two Subnet Views should appear at the GUI Client. One Subnet View for SN06.x and one Subnet View for SN07. All NEs should still be in the SN06.x Subnet View.

***Note 2:*** A discover/recover and audit of all the SN06.x NEs should occur in the SN06.x Subnet View.

**38** This procedure is complete.

If this is a simplex upgrade, return to step 1a of the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) on page 13 and continue with the SN06.x to SN07 upgrade process.

If this is a two-server upgrade, return to step 3h of the MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) on page 26 and continue with the SN06.2 to SN07 upgrade process.

## Upgrading the MG 9000 Manager master server

### *At the workstation dedicated as the master server*

1 Login as root (superuser) and insert the Succession MG 9000 Manager software CD into the CD-ROM drive. This server is also running the OpenOrb NamingService.

***Note:*** If this is an N240 cluster configuration, install the software on the inactive side.

2 List the available files on the Nortel Networks load disk. To list the files, change directory to the CD-ROM drive and list the contents by typing

**> cd /cdrom/cdrom0**

**> ls**

The system responds with the following example output:

```
# cd /cdrom/cdrom0
# ls
BWTool.exe NTMG9KS_7_31_0.PKG
NTMG9KM_7_31_0.PKG NTOMCLTR_7_31_0.PKG
```

3 At the prompt (#), use pkgadd to install the server portion (NTmg9ks07.pkg) of the software. To directly install the software from the CD, enter the following command:

**# pkgadd -d /cdrom/cdrom0/<mgemserver package>**

where <mgemserver package> is the MG 9000 Manager server package name, for example NTMG9KS_7_31_0.PKG

The system responds with the following:

```
The following packages are available:

 1 NTmg9ks07  Succession MG 9000 Manager Server
        (sparc) 7.44

Select package (s) you wish to process (or 'all'
to process all packages). (default: all)
[?,??,q]:
```

**4** Enter “1” and press return to begin the server installation process.

The system responds with the following:

```
Processing package instance <NTmg9ks07> from
</NTmg9ks07.pkg>

Succession MG 9000 Manager Server (sparc) 7.44

Copyright (c) 1998-2003 Nortel Networks
All Rights Reserved

This product is protected by copyright and
distributed under licenses restricting copying,
distribution and decompilation.


## Executing checkinstall script.
Using as the package base directory.
## Processing package information.
## Processing system information.
   135 package pathnames are already properly
installed.
## Verifying disk space requirements.
## Checking for conflicts with packages already
installed.
## Checking for setuid/setgid programs.

This package contains scripts which will be
executed with super-user permission during the
process of installing this package.

Do you want to continue with the installation of
<NTmg9ks07> [y,n,?]
```

**5** Enter Y to continue with the installation.

***Note:*** Verify that the “Installation of <NTmg9ks07> was successful.” If there are any errors please contact your next level of support.

**6** Eject the CD-ROM by typing

```
# eject cdrom0
```

**7** Obtain the IP address or hostname of the current master server by typing

```
# hostname
```

**8** This procedure is complete. If this activity is part of an MG 9000 Manager upgrade, return to step 14 in procedure Upgrading MG 9000 Manager software from SN06.x to SN07 to continue with the upgrade process.

## Upgrading the MG 9000 Manager mid-tier server

### *At the workstation dedicated as mid-tier server*

1 Login as root (superuser) and insert the CD containing the Succession MG 9000 Manager software into the CD-ROM drive.

***Note:*** If this is an N240 cluster configuration, install the software on the inactive side.

2 At the prompt (#) use pkgadd to install the mid-tier portion (NTmg9km07.pkg) of the software. If you are directly installing from the CD-ROM use the following command to read the CD-ROM, and list the contents to read the release number:

```
# cd /cdrom/cdrom0/
# ls
# pkgadd -d /cdrom/cdrom0/NTmg9km_7_xx_0.pkg
```

where xx is the release number.

The system responds with the following information.

```
The following packages are available:
1 NTmg9km07 Succession MG 9000 Manager Midtier
Server
                    (sparc) 7.44

Select package(s) you wish to process (or 'all'
to process all packages). (default: all)
[?,??,q]: all
```

3 Enter “1” and press return to begin the server installation process.

The system responds as follows:

```
Executing checkinstall script.
Using </opt> as the package base directory.
Processing package information.
Processing system information.
1 package pathname is already properly
installed.
```

***Note:*** If a message appears with a confirmation prompt to overwriting conflicting files, respond Y. If existing files are not overwritten, the MG 9000 Manager mid-tier server upgrade cannot continue.

```
Verifying disk space requirements.
Checking for conflicts with packages already
installed.Checking for setuid/setgid programs.

This package contains scripts which will be
executed with super-user permission during the
process of installing this package.

Do you want to continue with the installation of
<NTmg9km07> [y,n,?]
```

**# Y**

***Note:*** Verify that “Installation of <NTmg9km_7_xx_0> was successful.” If there are any errors please contact your next level of support.

**4** The installation continues automatically and installs all the mid-tier server files in /opt/nortel/mg9kmtr_07 subdirectory as noted in the system response.

```
Installing Succession MG 9000 Manager Midtier
Server as <NTmg9km07>

## Installing part 1 of 1.
.
.
.
Configuring system, please wait ...

Installation of <NTmg9km07> was successful.
```

After the installation is compete, a message appears reporting that the installation was successful.

**5** This procedure is complete. If this activity is part of an MG 9000 Manager upgrade, return to step 18 of procedure Upgrading MG 9000 Manager software from SN06.x to SN07 to continue with the upgrade process.

## Configuring the MG 9000 Manager master server software

***At the workstation dedicated as the MG 9000 Manager master server***

1 Collect previous configuration data before proceeding. To display previous configuration data, type

**> /opt/nortel/mg9ksrv_06_2/bin/mg9kserver config**

The system responds with the following:

```
WARNING: Server is currently running, its
recommended that the server be shutdown before
making any configuration setting changes.
Main Configuration Menu

1) Change Distribution Policy
2) Change SESM IP Address
3) Change Oracle IP Address
4) Change Debug Level for logs
5) Change Persistence settings
6) Change ESA data download settings
7) Change EM Factory Sleep
8) Display current settings
9) Exit from Main Menu
```

2 Enter 8 to display current settings.

The system responds with the following example output:

```
CURRENT SETTINGS
Package Name                    :NTmg9ks62
Version                       :NTMG9KS_6_2_481_0
Server Mode                     :MASTER
Master Server IP Address        :47.xxx.xx.134
SESM IP Address                 :47.xxx.xx.137
Oracle IP Address               :47.xx.xx.137
Maintenace Release Upgrade      :NO
Initialize Database             :YES
Security Authentication Host    :47.xx.xx.134
ESA data download time          :1:30 AM
ESA data device name          :/SFDEV
ESA data file name             :ESA_SYSTEM_SD$XML
```

3 Exit the tool by entering 8 (for SN06) or 9 (for SN06.2).

4 To configure the master server, type

**> /opt/nortel/mg9ksrv_07/bin/mg9kconfig.sh**

***Note:*** The database for SN07 is not created until the server is restarted.

**5** The system responds with the following

```
Please enter the IP Address or hostname of CS2M
server?
Press the enter key to accept the default?
Default: [] =>
```

***Note:*** Only enter a Hostname if DNS is properly configured. Nortel recommends using IP addresses only.

**6** Enter the IP address for the CS2M server or select the default address in response to the following:

```
Please enter the IP Address or hostname of the
CS2M server? Press the enter key to accept the
default ?
Default: [] => x.x.x.x
```

**# <CS2M server IP address>**

**7** Enter the IP address where the Oracle server is being hosted in response to the following.

```
Please enter the IP Address or hostname of the
Oracle host server?
Press the enter key to accept the default ?
Default: [47.xxx.xx.220] =>
```

***Note:*** Only enter a Hostname if DNS is properly configured. Nortel recommends using IP addresses only. This information will be needed when configuring the mid-tier server.

This is usually the same IP address as the CS2M server, unless a dedicated Oracle server is being used, which requires a different IP address.

**# <Oracle IP address>**

***Note:*** Only enter a Hostname if DNS is properly configured. Nortel recommends using IP addresses only.

**8** Enter the IP address of the Security Authentication Host in response to the following:

***Note:*** The default IP is the MG 9000 mid-tier server IP address.

```
Please enter the IP address or hostname of the
Authentication server?
Press the enter key to accept the default ?
Default: [47.xxx.xx.235] =>
```

This is usually the same IP address as the MG 9000 mid-tier server IP address.

**9** Enter the IP address or Hostname of the server where image files are stored.

```
Please enter the IP address or hostname of the
server that will be used to store load images.

NOTE: The FTP server must have over write
privileges.

Press the enter key to accept the default ?
Default: [x.x.x.x] =>
```

This is typically the SDM address. It must have over write privileges. Communication to the server is verified.

**10** Enter yes if Integrated EMS (IEMS) is to be the Northbound interface for Logs.

```
Please enter yes if you want IEMS to be the
Northbound interface for Logs? Press the enter
key to accept the default (y/n)?
Default: [y] =>
```

***Note:*** Answering Y to this question means the syslog output of the master server has already been set to IEMS using the command line interface.

**11** Enter the User ID that is used to FTP images to the FTP server entered in the previous step.

```
Enter the user id that will be used to ftp Images
to the Image server.

Press the enter key to accept the default ?
Default: [] =>
```

**12** Enter the User ID and password to the Image server. This must have over write privileges.

```
Enter the user id that will be used to ftp Images
to the Image server.

Press the enter key to accept the default?
Default: [] => xxxx
Enter Password: xxxxxx
```

**13** Enter the directory where the images will be placed for each type of card.

```
Enter the directory that the image will be
placed in for the following cards:

SCI: Press the enter key to accept the default ?
Default: [/swd/mg9k] =>

SCO: Press the enter key to accept the default ?
Default: [/swd/mg9k] =>

ITP: Press the enter key to accept the default ?
Default: [/swd/mg9k] =>

ABI: Press the enter key to accept the default ?
Default: [/swd/mg9k] =>

DS1: Press the enter key to accept the default ?
Default: [/swd/mg9k] =>
```

**14** Verify the system response.

```
*********************************************
Setup Server As : Master
Master Server IP Address : 47.xxx.xx.207
CS2M IP Address: 47.xxx.xx.220
Security Authentication Host : 47.xxx.xx.220
Get Northbound logs from IEMS : y
Oracle IP Address : 47.xxx.xx.8
Image Server : 47.xxx.xx.207
Image Server User ID : maint
SuperCore IMA Image Directory : /swd/mg9k
SuperCore OC3 Image Directory : /swd/mg9k
ITP Image Directory : /swd/mg9k
ITX Image Directory : /swd/mg9k
ABI Image Directory : /swd/mg9k
DS1 Image Directory : /swd/mg9k
*********************************************
Is the above information correct?
Press the enter key to accept the default (y/n)?
Default : [n] => y
```

**15** Start the MG 9000 Manager server application. To start the server, type

```
> servstart MG9KSERVER_07
```

**16** For additional help on available options, execute the following command.

```
# /opt/nortel/mg9ksrv_07/bin/mg9kserver help
```

**17** This procedure is complete.

If this is a simplex upgrade, return to step1b of the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) on page 13 and continue with the SN06.x to SN07 upgrade process.

If this is a two-server upgrade, return to step 3i of the MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) on page 26 and continue with the SN06.2 to SN07 upgrade process.

## Configuring the MG 9000 Manager mid-tier server software

***At the workstation dedicated as the MG 9000 Manager mid-tier server***

**1** Collect the current configuration by typing

for SN06

**`# /opt/nortel/mg9kmtr_06/bin/mg9kmidtier config`**

for SN06.2

**`# /opt/nortel/mg9kmtr_06_2/bin/mg9kmidtier config`**

The system responds with the following.

```
WARNING: Server is currently running, its
recommended that the server be shutdown before
making any configuration setting changes.

Main Configuration Menu


1) Change IP Address of Master Server
2) Enable / Disable SSL Connections
3) Change Debug Level for logs
4) Display current settings
5) Exit from Main Menu
```

**2** Select 4 from the list to display the current settings.

The system responds with the following.

```
CURRENT SETTINGS
Package Name                    :NTmg9km62
Version                        :NTMG9KM_6_2_481_0
Master Server IP Address        :106.40.34.134
SSL enabled                     :false
Security Type                   :PAM Security
```

**3** To configure the mid-tier server, type

**`# /opt/nortel/mg9kmtr_07/bin/mg9kconfig.sh`**

**4** Enter the IP address or hostname of the master server obtained in step 7 of Upgrading the MG 9000 Manager master server

***Note:*** Only enter a Hostname if DNS is properly configured. Nortel recommends using IP addresses only.

**`# <IP address of Master server>`**

Press Return to continue.

**5** The system prompts you to make sure the information provided is accurate.

```
.
.
.
Is the above information correct? Press the
enter key to accept the default (y/n)? Default:
[n] =>
```

**6** Enter Y and continue.

```
Configuring system, please wait ...
Set JNLP softlinks for NTmg9km07...

Configuration complete ...
```

**7** Restart the MG 9000 Manager mid-tier application. To start the application, type

```
> servstart MG9KMIDTIER_07
```

**8** This procedure is complete.

If this is a simplex upgrade, return to step1e of the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) on page 13 and continue with the SN06.x to SN07 upgrade process.

If this is a two-server upgrade, return to step 3j of the MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) on page 26 and continue with the SN06.2 to SN07 upgrade process.

## MG 9000 Manager client configuration

### Installing the MG 9000 Manager Windows PC client software

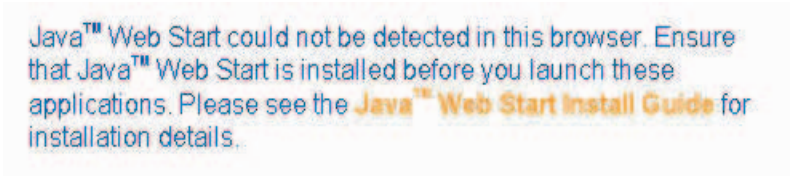
#### *At the Windows PC client*

1 From a web browser, launch Succession OAM&P Applications Launch Point page at:
http://<SN07 MG9KEM Midtier Server IP or hostname>. Click on Application Launcher.

The Application Launch Point window appears containing two links, one for SN06.x and one for SN07. Click on the SN07 “MG9000 Element Manager” link. The Application Launch Point window appears. Click on the” MG9000 Element Manager” link. Enter the username and password in the login when prompted.

***Note:*** When starting the MG 9000 Manager from a Microsoft Windows platform, Windows may ask for a Security Certificate Approval. Windows does not display the Security Certificate Approval window on top of all other open windows. It may become necessary to iconify all open windows to see the Security Certificate Approval window. The security settings in the browser determine if the user will be asked for certificate approval.

2 Use the following figure and the information in the following table to determine the next step.




| If Java Web Start (JWS) software | Do |
|---|---|
| is already installed in the client machine | step 8 |
| is not installed in the client machine, as evidenced by the preceding message | step 3 |

3 Select the link “Java™ Web Start Install Guide” to visit “Client Software Installation” page.

4 Visit “Java 2 Runtime Environment Install Guide” under “Microsoft Windows” section for online documentation.

5 Visit “Java 2 Runtime Environment Software Download” under “Microsoft Windows” section to download Java Runtime Environment.

6 Save j2re-1_4_1_02-windows-i586-i.exe and execute the JRE software.

7 Follow the instructions in JRE software to install JRE 1.4.1_02

8 The PC client is setup to launch MG 9000 Manager SN07 client applications.

9 This procedure is complete.

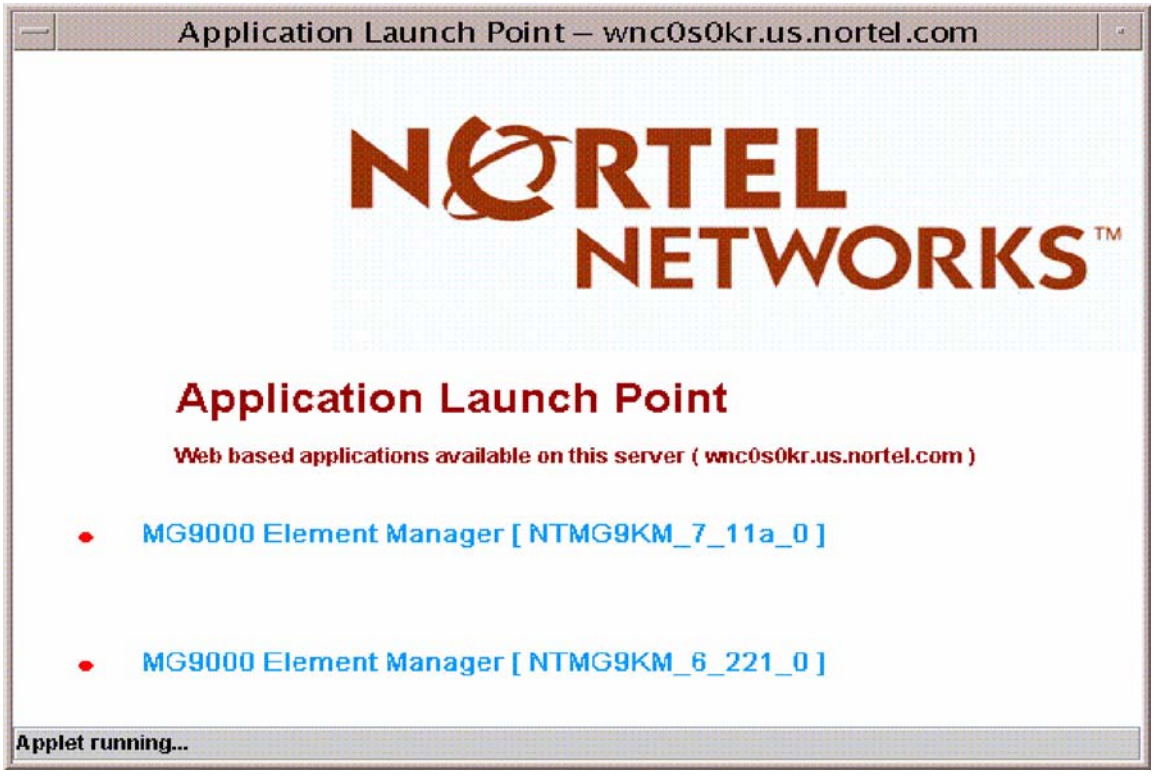
## Installing the MG 9000 Sun client software

### *At the client workstation*

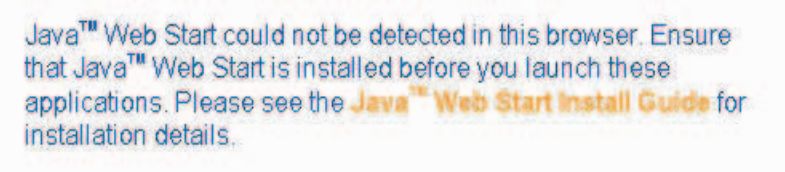
1 From a web browser, launch Succession OAM&P Applications Launch Point page at:
http://<SN07 MG9KEM Midtier Server IP or hostname>. Click on Application Launcher.

The Application Launch Point window appears containing two links, one for SN06.x and one for SN07. Click on the SN07 “MG9000 Element Manager” link. The following figure shows the Application Launch Point with the SN06.x and SN07 MG 9000 Manager links. Enter the username and password in the login when prompted.

***Note:*** The top link that appears in the launch point window is for the SN07 client, the bottom link is for the SN06 client.



**2** Use the following figure and the information in the following table to determine the next step.




| If Java Web Start (JWS) software | Do |
|---|---|
| is already installed in the client machine | step 14 |
| is not installed in the client machine, as evidenced by the preceding message | step 3 |

**3** Select the link "Java™ Web Start Install Guide" to visit "Client Software Installation" page.

**4** Visit "Java 2 Runtime Environment Install Guide" under "Sun Solaris" section for online documentation.

**5** Visit "Java 2 Runtime Environment Software Download" under "Sun Solaris" section to download Java Runtime Environment.

**6** Save j2re-1_4_1_02-solaris-sparc.sh to your home directory.

**7** Change execute permissions

```
$ chmod +x j2re-1_4_1_02-solaris-sparc.sh
```

**8** Execute JRE, this will create a JRE subdirectory called j2re1.4.1_02 in your home directory. Remember the path of this directory as you will need this path later when configuring JWS.

```
$ ./ j2re-1_4_1_02-solaris-sparc.sh
```

**9** Follow the instructions in JRE software to install JRE 1.4.1_02

**10** In your j2re1.4.1_02 subdirectory there is a zip file called javaws-1_2_0_02-solaris-sparc-i.zip. Copy this zip file to your home directory.

**11** Install JWS by unzipping the zip file and executing "install.sh".

```
$ unzip ./javaws-1_2_0_02-solaris-sparc-i.zip
```

```
$ ./install.sh
```

**12** Accept the license agreement and enter the path to JRE from step 8.

**13** Follow the remaining online directions.

14 The Sun Solaris client is now setup to launch MG9KEM SN07 client applications.

15 Exit the browser and launch the browser again for settings to take effect.

16 This procedure is complete.

### Removing an MG 9000 Manager JWS application from cache

#### *At the MG 9000 Manager client PC*

1 Access the Java Web Start Application Manager by selecting Start->Programs->Java Web Start. The Java Web Start Application Manager appears.

2 Select View->Downloaded Applications from the menu bar.

3 Select an MG 9000 Manager JWS application to be deleted.

4 Select Application->Remove Application from the menu bar.

5 This procedure is complete.

The following procedure is provided as an optional method for accessing a JWS application on a Sun workstation.

### Accessing JWS application on a Sun workstation

#### *At the client workstation*

1 Change directory to where the Java Web Start application is installed and enter the following command

```
> cd <path/javaws>
```

2 To launch the Java WebStart application manager, type

```
> javaws &
```

3 Select View->Downloaded Applications from the menu bar.

4 This procedure is complete.

# Importing MG 9000 Manager data

## Purpose of these procedures

These procedures provide the steps for importing MG 9000 Manager data in an upgrade scenario.

## When to use these procedures

Use the procedures when it is necessary to import MG 9000 Manager XML data.

The Import NE command is used to import data during an upgrade.

***Note:*** An import NE can only be used on undiscovered NEs which have previously been exported. If the NE is provisioned, the Import command will not show the NE as able to import. The only NEs that will be listed in the window will be undiscovered or non-existent NEs. The Import can be used if rolling back to a previous software release.

## Prerequisites

This procedure has no prerequisites.

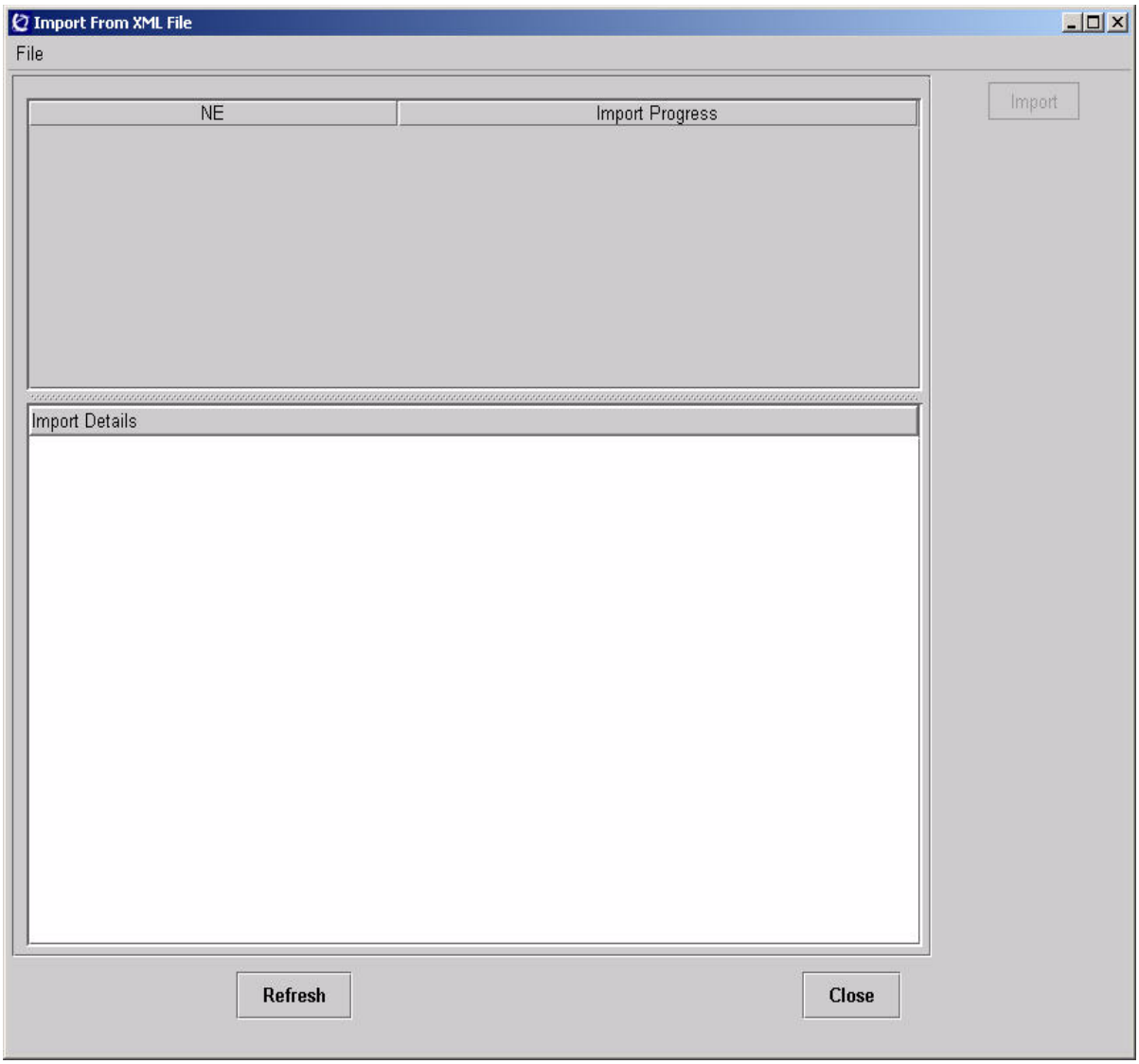
## Action

### Performing an Import NE

***At the MG 9000 Manager***

**1** From the Subnet View, select MG9000->ImportNE from the menu bar. The Import from XML file window appears. The following figure shows the Import from XML file window.

## Import from XML file window




2 When upgrading from SN06 to SN07, click on the NE with path named /data/mg9kem/persistdata/xml/SN06/ <ne_number>.

When upgrading from SN06.2 to SN07, click on the NE with path named /data/mg9kem/persistdata/xml/SN06_2/ <ne_number>.

3 Click Import. The progress will be displayed in the Import details pane. Close the window. The Import NE will cause a discovery and an audit to run. Observe the NE icon in the Subnet View appears with a discovery arrow. When the discovery arrow disappears, the Import is complete.

4 This procedure is complete.

# Exporting MG 9000 Manager data

## Purpose of these procedures

This procedures provides the steps for exporting MG 9000 Manager data in an upgrade scenario.

***Note:*** The Export NE command is no longer available in SN07. This procedure is used to support software upgrades from SN06.X to SN07.

## When to use these procedures

Use the procedures when it is necessary to export MG 9000 Manager XML data.

The Export NE command is used to export the customer's data in preparation for an upgrade. The command writes out the customer's MG 9000 Manager data into XML files that are used when upgrading the MG 9000 Manager and MG 9000.

## Prerequisites

This procedure has no prerequisites.

## Action

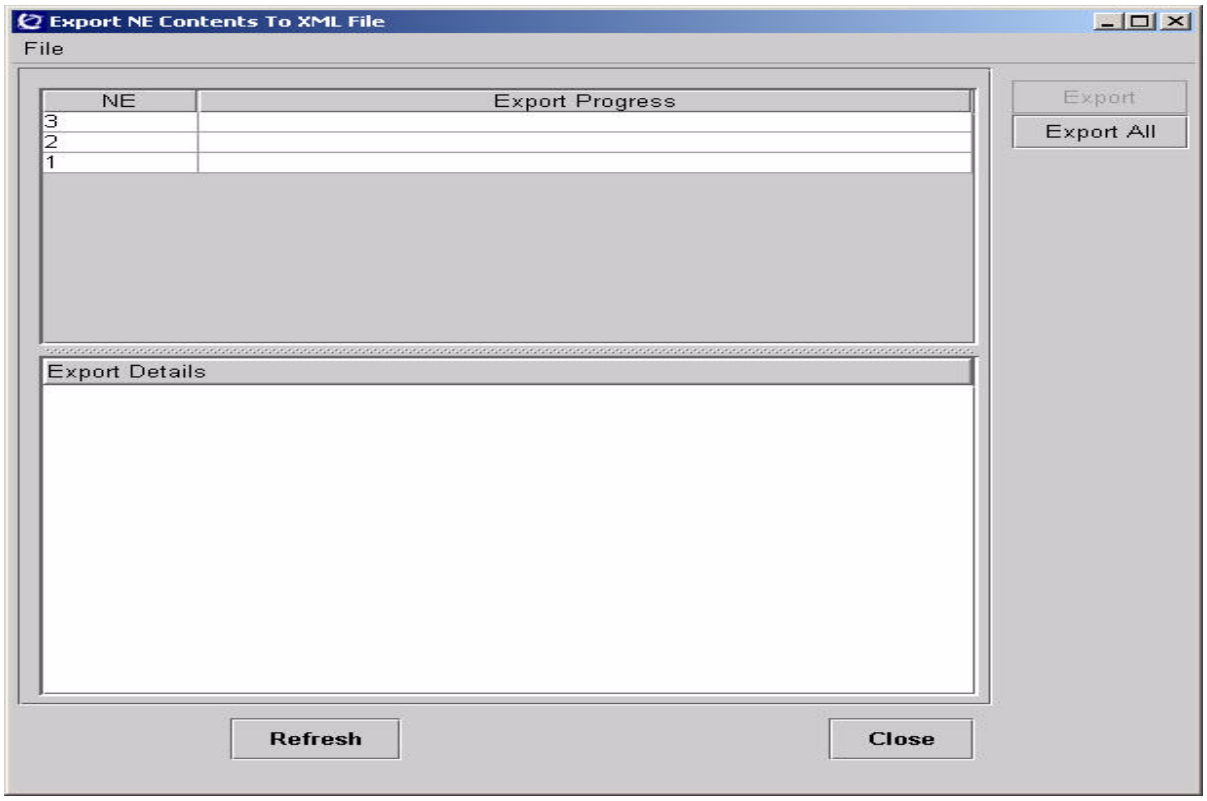
### Performing an Export NE

***At the MG 9000 Manager***

**1** From the Subnet View, select MG9000->ExportNE from the menu bar. The NE Export to XML file window appears. The following figure shows the NE Export to XML file window.

***Note:*** Perform this procedure after provisioning activities are complete.

## NE Export to XML file window




2 Click on the NE, click on Export, then wait for the message “Completed XML Export” appears in the window indicating the export action is complete before closing the window.

***Note:*** Use the Export All button when performing an export in support of an MR release upgrade.

3 This procedure is complete.

# Downgrading the MG 9000 Manager from SN07 to SN06.x

## When to use this procedure

When it is necessary to downgrade the MG 9000 Manager from SN07 to SN06.x, perform this downgrade procedure. Before continuing, consider the following:

- Service impact -
  - — During the time when the NEs have been downgraded to SN06.x and the active DCC card is still at SN07, the node is not being managed. Alarms are going to the SN06.x MG 9000 Manager but any alarms specific to SN07 MG 9000 card loads are being dropped. Also, during this time OM collection cannot be performed. The NE must be added back into the SN06.x OM collector before OMs can be collected again. Also, ESA downloads cannot be performed during this time. Once the MG 9000 cards are downgraded to SN06.x, ESA downloads can then be performed again.
  - — The MG 9000 Manager must be downgraded before downgrading the CS 2000 Management Tools.
- Roll back time - Refer to the Computing upgrade and downgrade times on page 5 table for the time estimated time required for a downgrade from SN07 to SN06.x.

## Prerequisites

There are no prerequisites.

## Action

### Downgrading the MG 9000 Manager from SN07 to SN06.x

***At the MG 9000 Manager server***

**1** If the XML file from the SN06.x export was deleted, put the backup copy of the SN06.x export on the Master Server at /data/mg9kem/persistdata/xml/SN06/<ne_number> for SN06 or

/data/mg9k3m/persistdata/xml/SN06.2/<ne_number> for SN06.2.

***Note:*** This assumes the following:

- the SN06.x master server application is still running
- the SN06.x mid-tier application is still running
- the SN06.x Namespace (MGEMS06 for SN06 and MGEMS062 for SN06.2) and user id are still present on the Oracle database

**2** Ensure that an audit is not being performed or is scheduled for this NE.

**3** In the SN06.x Subnet View, select MG9000->Import NE from the menu bar.

***Note:*** This assumes that the NE has been previously deleted from the SN06.x Subnet View.

**4** Select the SN06.x import path (/data/mg9kem/persistdata/xml/SN06/<ne_number> for SN06 or /data/mg9kem/persistdata/xml/SN06.2/<ne_number> for SN06.2) which is to be downgraded and click on Import.

All the SN06.x data which was previously exported will be imported. Any data added after the export is not necessarily maintained. The NE icon will be created and the discovery/recovery process is started.

**5** Go to the SN07 Subnet View and delete the NE which was just downgraded. This will remove the data from the SN07 namespace and user id in the database for the NE downgraded.

**6** At the SN06.x Subnet View, perform a card downgrade on all the cards on the NE to go back to their SN06.x version using the Downgrading the MG 9000 from SN07 to SN06.x on page 138 procedure. The DCC card must be downgraded first followed by the ITX, ITP, and ABI (DS-512) and/or DS1.

***Note:*** This is a safe stopping point.

***After all network elements are at SN06.x***

**7** Run the pkgrm script on each server (mid-tier server and master server) to remove the SN07 package. This stops the SN07

server application. Uninstall the server application by performing the following steps:

**a** Login as root.

**b** To remove the master server SN07 software, type

```
> pkgrm NTmg9ks07
```

The system responds with

```
The following package is currently installed:
NTmg9ks07 Succession MG 9000 Manager Midtier
Server
   (sparc) NTMG9KS_7_281_0
Do you want to remove this package?
```

```
> Y
```

**c** To remove the mid-tier server SN07 software, type

```
> pkgrm NTmg9km07
```

The system responds with

```
The following package is currently installed:
NTmg9km07 Succession MG 9000 Manager Midtier
Server
   (sparc) NTMG9KM_7_281_0
Do you want to remove this package?
```

```
> Y
```

**d** To remove the OM collector SN07 software, type

```
> pkgrm NTomcltr07
```

The system responds with

```
The following package is currently installed:
NTomcltr07 Succession MG 9000 Manager Midtier
Server
   (sparc) NTOMCLTR07
Do you want to remove this package?
```

```
> Y
```

**8** This procedure is complete.

# Upgrading the MG 9000 Manager software to a maintenance release

## When to use this procedure

Use the following procedure when upgrading the MG 9000 Manager software to a maintenance release (MR).

When a maintenance release is made available to the customer, data on the MG 9000 Manager which is at the SN07 format, must be moved into the MR format to maintain provisioned data.

The MR process is different depending on whether you have a High Availability (HA)-Cluster or non Cluster setup.

- non Cluster setup - a simplex configuration with a single N240 server or two T1400's configured to run the MG 9000 Manager software
- HA-Cluster setup - a duplex configuration with two N240 servers that share one cluster IP address

Use the MR process that applies to your MG 9000 Manager setup.

## Prerequisites

There are no prerequisites.

## Action

## Upgrading MG 9000 Manager software to a maintenance release in a non Cluster setup (simplex configuration)

### *At the MG 9000 Manager*

1 Prior to proceeding with this MR upgrade procedure, perform a backup of the entire Oracle database. Refer to “Performing a data backup on a Sun server” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

2 Upgrade the hardware, if necessary. Ensure the connection from the MG 9000 Manager to the MG 9000 is up.

3 To stop the GUI clients, click on File->Exit from the GUI to exit.

4 Telnet into the server running the MG 9000 Manager mid-tier application and log in as root at the servers during the MR process.

5 Stop the mid-tier server by typing

```
# servstop MG9KMIDTIER_07
```

Process information will be displayed

```
Shutting MG 9K Midtier Server down ...
Midtier shutdown complete
```

6 Stop the Performance Collector and Formatter (PCF) OM collection application by typing

```
# servstop MG9KOMC_07
```

Process information will be displayed

```
Shutting OM Collector down ...
OM Collector shutdown complete
```

7 Stop the master server by typing

```
# servstop MG9KSERVER_07
```

Process information will be displayed

Shutting MG 9K Server down ...

Server shutdown complete

8 If required, upgrade to the MR Succession Solaris Platform Foundation Software (SSPFS) Platform software, if any. Refer to “Upgrading SSPFS Software” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450. Back up the MG 9000 file system and save all data in the /data/mg9kem/persistdata directory. This includes the SSPFS load on the servers running the MG 9000 Manager master and mid-tier applications.

**9** Remove the old MG 9000 Manager server package by typing

**> pkgrm NTmg9ks07**

```
The following package is currently installed:
NTmg9ks07     Succession MG 9000 Manager Server
                (sparc) NTMG9KS_07_11_0
Do you want to remove this package?
```

**10** Install and start the MR release MG 9000 Manager server application and initialize the database by performing the following steps:

**a** Telnet into the server running the MG 9000 Manager server application and log in as root.

**b** Add in the MR server package from the CD-ROM by typing

**> pkgadd -d /cdrom/cdrom0/<MG9K_MR_server_package_name>.pkg**

```
The following packages are available:
1 NTmg9ks07 Succession MG 9000 Manager Server
              (sparc) NTMG9KS_07_44_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

**c** Change to the following directory

**> /opt/nortel/mg9ksrv_07/bin**

**d** Configure the MG 9000 Manager server by typing

```
> ./mg9kconfig.sh
```

The system responds with the following message:

```
Setup has detected configuration settings
from a previous installation.

*****************************************
Setup Server As              : MASTER
Master Server IP Address      : 47.xxx.xx.207
SESM IP Address              : 47.xxx.xx.220
Security Authentication Host: 47.xxx.xx.220
Oracle IP Address            : 47.xxx.xx.8
Image Server                 : 47.xxx.xx.207
Image Server User ID         : maint
SuperCore IMA Image Directory: /swd/mg9k
SuperCore OC3 Image Directory: /swd/mg9k
ITP Image Directory           : /swd/mg9k
ITX Image Directory           : /swd/mg9k
ABI Image Directory           : /swd/mg9k
DS1 Image Directory           : /swd/mg9k
*****************************************
Is the above information correct?
Press the enter key to accept the default
(y/n)?
Default:[n]=>y
```

**11** Start the MR MG 9000 Manager server application by typing

```
> servstart MG9KSERVER_07
```

**12** Install and start the MR release mid-tier application by performing the following steps:

**a** Telnet into the server running the MG 9000 Manager mid-tier application and log in as root on the MG 9000 mid-tier server.

**b** Remove the old mid-tier package by typing

```
> pkgrm NTmg9km07
```

```
The following packages are available:
1 NTmg9km07 Succession MG 9000 Manager
             Midtier Server
            (sparc) NTMG9KM_7_44_0
Do you want to remove this package? y
```

**c** Add in the MR mid-tier package from the CD-ROM by typing

**> pkgadd -d /cdrom/cdrom0/<MG9K_MR_midtier_package_name>.pkg**

```
The following packages are available:
1 NTmg9km07 Succession MG 9000 Manager
            Midtier Server
            (sparc) NTMG9KM_7_44_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

**d** Change to the following directory

**> /opt/nortel/mg9kmtr_07/bin**

**e** Configure the mid-tier by typing

**> ./mg9kconfig.sh**

```
Setup has detected configuration settings
from a previous installation.
**************************************
Master Server IP Address : 47.142.84.210
Security Authentication Host : 47.142.84.211
**********************************************

Is the above information correct?
Press the enter key to accept the default
(y/n)?
Default: [n] => y
```

**f** Start the MR mid-tier application by typing

**> servstart MG9KMIDTIER_07**

**13** Install and start the SN07 MR OM collection application on the server where the mid-tier application is running by performing the following:

**a** Remove the old SN07 OM collector package by typing

```
> pkgrm NTomclt07
```

```
The following packages are available:
1 NTomcltm07 Succession Operational
Measurement Collector
            (sparc) NTOMCLTR_7_441_0
Do you want to remove this package? y
```

**b** Add in the MR OM collector package from the CD-ROM by typing

```
> pkgadd -d
/cdrom/cdrom0/<NTmg9k_MR_OM_collector_package_name>.pkg
```

```
The following packages are available:
1 NTomclt07 Succession Operational
            Measurement Collector
            (sparc) NTOMCLTR_07_42_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

**c** Start the MR OM collector by typing

```
> servstart MG9KOMC_07
```

**14** Install the new MR release GUI client. Refer to Installing the MG 9000 Sun client software on page 66 procedure for a Sun workstation, or to Installing the MG 9000 Manager Windows PC client software on page 64 procedure for a Windows PC.

**15** Reconnect any SN07 third party application that retrieves alarms for delivery to Operations Support System (OSS) fault management systems.

**16** This procedure is complete.

## Upgrading MG 9000 Manager software to a maintenance release in an HA-Cluster setup

### *At the MG 9000 Manager*

1 Upgrade the hardware, if necessary. Ensure the connection from the MG 9000 Manager to the MG 9000 is up.

2 To stop the GUI clients, click on File->Exit from the GUI to exit.

3 Telnet into the active server through the cluster IP address and log in as root.

All MR upgrades are performed on the standby node while the active node is providing service. After the standby node of the cluster is upgraded and configured, perform a failover so the standby node becomes active. After determining that both nodes are functional, the newly active node with the MR update can be cloned to the standby node. This will ensure both nodes or units of the cluster have the same data image.

4 Determine which of the cluster nodes is in standby so it can be upgraded with the MR.

5 Telnet to the cluster IP address, log in as root and type:

```
# bash
```

The cluster prompt changes showing the unit and the status of the unit.

```
mgem_ha_srv-unit0(active):/>
```

6 Remove the old MG 9000 Manager server application on standby unit by typing

```
> pkgrm NTmg9ks07
```

```
The following package is currently installed:
NTmg9ks07     Succession MG 9000 Manager Server
                (sparc) NTMG9KS_7_44_0
Do you want to remove this package? Y
```

7 Install the MR release on the standby unit for the MG 9000 Manager server application by performing the following steps:

**a** Add in the MG 9000 Manager server package from the CD-ROM by typing

**> pkgadd -d /cdrom/cdrom0/<MG9K_MR_server_package_name>.pkg**

```
The following packages are available:
1 NTmg9ks07 Succession MG 9000 Manager Server
            (sparc) NTMG9KS_7_441_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

**b** Configure the MG 9000 Manager server application by typing

**> /opt/nortel/mg9ksrv_07/bin/mg9kconfig.sh**

The system responds with the following message:

```
*****************************************
Setup Server As                : MASTER
Master Server IP Address       : 47.xxx.xx.207
SESM IP Address                : 47.xxx.xx.220
Security Authentication Host: 47.xxx.xx.220
Oracle IP Address              : 47.xxx.xx.8
Image Server                   : 47.xxx.xx.207
Image Server User ID           : maint
SuperCore IMA Image Directory: /swd/mg9k
SuperCore OC3 Image Directory: /swd/mg9k
ITP Image Directory            : /swd/mg9k
ITX Image Directory            : /swd/mg9k
ABI Image Directory            : /swd/mg9k
DS1 Image Directory            : /swd/mg9k
*****************************************
Is the above information correct?
Press the enter key to accept the default
(y/n)?
Default:[n]=>y
```

**8** Install the MR release MG 9000 Manager mid-tier server application on the standby unit by performing the following steps:

**a** Remove the old mid-tier package by typing

```
> pkgrm NTmg9km07

The following packages are available:
1 NTmg9km07 Succession MG 9000 Manager
             Midtier Server
            (sparc) NTMG9KM_7_44_0
Do you want to remove this package? y
```

**b** Add in the MR mid-tier package from the CD-ROM by typing

```
> pkgadd -d
/cdrom/cdrom0/<MG9K_MR_midtier_package_name>
.pkg

The following packages are available:
1 NTmg9km07 Succession MG 9000 Manager
            Midtier Server
            (sparc) NTMG9KM_7_441_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

**c** Configure the mid-tier by typing

```
> /opt/nortel/mg9ksrv_07/bin/mg9kconfig.sh

Setup has detected configuration settings
from a previous installation.
*****************************************
Master Server IP Address     : 47.xxx.xx.209
Security Authentication Host : 47.xxx.xx.208
*****************************************

Is the above information correct?
Press the enter key to accept the default
(y/n)?
Default: [n] => y
```

**9** Install and start the SN07 MR OM collection application on the standby unit by performing the following:

**a** Remove the old SN07 OM collector package by typing

**> pkgrm NTomclt07**

```
The following packages are available:
1 NTomcltm07 Succession Operational
Measurement Collector
            (sparc) NTOMCLTR_7_44_0
Do you want to remove this package? y
```

**b** Add in the MR OM collector package from the CD-ROM by typing

**> pkgadd -d /cdrom/cdrom0/<NTmg9k_MR_OM_collector_package_name>.pkg**

```
The following packages are available:
1 NTomclt07 Succession Operational
            Measurement Collector
            (sparc) NTOMCLTR_7_441_0
Select package(s) you wish to process (or
'all' to process all packages).
(default: all) [?,??,q]:1
```

```
Make the standby unit to be active now by
causing the old active unit to failover and
switch states with the standby unit that has
currently been upgraded.
```

To create a failover, telnet to the cluster IP address, login into active unit and type:

**> swact**

Note: The failover can take around 5 minutes or more

**10** Install the new MR release GUI client. Refer to Installing the MG 9000 Sun client software on page 66 procedure for a Sun workstation, or to Installing the MG 9000 Manager Windows PC client software on page 64 procedure for a Windows PC. Connect the client by pointing to the virtual IP address of the cluster.

**11** Verify the newly active unit recovers by typing the following command while logged into the cluster IP address

**> servquery -status all**

**12** Launch the MG 9000 Manager client.

**13** Reconnect any SN07 third party application that retrieves alarms for delivery to Operations Support System (OSS) fault management systems.

**14** Once it is determined that the newly active node with the MR update is fully functional, mirror the newly active node to the standby node so both nodes have the same image. Perform procedure “Cloning the image of one node in a cluster to the other node” in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

**15** This procedure is complete.

## Patching MG 9000 Manager software

The MG 9000 Manager server, mid-tier, and OM Collector are patched using the Network Patching Manager (NPM) patching system. The user must restart the server, mid-tier, and OM Collector applications through the NPM following application or removal of patches.

For information and procedures for patching the MG 9000 Manager software using the NPM, refer to the Succession Patching chapter in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

The following logs are generated when the MG 9000 Manager server shuts down or starts:

- MGEM700 - The element manger server is starting.
- MGEM702 - The mid-tier server is now starting.
- MGEM703 - The mid-tier server is shutting down.
- OMC700 - The OM Collector process was started.
- OMC701 - The OM Collector process is shutting down.

# Upgrading the MG 9000

This section provides a description of the upgrade process and the software upgrade tool in the MG 9000 Manager used to upgrade software in the cards in the MG 9000. The following procedures for upgrading the MG 9000 are included in this section:

# Installing MG 9000 loads into CS 2000 Core Mgr from DAT tape

## Purpose of this procedure

This procedure describes how to install the MG 9000 software loads onto the CS 2000 Core Manager (SDM) from Digital Audio Tape (DAT) tape.

## When to use this procedure

This procedure is to be used when a Maintenance Non-computing Load (MNCL) software release or standard NCL is delivered to the customer site.

## Prerequisites

When supporting an upgrade from SN06.x to SN07, ensure the SN06.x loads are currently in the SDM in the event there is a need to perform a software downgrade from SN07 to SN06.x.

## Action

**Installing MG 9000 loads into the CS 2000 Core Manager from DAT tape**

***At the CS 2000 Core Manager frame***

**1** Insert the DAT tape in slot 2 or slot 13 on the CS 2000 Core Manager.

***At the CS 2000 Core Manager console or terminal window***

**2** Log in to the CS 2000 Core Manager as the root user.

```
AIX Version 4
(C)Copyrights by IBM and by others 1982, 1996.
login: root
root's password: <password>
```

**3** Enter the SDM maintenance level by typing

```
#sdmmtc
```

**4** Enter the Software Installation Menu level by typing

```
>swim
```

The system responds with the SWIM level.

**5** Enter the Apply level by typing

```
>apply
```

**6** Retrieve the fileset from tape by typing

```
>source <dat_no>
```

*where* dat_no is 0 or 1. Use 0 if the DAT is in slot 2 or 1 if the DAT tape is in slot 13.

**7** Select the new MG 9000 software from the Apply menu by typing

```
>select <fileset_no>
```

*where* fileset_no is an integer value and represents the new MG 9000 software file set such as “4”

To select multiple or all file sets, the Select command should be executed for each file set before the Apply command is executed. As each file set is selected, its file set is highlighted on the MAP terminal screen.

***Note:*** The load will be placed in the following directory: /swd/mg9k/.

**8** Apply the file set to the CS 2000 Core Manager (SDM) by typing

```
>apply
```

**9** The MG 9000 software is now available to support software upgrades from the MG 9000 Manager.

**10** Remove the DAT tape.

**11** This procedure is complete.

# Installing MG 9000 loads into CS 2000 Core Mgr from CDROM

## Purpose of this procedure

This procedure describes how to install the MG 9000 software loads onto the CS 2000 Core Manager (SDM) from CDROM.

## When to use this procedure

This procedure is to be used when a Maintenance Non-computing Load (MNCL) software release or standard NCL is delivered to the customer site.

## Prerequisites

When supporting an upgrade from SN06.x to SN07, ensure the SN06.x loads are currently in the SDM in the event there is a need to perform a software downgrade from SN07 to SN06.x.

## Action

### Installing MG 9000 loads into the CS 2000 Management Tools Manager from CDROM

***At the CS 2000 Management Tools Manager***

**1** Insert the CDROM into the CDROM tray. If the unit is a Netra 240 in a cluster configuration, use the active Netra 240 unit. The active unit is identified by a lit USER LED on the front of the unit.

The CDROM label for the SAM21 Shelf Controller software includes the product code, MG9K0007, on the lower half of the label.

***At the CS 2000 Management Tools console or terminal window***

**2** Log in and then use the su command to gain root privilege.

```
login: username
Password: <password>
Last login: Fri Jun 30 12:48:18 from <otherhost>
su - root
Password: <password>
```

**3** Execute the platform_load_install.sh script by typing

```
# /opt/nortel/sspfs/Scripts/platform_load_install.sh
```

The system responds with the following.

```
Welcome to the Platform Installation Tool
Version 3.2

================================================
RPM INSTALLATION/REMOVAL
============================
1) Install RPM from CDROM 2) Install RPM from
                             Disk
3) Uninstall RPM          4) Query all RPMs

OTHER
=========
C) Change Rotation Parameters P) View Rotation
                                 Parameters
V) MG9K Platform Version      X) Exit
Installed

Please choose one of the following:
```

**4** To install the software type **1** and press the Return key.

The screen clears and the contents of the .rpm package are displayed.

***Note:*** If the message `There is no cd in the CDROM drive, please check drive` is displayed, ensure that the CDROM is inserted in the tray for this unit.

**5** To proceed with the software installation, type Y.

The software is extracted from the .rpm package. The .rpm package is transferred to the CS 2000 Core Manager.

**6** Enter the root password for the CS 2000 Core Manager. The software is installed on the CS 2000 Core Manager.

**7** Enter the Eject command to eject the CD from the CDROM drive.

```
# eject
```

**8** Log out of the CS 2000 Management Tools server.

**9** Remove the CDROM.

**10** This procedure is complete.

# Provisioning a floating IP address

## Purpose of this procedure

The MG 9000 Manager assigns the floating IP address to the card being upgraded dynamically. The floating IP address is provisioned from the MG 9000 Manager as described in the following procedure. Provisioning a floating IP address should be performed during initial installation and commissioning. The floating IP address is persisted in the MG 9000 Manager data.

***Note:*** Before beginning, ensure you have the correct privileges to perform this procedure.

Contact your network administrator to obtain a new IP address when a new floating IP address must be provisioned.

## When to use this procedure

This procedure is provided only if the need arises to change, correct, or add the floating IP address.

## Prerequisites

There are no prerequisites.

## Action

**Provisioning a floating IP address**

***At the MG 9000 Manager***

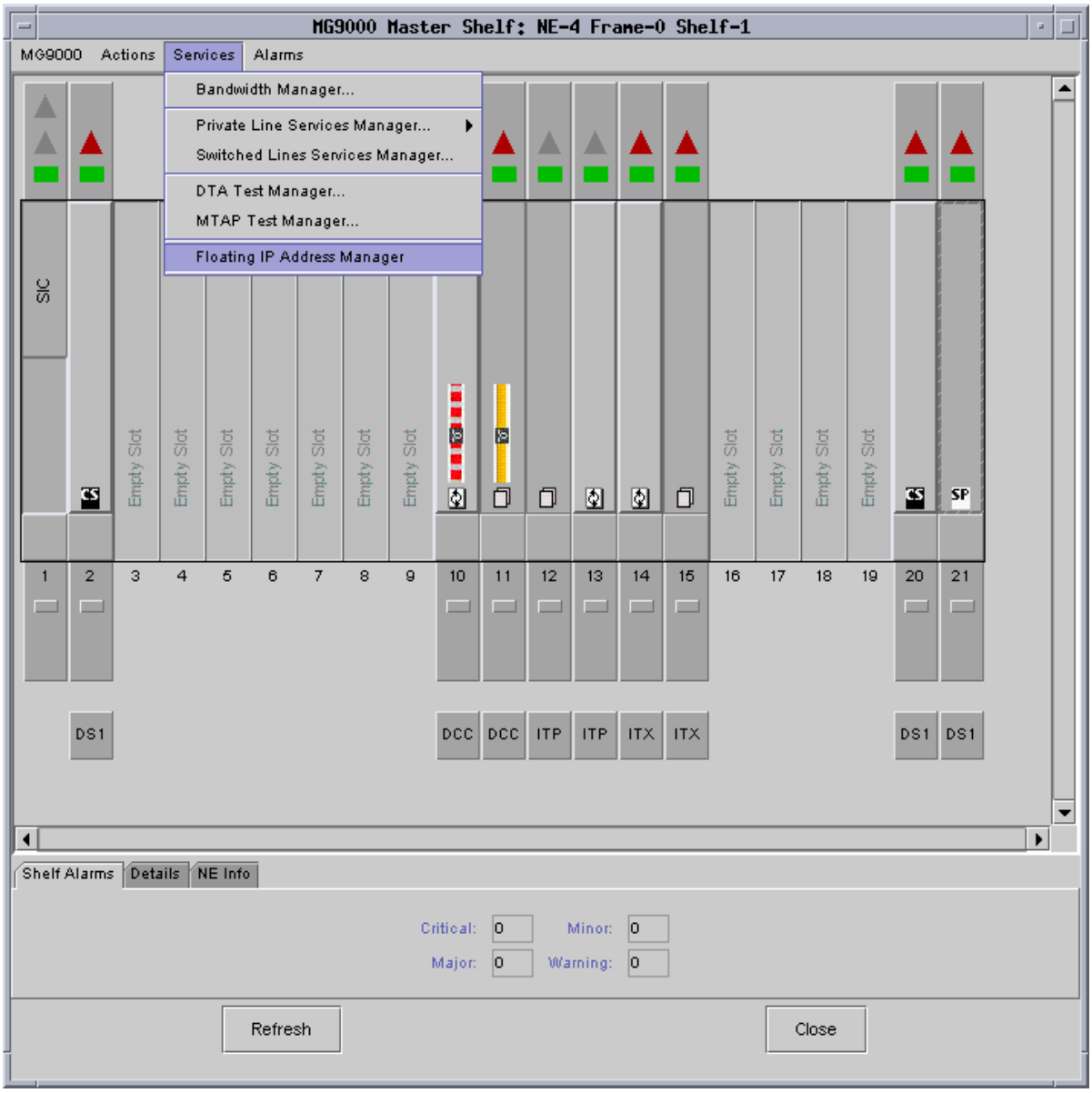
**1** Verify whether a floating IP address has already been provisioned at the MG 9000 Manager by selecting Services->Floating IP Address Manager from the menu bar of any Frame, Shelf, or Card View. This address must be in the same subnet as the MG 9000.

***Note:*** If performing an upgrade from SN06.x to SN07, perform this step from the SN06.x MG 9000 Manager.

**2** To provision a floating IP address in the MG 9000 Manager if necessary, perform the following steps:

**a** From any Frame, Shelf, or Card view select the menu Services. From within Services select Floating IP Address Manager, as shown in the following figure.

## Floating IP Address Manager accessed from Shelf View



**b** Enter the IP address in the Floating IP Address Manager and select Apply. The address will be displayed under existing IP addresses. When finished, select Close.

### Floating IP Address Manager View


**c** If the floating IP address must be replaced, delete the entry first. To delete an entry select the entry, select the Delete check box, then press Apply. When finished select Close.

**d** If the floating IP address is correct, select Close.

**3** This procedure is complete. If this is part of an upgrade, return to the upgrade checklist to continue with the upgrade process.

# Upgrading software in MG 9000 cards

This section provides an overview of upgrading software in MG 9000 cards.

The MG 9000 Manager provides tools for upgrading software in MG 9000 cards to upgrade the software in the following intelligent cards in the MG 9000:

- data control card (DCC)
  - — OC-3
  - — DS1-IMA
- Internet telephony extender (ITX) card
- Internet telephony processor (ITP) card
- DS-512 Access Bridging Interface (ABI) card
- DS1 card (not used in UA-IP solution)

The following cards do not use the Software Upgrade Wizard. Instead, each card must have the software downloaded into it individually using the Software Download tool accessed from the card view for each card. There are software download procedures provided for these cards later in this document.

- metallic test access (MTA) card
- x digital subscriber line (xDSL) card

The software upgrade consists of the following four steps:

1. Configure - The configuration parameters are entered in a Card Upgrade Wizard or MG Upgrade Wizard described later.
2. Download - The MG 9000 is requested to download the software load to a card or cards based in the parameters configured in the previous step. The load is downloaded and stored in flash memory.
3. Apply - The software load is installed. A restart is performed in the card.
4. Accept - The new installed load is made the primary load. The user can no longer revert to the old load unless a complete downgrade is performed.

An additional Abort step can be used to abort an upgrade in progress, an revert back to the old load.

***Note:*** Software upgrade of cards in the MG 9000 must be performed in the following order DS1, ABI, ITP, ITX, DCC.

There are two ways to perform a software upgrade.

- with user interaction - The user must enter separate commands to perform the download, apply, and accept steps.
- without user interaction - The user enters a single command to perform the download, apply, and accept steps.

### Upgrade version rules

The software upgrade application requires the following version order when an upgrade is performed to a load with the same version or to higher version load.

- DS1 or ABI
- ITP
- ITX
- DCC

***Note 1:*** The MG 9000 supports in-service upgrades from SN06.x to SN07. The Silence Suppression variables (used in the UA-IP solution only) will be set to default when the upgrade occurs. To reset the Silence Suppression variables, go to “Provisioning switched lines services” in *MG 9000 Configuration Management*, NN10096-511.

***Note 2:*** When it is necessary to downgrade to SN06.x, perform the Downgrading the MG 9000 from SN07 to SN06.x on page 138 procedure.

***Note 3:*** During a downgrade, attempting to upgrade cards to a version lower than the DCC card is not supported.

Upgrades - the supported upgrade path for the MG 9000 is from SN06 to SN07 for the UA-IP solution and from SN06.2 to SN07 for the UA-AAL1 solution.

Downgrades - the supported downgrade path for the MG 9000 is from SN07 to SN06.2 for UA-AAL1 and SN07 to SN06 for UA-IP.

# Software Upgrade View

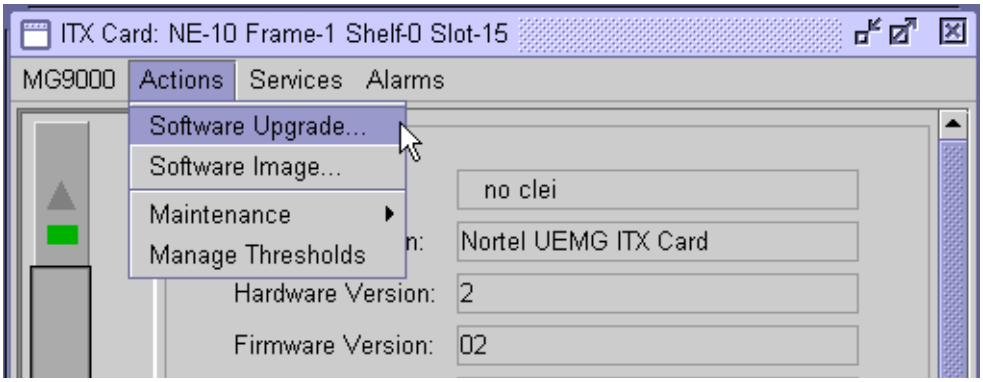
This section provides an overview of the Software Upgrade tool in the MG 9000 Manager.

The software upgrade is performed using the Software Upgrade tool. The Software Upgrade tool is accessed from the MG 9000 Manager. When accessed, the Software Upgrade View appears. The Software Upgrade view is accessed from the

- Card View for upgrading a single card, protection group, or all cards of the same type
- Frame View for upgrading multiple card types

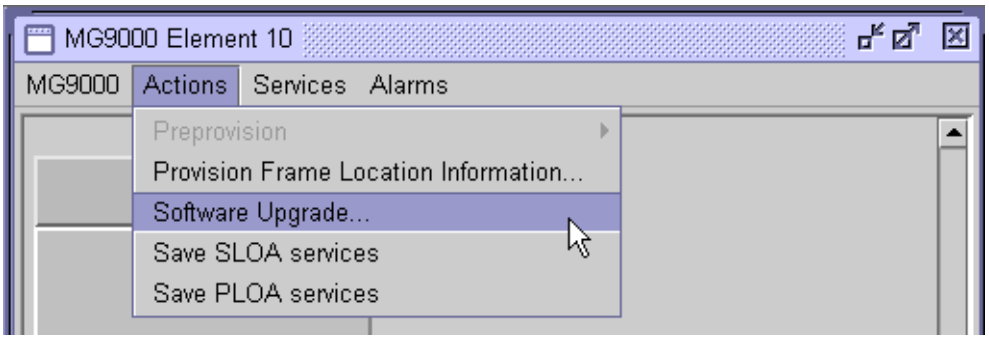
The following figure shows accessing Software Upgrade from the Actions pull-down menu from the Card View

**Software upgrade accessed from Card View**




The following figure shows accessing Software upgrade from the Actions pull-down menu from the Frame View.

**Software upgrade accessed from Frame View**



The Software Upgrade view contains the following four panels

- Upgrade Originator panel - displays the name and number of the MG 9000 where the upgrade is taking place and the location of the view from which the upgrade command was invoked
- Upgrade State - displays text fields with information about an upgrade in progress which includes the status and the action being performed or just completed. The action and upgrade type fields are updated when the upgrade request is confirmed. The upgrade status is updated as upgrade steps are performed.
- Upgrade Type Data - displays data used to perform the upgrade. The text fields in this panel are updated when the configure step is completed. When the upgrade is for a single card type, protection group, or single card it includes text fields for the cards being upgraded, the load server, the user identifier that is used to access the load server, and the full path to the load name. The text field upgrading indicates the cards being upgraded as follows
  - — For a single card upgrade, this field displays the location of the card being upgraded.
  - — For an active/inactive pair of mate cards, the shelf location followed by the two slot numbers is displayed.
  - — For a card type upgrade, the card type being upgraded is indicated.
- Upgrade Instructions & Results - displays the results of an upgrade step and instructions for the next step to perform

Seven buttons are provided in the lower area of the view to enable the user to perform commands. The buttons are described in the following table.

**Software Upgrade View buttons and descriptions**

| Button | Description |
|---|---|
| History | This button creates a new view that shows the upgrade history for the given MG 9000. Refer to Upgrade history on page 145. |
| Refresh | This button updates the Software Upgrade View. |

**Software Upgrade View buttons and descriptions**

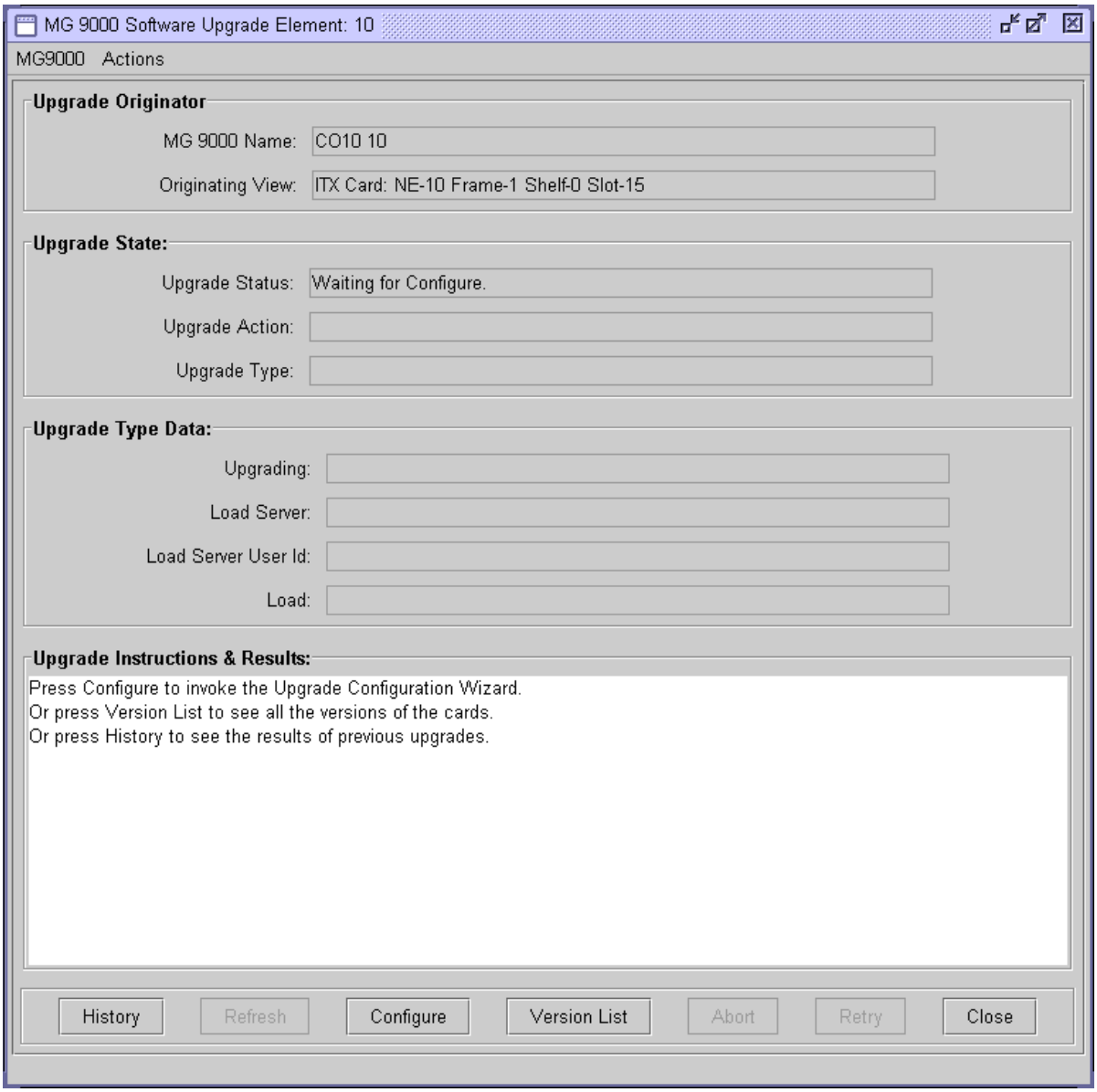
| Button | Description |
|---|---|
| <upgrade step> | This is the second button from the left. This button is used to perform an upgrade step. It changes its label depending on the next step to be performed. It is greyed out when the step is no longer valid.<br>The labels assumed by this button are described as follows:<br>• Configure - The upgrade step button is set to this label when the view is first created, and after an abort is completed.<br>— When pressed on the Software Upgrade accessed from the Card View, the Card Upgrade Wizard is created.<br>— When pressed on the Software Upgrade accessed from the Frame View, the Card Type Selector view is created.<br>See section Upgrade Wizard overview on page 112. If another user is performing a software upgrade, a message is output indicating the tool is in use and the Configure button is disabled.<br>• Upgrade - The Upgrade step button appears when an upgrade without user interaction is chosen. This step accomplishes the actions described in the following three buttons that appear when user interaction is selected.<br>The following labels appear when user interaction is selected:<br>• Download (not applicable to the Software Upgrade accessed from the Frame View) - The upgrade step button is set to this label when the upgrade wizard finishes the configuration for an upgrade with user interaction. When pressed, the MG 9000 is requested to perform a download. The parameters provided by the upgrade wizard are sent to the MG 9000 in the download request.<br>• Apply (not applicable to the Software Upgrade accessed from the Frame View) - The upgrade step button is set to this label when the MG 9000 completes the download step successfully. When this button is pressed the MG 9000 is requested to apply the load to the card previously downloaded.<br>• Accept (not applicable to the Software Upgrade accessed from the Frame View) - The upgrade step button is set to this label when the MG 9000 completes the apply step successfully. When this button is pressed, the MG 9000 is requested to accept this load as the primary load. |
| Version List | View all versions of the cards. |

**Software Upgrade View buttons and descriptions**

| Button | Description |
|---|---|
| Abort | This button is used to request the MG 9000 perform an abort. The button is enabled when an upgrade without user interaction is executed, and when the download step for an upgrade with user interaction is performed. It remains enabled until an abort is initiated or the accept step of the upgrade is initiated. In certain situations, such as when a fault on a card cannot be corrected, the MG 9000 cannot abort and revert back to the old loads. If the abort fails and there is no other way to stop the upgrade, use the Reset Upgrade System command located on the MG9000 History view (refer to Upgrade history on page 145). |
| Close | This button is used to close this view. It is disabled while the upgrade is in progress. The button is enabled when an accept or an abort step is completed.<br>An upgrade view can also be closed by the Close command in the window menu. A Close command is also provided in the MG 9000 menu. For the last two cases the Close command is not disabled when an upgrade is in progress. |
| Retry | This button is enabled only if a step in the upgrade process fails. Retry is used to continue an upgrade action from the place where it stopped after the customer has corrected the problem. |

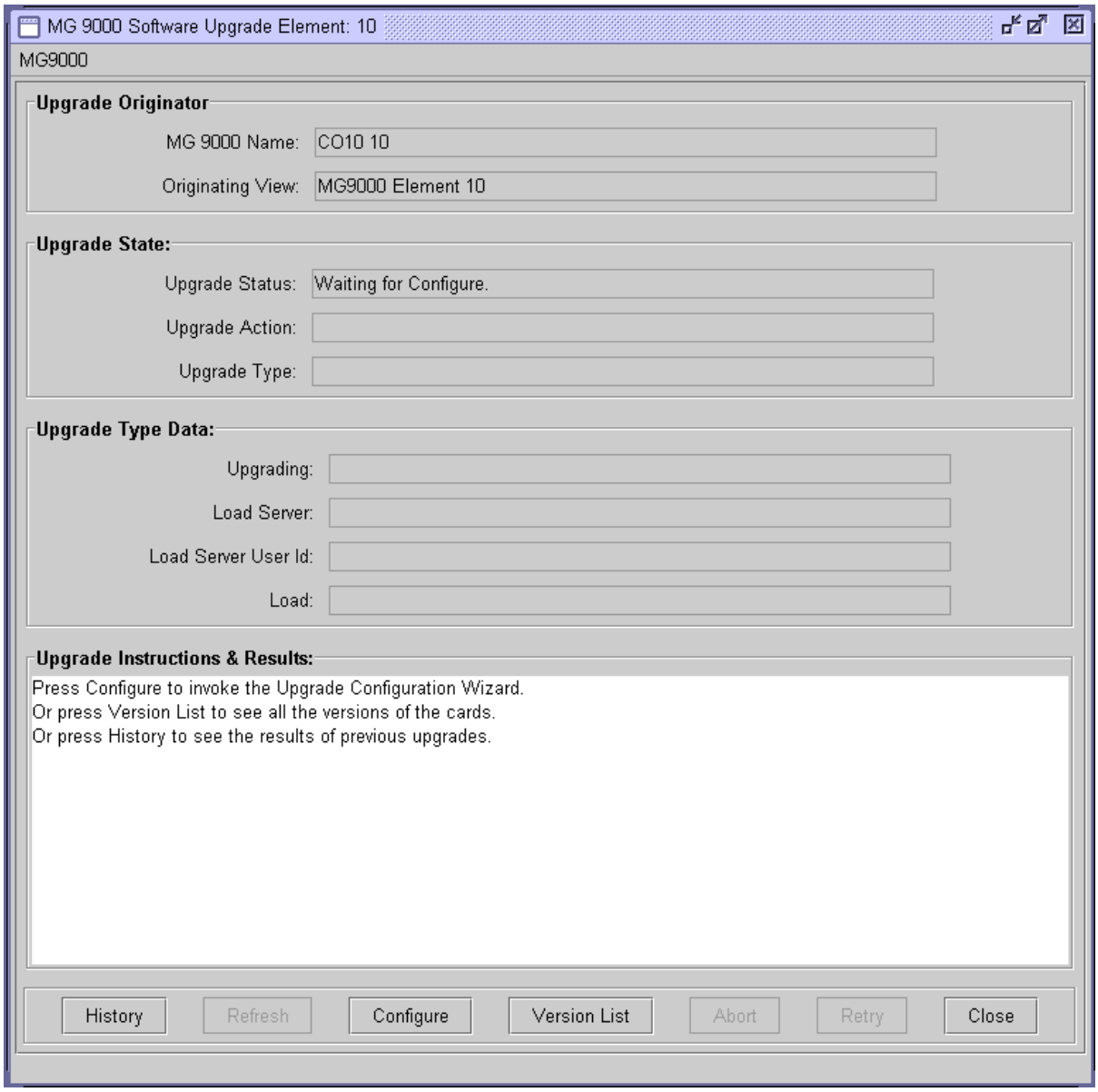
The following figure shows the Software Upgrade View accessed from the Card View.

## Software Upgrade View accessed from Card View



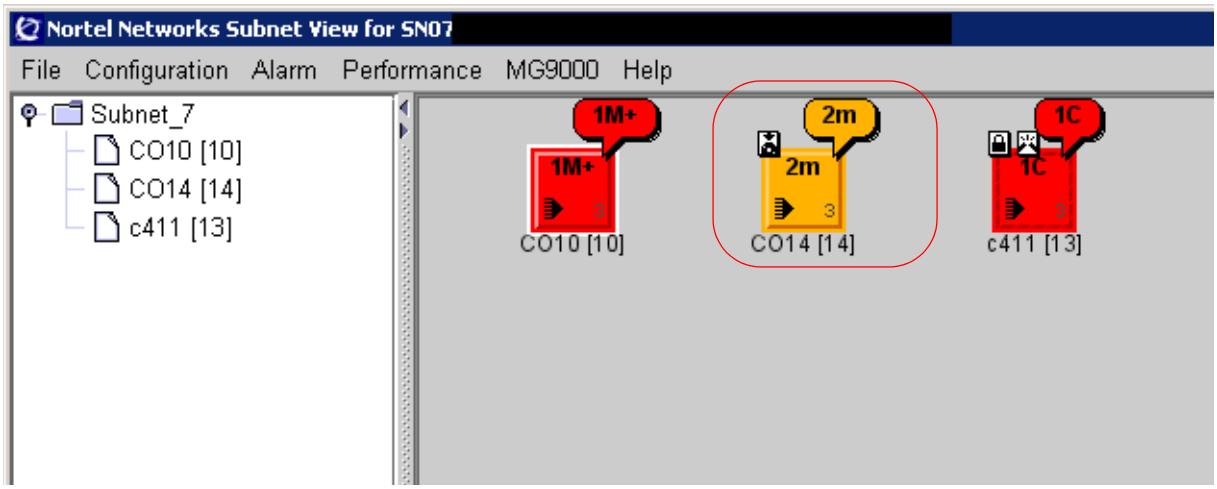

When performing an upgrade of multiple card types, from the Frame View of the MG 9000 to be upgraded, select Actions->Software Upgrade. The Software Upgrade View accessed from the Frame View appears as shown in the following figure.

## Software Upgrade View accessed from Frame View



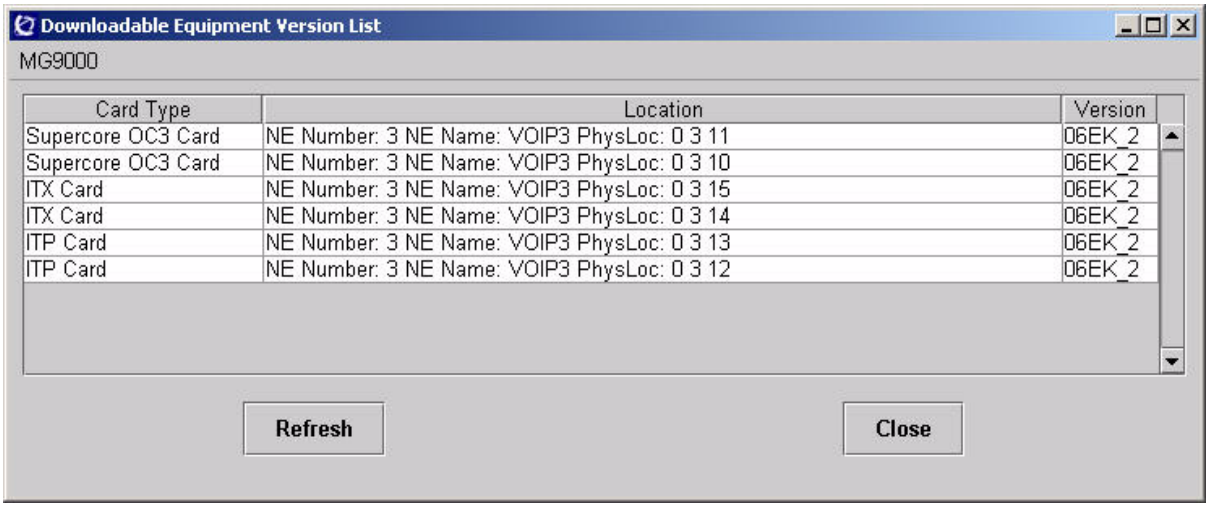

The following figure shows the Subnet View with the download icon on top of the MG 9000 on which a software download is in progress. The download icon also appears at the card and shelf views. The icon remains until the upgrade is complete or an abort completes.

### Subnet View showing download icon




The following figure shows the version list that appears in response to selecting the Version List button on the Software Upgrade View. The version list shows all common cards on the selected MG 9000 and the software version of the loads in the card.

### Version list



# Software upgrade errors and problem resolution

The following table lists the errors that may arise at various steps in the MG 9000 software upgrade process, the cause, and recovery actions.

**MG 9000 software upgrade errors and problem resolution**

| Error type | Cause | Recovery action |
|---|---|---|
| **Upgrade provisioning errors** | | |
| Invalid file type | This error is received if the card type selected is invalid for the load file name provided. Every load file name has the card type embedded within it. | Ensure the load file name is valid for the card type to be provisioned, then try again. |
| Invalid Version | This error is received if the version number embedded within the load file name is invalid for this gateway. For example, if it is only valid to upgrade to versions 5 or 6 and the loadfile name contains version 8, an error is displayed. | Ensure the load file name version is valid for the attempted upgrade, then try again. |
| Invalid State | This card is locked or active. | If this card is active and does have a mate, the request will be denied. First Swact/Spare the card to its mate and continue.<br>If this card is inactive, but locked, first unlock the card and continue. |

## MG 9000 software upgrade errors and problem resolution

| Error type | Cause | Recovery action |
|---|---|---|
| **Download errors** | | |
| FTP server related | Possible causes:<br>• incorrectSDM loadfile/path permissions<br>• floating IP configuration error<br>• network connection failure identified during the provisioning activity | Abort the upgrade. Check provisioned data for validity and provision another upgrade. |
| Corrupt File | This error may be due to:<br>• provisioning an incompatible load file for this card. For instance, if the card type is ITP, the load file name must include ITP. The same is true for other cards.<br>• insufficient memory for an image file | Abort the upgrade.<br>• For the incompatible load file error, check the file name type and provision another upgrade.<br>• For the insufficient memory error, go to dshell and do a filesys/finfo and look a the freespace on the volume. It should be about three times the size of the image file. |
| Node Not Responding | The card may be undergoing a maintenance operation or is in an otherwise invalid state (such as, restarting) or may not be running. | Go to the Card View and verify the card status, if the card status appears correct the error may have been due to an longer than expected communication delay. Abort the upgrade and try again |
| **Apply errors** | | |
| State | If this card is Active, an Apply will fail if this card has a mate. | Abort the upgrade. Cause a redundancy action (Swact or Spare) to occur. This card may have been Inactive during the provisioning of the upgrade. A redundancy action may have occurred which would be the reason the card is no longer Active. |

**MG 9000 software upgrade errors and problem resolution**

| Error type | Cause | Recovery action |
|---|---|---|
| Node Not Responding | This card may be undergoing a maintenance operation, is in an otherwise invalid state (such as, restarting) or may not be running. | Go to the Card View and verify the card status, if the card status appears correct the error may have been due to an longer than expected communication delay. Abort this upgrade and try again |
| SwactDataSync<br>Multi-Node Only | Mate cards in a protection group are NOT in data sync, a required Swact has failed or will not be executed | Go to the Card View and lock the card, then go to the Card View for the Inactive mate and unlock the card. The unlock action will cause a restart (since they are not in data sync).<br>Once the Inactive card has completed its restart, attempt to Abort.<br>***Note:*** If after multiple tries data sync is not achieved, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| SwactMateState<br>Multi-Node Only | For reasons other than not in DataSync, the Active card refuses to give up activity (possibly due to faults on the inActive card). | Determine what the fault state or problem with the inActive card is and correct it.<br>Once the inActive card is in a valid state, you may then again attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| SwactMateUnavailable<br>Multi-Node Only | A communication problem exists between the Inactive and the Active cards. A Swact is not allowed. | Resolve the communication problem.<br>Once the Inactive card is in a valid state, attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |

## MG 9000 software upgrade errors and problem resolution

| Error type | Cause | Recovery action |
|---|---|---|
| SwactError<br>Multi-Node Only | A generic error associated with a Swact request, but enough information cannot be obtained for the Upgrade subsystem to identify the cause. | Contact your maintenance administrator to identify and resolve the problem.<br>Once the card(s) are in a valid state, attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| Generic | See Above | Contact Nortel Networks. |
| **Accept errors** | | |
| Node Not Responding | The card may be undergoing a maintenance operation, is in an otherwise invalid state (such as restarting) or may not be running. | Go to the Card View and verify the card status, if the card status appears correct the error may have been due to an longer than expected communication delay. Abort the upgrade and try again |
| GENERIC | See Above | Contact Nortel Networks. |
| **Abort errors** | | |
| Node Not Responding | The card may be undergoing a maintenance operation, is in an otherwise invalid state (such as restarting) or may not be running. | Go to the Card View and verify the card status, if the card status appears correct, the error may have been due to an longer than expected communication delay. Abort this upgrade and try again. |

**MG 9000 software upgrade errors and problem resolution**

| Error type | Cause | Recovery action |
|---|---|---|
| SwactDataSync | Mate cards in a protection group are NOT in data sync, a required Swact has failed or will not be executed | Go to the Card View and lock, then go to the Card View for the inActive mate and unlock the card. The unlock action will cause a restart (since they are not in data sync).<br>Once the inActive card has completed its restart, you may then again attempt to Abort.<br>***Note:*** If after multiple tries data sync is not achieved, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| SwactMateState | For reasons other than not in DataSync, the Active card refuses to give up activity (possibly due to faults on the Inactive card). | Determine what the fault state or problem with the inActive card is and correct it.<br>Once the Inactive card is in a valid attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| SwactMateUnavailable | There is a communication problem between the Inactive and Active cards. A Swact is not allowed. | Resolve the communications issue<br>Once the Inactive card is in a valid state, again attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |

**MG 9000 software upgrade errors and problem resolution**

| Error type | Cause | Recovery action |
|---|---|---|
| SwactError | This is a generic error associated with a Swact request, but enough information cannot be obtained for the Upgrade subsystem to identify the cause. | Contact your maintenance administrator to identify and resolve the problem.<br>Once the card(s) are in a valid state, attempt to Abort.<br>***Note:*** If you cannot correct the error, contact Nortel Networks for further guidance - additional upgrades are not possible until this is resolved. |
| GENERIC | See Above | Contact Nortel Networks |

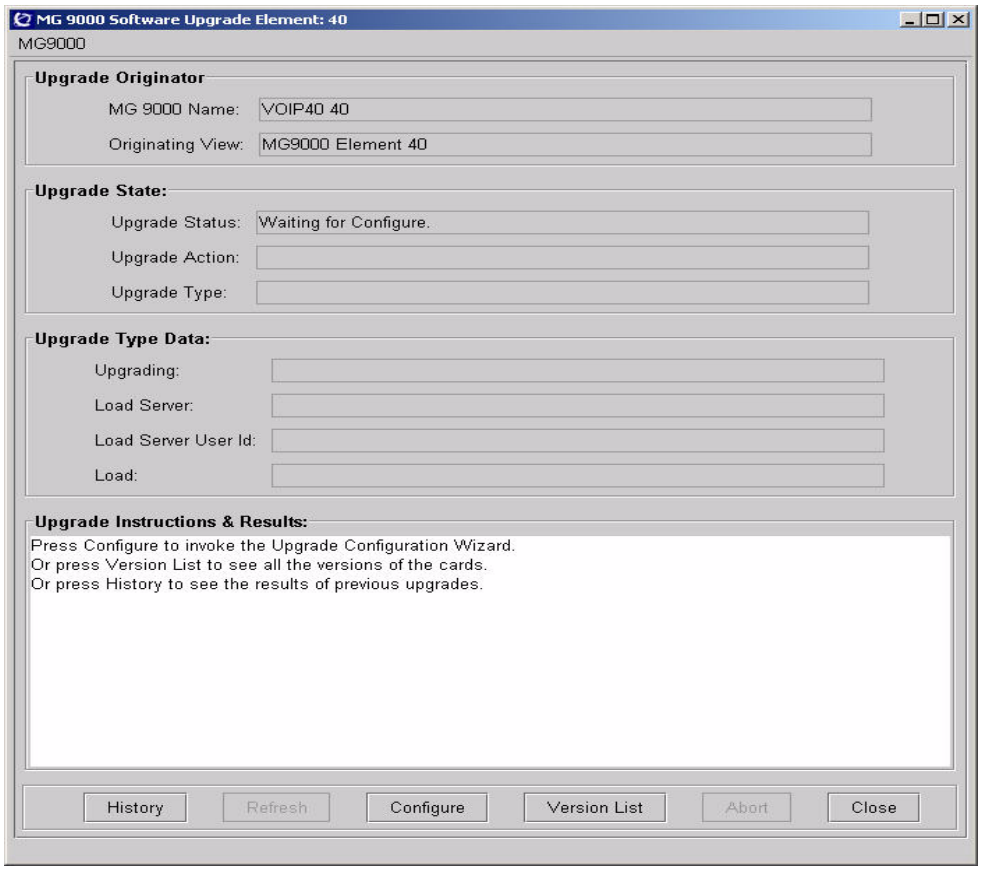
# Upgrade Wizard overview

This section provides an overview of the upgrade wizard which is accessed from the Software Upgrade View.

The Software Upgrade View contains the following text fields:

- MG 9000 Name - provides the name and number of the MG 9000 selected for upgrade
- Originating view - provides the frame view of the MG 9000 view from which the software upgrade request has been originated
- Upgrade status - is set to Waiting for Configure
- All other fields are blank and then updated when the configuration step is completed and the Configure button is enabled. The user is instructed to perform the Configure step in the Upgrade Instructions & Results texts area. The following figure shows the Software Upgrade View.

### Software Upgrade View



After clicking Configure, the Upgrade Wizard appears. The upgrade wizard is available in two forms, Card Upgrade Wizard and MG Upgrade Wizard, depending on how it was accessed. These two are described in the sections that follow.

## Card Upgrade Wizard

This section provides an overview of the Card Upgrade Wizard. The Card Upgrade Wizard is accessed from the individual card view by selecting Actions->Software Upgrade from the menu bar and clicking on Configure in the Software Upgrade View.

The upgrade wizard consists of four panels. Each panel is a step in the card upgrade wizard and all steps are discussed next.

- The first Card Upgrade Wizard step (step 1) allows the user to specify the upgrade type by clicking on the pull down. The following three upgrade types are available:
  - card type - upgrade the individual card from which this panel was launched
  - protection group - upgrade the card from which this panel was launched and its redundant mate (though this option is available in the Card upgrade wizard, it is recommended that upgrades of a protection group be performed using the MG Upgrade Wizard on page 119.)
  - all cards of this type - upgrade all cards of the selected type in the MG 9000 (though this option is available in the Card upgrade

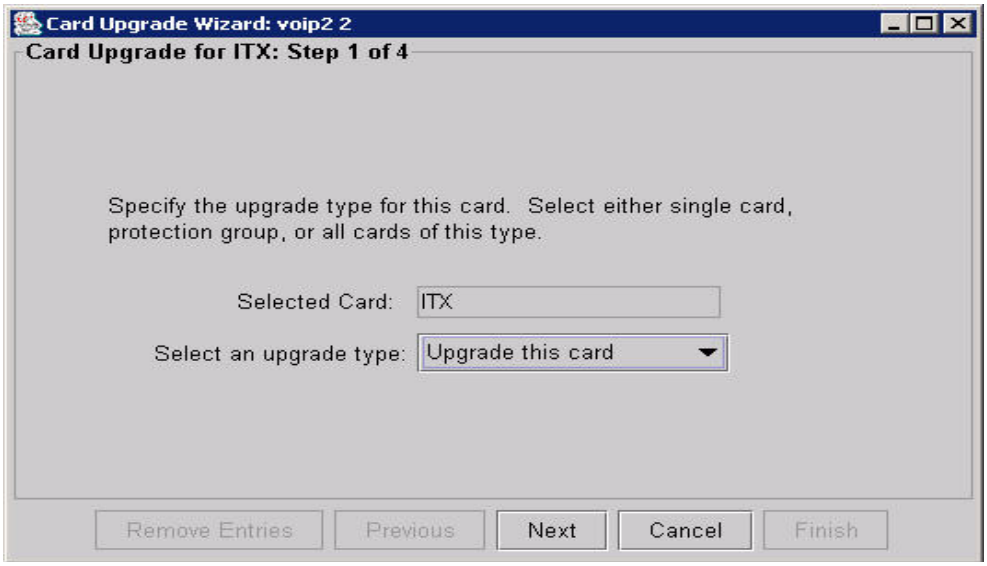
wizard, it is recommended that upgrades of all card of a given type be performed using the MG Upgrade Wizard on page 119.)

The upgrade procedures for protection group and all card type upgrades are similar to the upgrade procedures for single card upgrades. The difference are:

— upgrading of multiple cards instead of a single card with upgrade icon appearing on all cards being upgraded

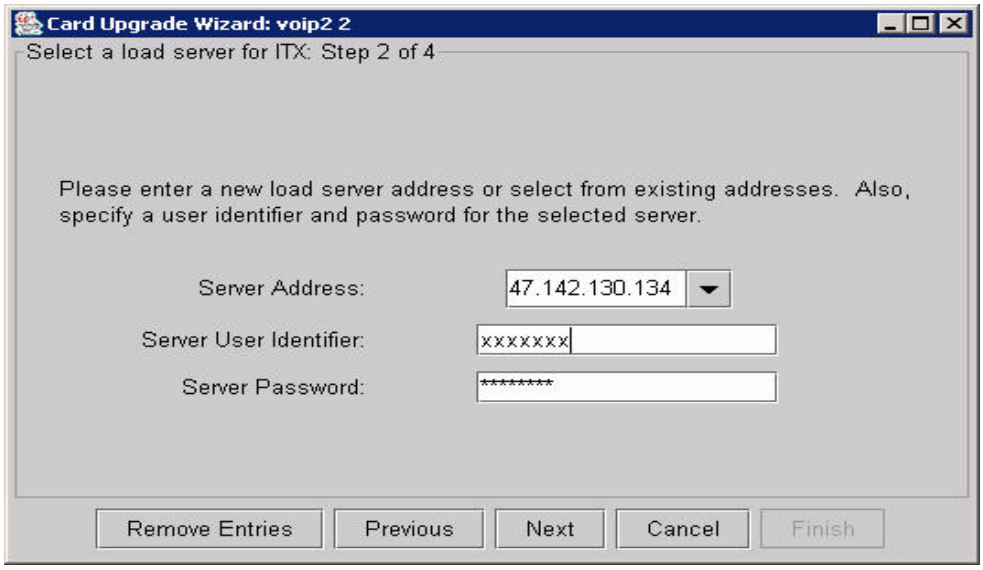
— Swact occurs without user intervention as part of the upgrade

### Card Upgrade Wizard, Step 1



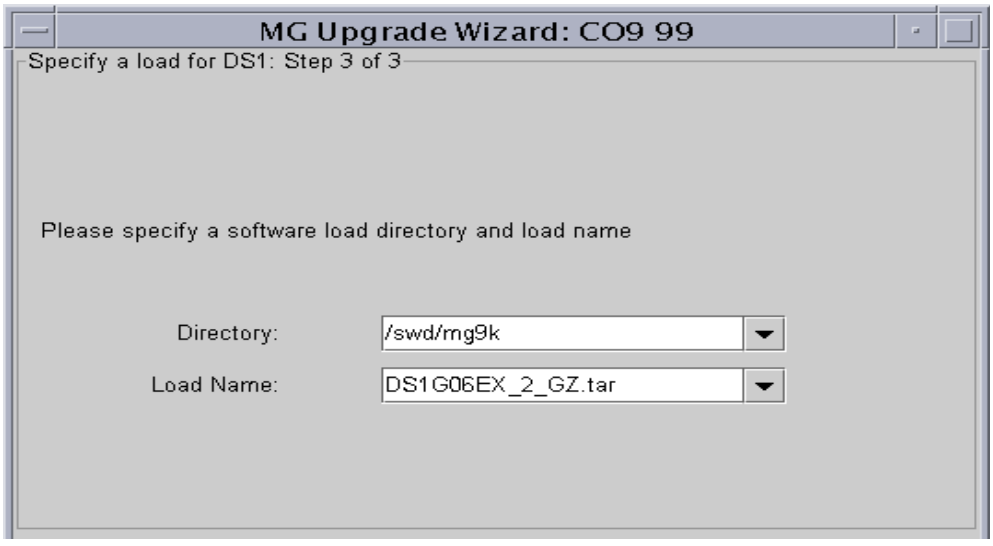

- The next Card Upgrade Wizard step (step 2) allows the user to enter a load server IP address, a userid and password to be used to access the load server. The last six entries for the server IP address are remembered. The user can select between the last six entries or enter a new one. The user is not allowed to move to the next panel until all the entries on this panel are completed with valid data. If the entered IP address, userid, or password are not valid, an error message appears and the user must correct the entry for the upgrade process to proceed to the next step. The following figure shows the Card Upgrade Wizard, Step 2.

### Card Upgrade Wizard, Step 2, select a load server




- The next panel (step 3) allows the user to enter the directory and load name to be used for the upgrade. In the SN06.2 and SN07 version, if the entered directory is incorrect, a message appears to inform the user and the directory must be corrected for the upgrade to proceed.

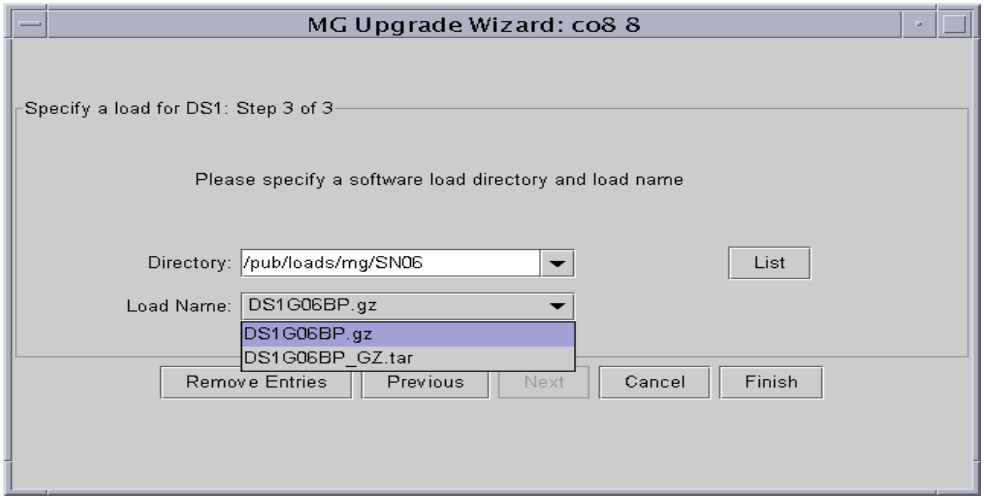
### Card Upgrade Wizard, Step 3, specify a load (SN06 version)




When upgrading from SN06 to SN07, the SN06 version of the Card Upgrade Wizard appears (no List button). Enter the load name. The load name is parsed for the version number. A valid string for the load name consists of the card type in uppercase followed by the version.

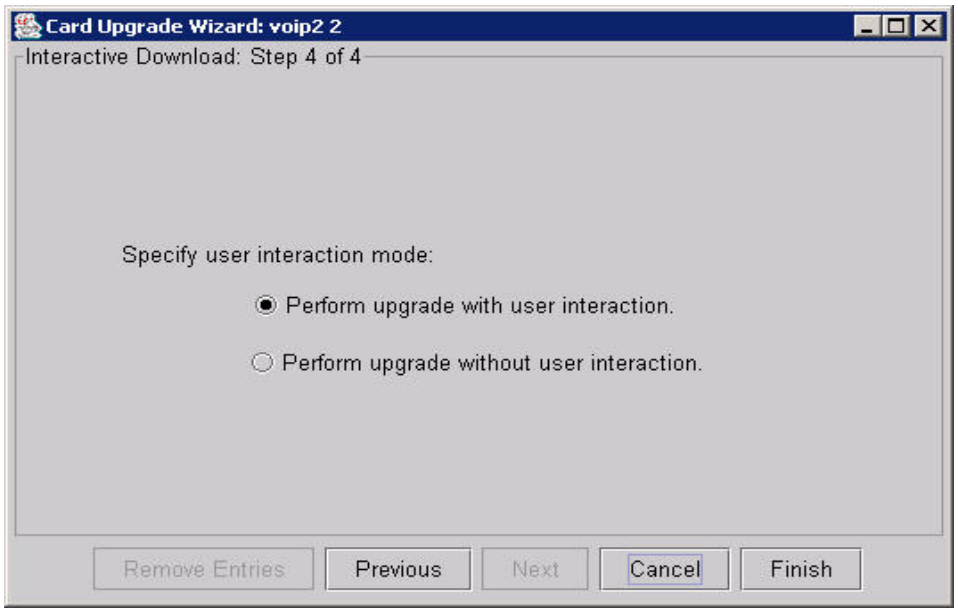
On the SN06.2 or SN07 version of the Step 3, click on the List button to retrieve the files from the SDM and the combo box is populated with MG 9000 patched image (9PI) file names (identified by the .tar extension on the filename). Choose a file from the list. The following figure shows Step 3 of the Card Upgrade Wizard.

**Card Upgrade Wizard, Step 3, specify a load (SN06.2 version)**




- The next panel (step 4) prompts for the user to select between performing the upgrade with user interaction or without user interaction. The following figure shows Step 4 of the MG Upgrade Wizard.

**Card Upgrade Wizard, Step 4, interactive download**




— Perform upgrade without user interaction - It is recommended that this mode is used. When selecting this mode, after the user clicks Finish, the system responds with an Upgrade button on the Software Upgrade View. After the user clicks Upgrade, the system continues with the successful completion of each action, the next action automatically executes without any input needed from the user. The exception to this, is if an error occurs. Then the upgrade stops and the user must click Abort. Error messages will be output. Refer to Software upgrade errors and problem resolution on page 106 for information on responding to errors.

— Perform upgrade with user interaction - When selecting this mode, the system responds with a Download button on the Software Upgrade View. The system then prompts for an Apply followed by an Accept. Like the previously discussed upgrade without user interaction, refer to Software upgrade errors and problem resolution on page 106 for information on responding any errors that may occur.

***Note 1:*** If a “Protection group” or “All cards of this type” upgrade is selected, during the Download action/phase of the upgrade, only one designated card gets the new software from the load server. All other cards involved with the upgrade get the new software from that card.

***Note 2:*** If a “Protection group” or “All cards of this type” upgrade is selected, during an upgrade, a controlled, non-user

requested Swact occurs. The system raises redundancy notifications as normal while Apply action is occurring, only an encountered error terminates its progress.

The user interaction is as follows:

– Apply - After the system successfully completes the Download, the system prompts the user to click Apply. Apply causes the card to restart. After the restart has completed, the card will be executing the new, upgraded software. An automatic SWACT and restart of the mate occurs as part of the Apply action. (Not applicable to single card upgrades.)

– Accept - After the system successfully completes the Apply the system prompts the user to click Accept. Accept causes the card to complete its upgrade activity which takes a few seconds. The system notifies the user when the Accept is completed. Exit the upgrade view by pressing Close. Verify the upgrade is complete by viewing History.

- After clicking Finish, the Upgrade Wizard disappears and the Software Upgrade View prompts the user to click Download (with user interaction) or Upgrade (without user interaction) to start the upgrade process. Upgrade progress is reported in the Upgrade Instructions & Results window of the Software Upgrade View.

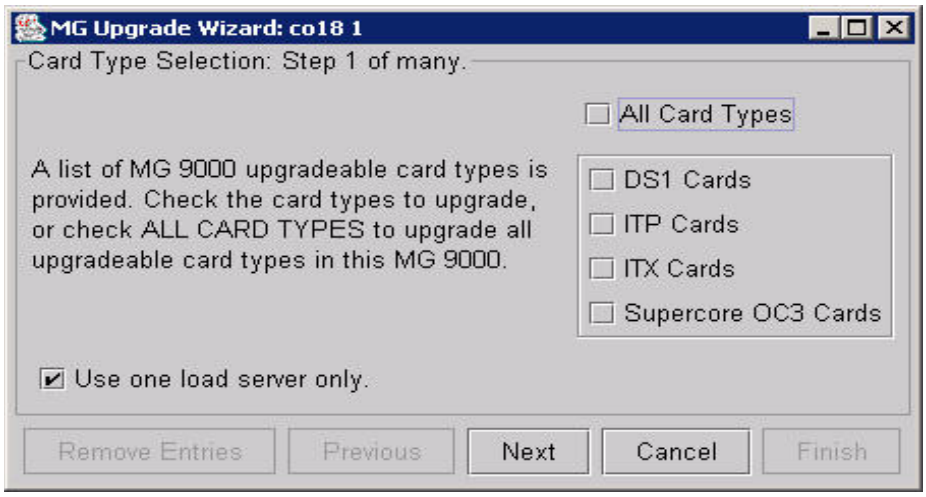
## MG Upgrade Wizard

This section provides an overview of the MG Upgrade Wizard. The MG Upgrade Wizard is accessed from the Frame View by selecting Actions->Software Upgrade from the menu bar and clicking on Configure in the Software Upgrade View.

The upgrade wizard consists of multiple steps (panels), depending on the actions chosen in step 1. Each panel is a step in the MG Upgrade Wizard and all steps are discussed next.

- The first MG Upgrade Wizard step (step 1) allows the user to specify All Card Types, one card type, or multiple card types. The MG Upgrade Wizard will upgrade the software in all cards of the selected type. The following figure shows the MG Upgrade Wizard, Card Type Selection, Step 1.

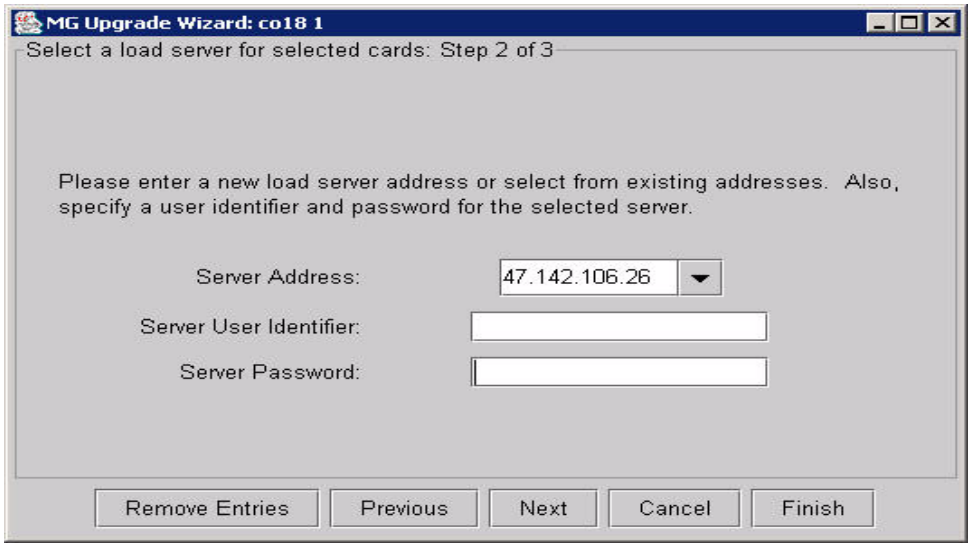
**MG Upgrade Wizard, Step 1, card type selection, multiple cards**




The MG Upgrade Wizard contains a list of card types available to be upgraded on the given MG 9000. One or more than one card types can be selected for upgrade. The user can also select all the card types on a given MG 9000 by selecting All Card Types. The check box “Use one load server only” is provided to specify a single or a different load server for each card type. The default value is to use the same load server for all card types.

- The next MG Upgrade Wizard (step 2) allows the user to enter a load server IP address, a userid and password to be used to access the load server. The last six entries for the server IP address are remembered. The user can select between the last six entries or enter a new one. A user is not allowed to move to the next panel until all the entries on this panel are completed with valid data. The following figure shows the MG Upgrade Wizard, Step 2.

### MG Upgrade Wizard, Step 2, select a load server




The panels that follow the first panel depend on the selections made on the first panel. If the selection “Use one load server only” is selected, the load server panel for a single load server will be displayed when the button Next is pressed. The load server panel contains the server address, user identifier and password for the load server where the load for the selected card type is contained.

If Use one load server only is not selected in the card type selection panel, a separate Load Server and Specify a Load panels are added to the wizard for each card type selected. This allows the use of a different server for each card type selected. For example, if the ITX and ITP card types are selected, the panels displayed after the card type selection panel are: the ITX Load server panel, followed by the ITX Specify a Load panel, followed by the ITP Load server panel, and finally followed by the ITP Specify a Load panel.

When the load server panel is completed and Next is pressed, the Load Information panel is displayed. It provides the directory and load name. If only one card type is selected in the card type selection panel this is the last panel in the wizard. The Finish button is enabled. The user Interaction panel is not provided in the MG Upgrade Wizard because the multi card type upgrade only supports upgrades without user interaction. When Finish is selected, the load name is checked for a valid version range. When the check passes, the wizard is removed and the user is prompted to start the upgrade for the selected card type.

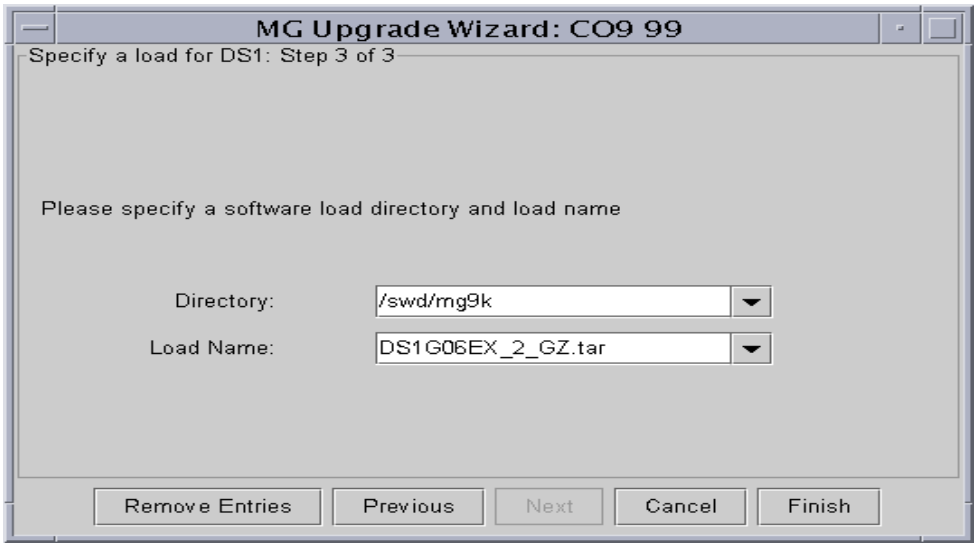
If more than one card type is selected, or all card types are selected, an additional Load Information panel is added to the wizard for each card type selected. For example, if all card types are selected the second panel is the Load server panel as in the previous case,

followed by the Load Information panel for ABI (if installed), followed by the Load Information panel for DS1 (if installed), then ITP, then ITX, and finally OC3 (or DS1-IMA). When the Specify a Load panel for the last card type is completed Finish is pressed from the ABI Specify a Load panel. The load names entered for the selected card types are checked for version range validity after the Next button is pressed on each card type configuration panel. (See Upgrade version rules on page 98.) After the load is validated, the wizard is removed and the user is prompted to start the upgrade.

- The next MG Upgrade Wizard step (step 3) allows the user to enter the directory and load name to be used for the upgrade. Like the Card Upgrade Wizard discussed earlier, if the entered directory is incorrect, a message appears to inform the user and the directory must be corrected for the upgrade to proceed.

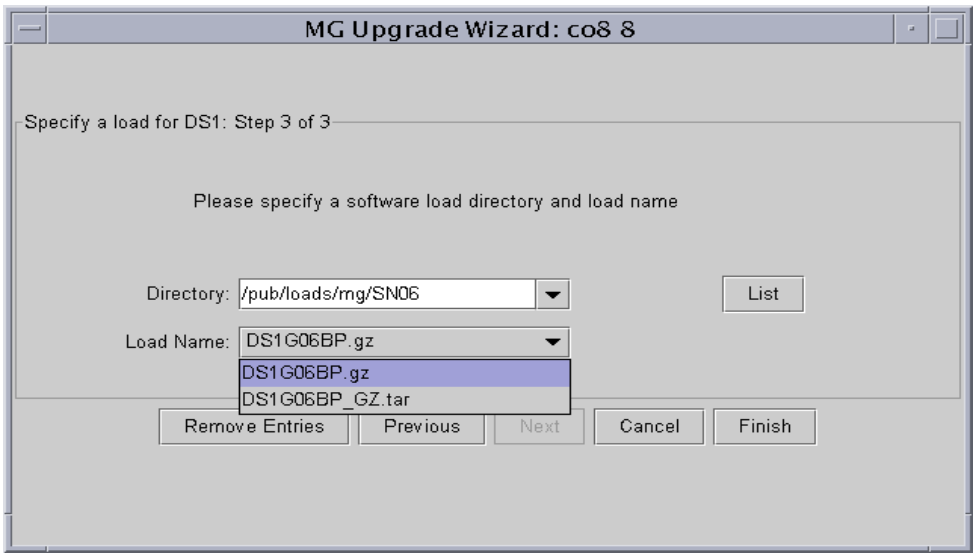
  When upgrading from SN06 to SN07, the SN06 version of Step 3 appears. Enter the load name. The load name is parsed for the version number. A valid string for the load name consists of the card type in uppercase followed by the version.

**MG Upgrade Wizard, Step 3, Specify a load (SN06 version)**




The following figure shows the MG Upgrade Wizard, Step 3, Specify a Load.

**MG Upgrade Wizard, Step 3, Specify a load (SN06.2 version)**




On the SN06.2 version of the MG Upgrade Wizard, Step 3, click on the List button to retrieve the files from the SDM and the combo box is populated with 9PI file names (identified by the .tar extension on the filename). Choose a file from the list.

This step will continue to increment until the loads are specified for each card type that is part of the upgrade. When the load for last card in the upgrade is specified, click Finish.

- When the configuration steps are completed, the MG Upgrade Wizard is closed and the third pane in the Software Upgrade view is modified to display the upgrade data for all the card types selected for upgrade. The Software Upgrade View is shown in Software Upgrade View accessed from Frame View on page 104 with a multiple card types upgrade running. The MG 9000 can only upgrade one card type at a time, so the MG 9000 Manager automatically schedules the upgrade for the selected card types in sequence. The third pane contains the card type for which the upgrade is in progress in the MG 9000.

  The third pane also contains a tabbed panel with a tab for each card type selected for upgrade. Each tabbed entry contains the load server, the user identifier, and the full path load name for that card type. The card type being upgraded is on the top of the tabbed pane.

# Card upgrade with user intervention

## When to use this procedure

Use this procedure when it is necessary to upgrade a single card in an MG 9000. This procedure provides the steps to perform a software upgrade in a single DCC, ITP, ITX, ABI, or DS1 card with user interaction.

***Note:*** This procedure applies to single card upgrades only, not multiple card upgrades.

## Prerequisites

Clear all alarms on the card to be upgraded before proceeding with the upgrade process.

## Action

**Card upgrade with user intervention**

***At the MG 9000 Manager***

**1** From the Subnet View, select the network element (NE) containing the card to be upgraded. Double click on the NE icon and the Frame View appears.

**2** Double click on the shelf containing the card and the Shelf View appears.

**3** Double click on the card to be upgraded and the Card View appears.

**4** At the Card View of the card selected for upgrade click the Actions menu.

**5** At the Actions menu select Software Upgrade... The Card Upgrade view is created as described in Software Upgrade View on page 99.

There are three possible messages in the Card Upgrade View at the time it is created:

- If a previous user closed the view before an abort was completed, the abort may still be in progress. An indication to wait until the abort is completed is displayed. In this case, the

Configure button is disabled. Either wait for the abort to complete or close the view.

A message will appear notifying when the abort is completed, and the Configure button is enabled.

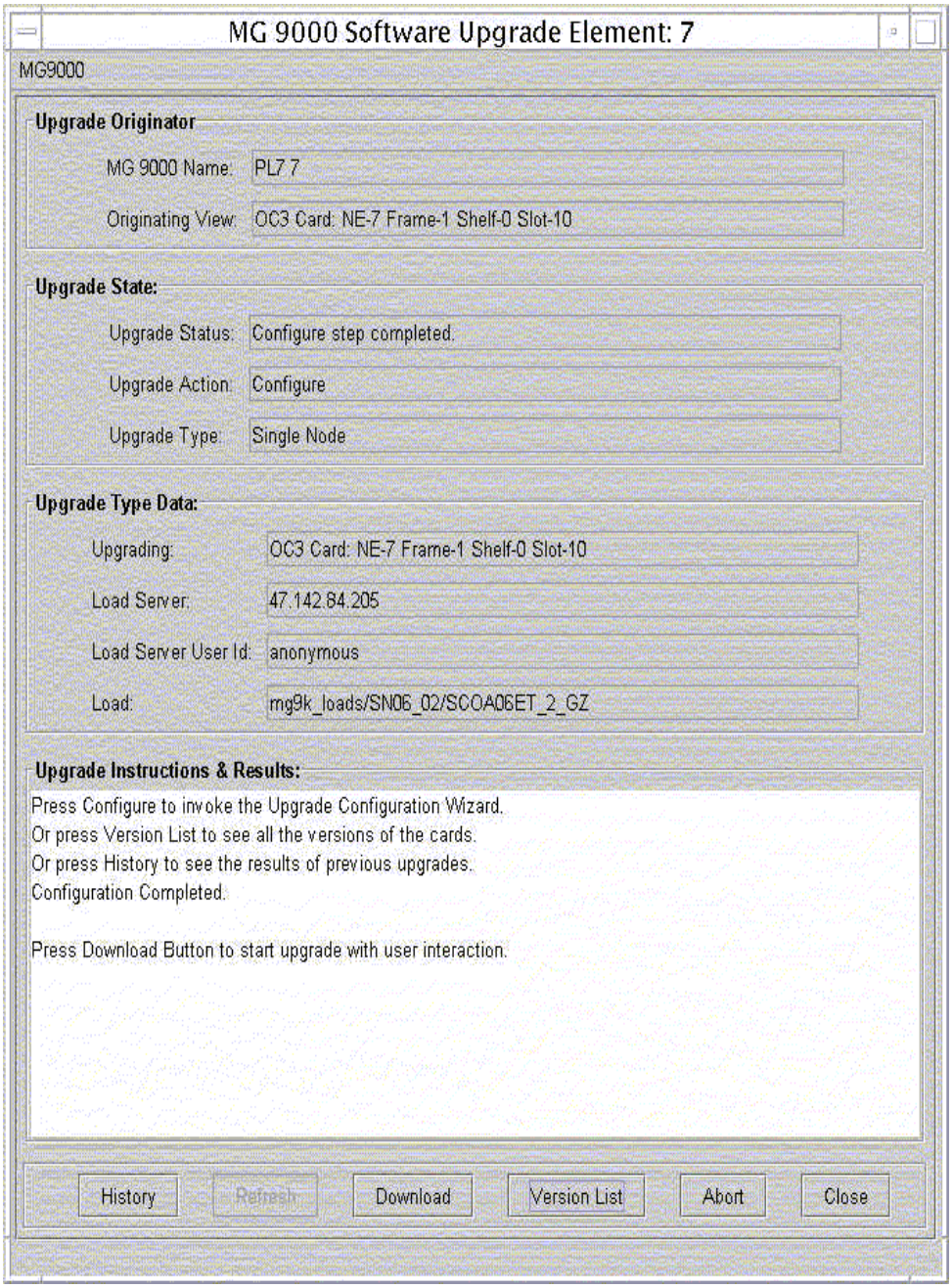
- Another user is performing an upgrade on a card on the same MG 9000. In this case, the user can close the view or abort the upgrade in process and start a new upgrade.
- If no upgrade activity is in progress on the selected MG 9000, the user is prompted to press the Configure button to start the upgrade.
- If the floating IP address has not been provisioned, the system prompts you to provision it. After the floating IP address is provisioned, continue with the procedure.

**6** Press the Configure button to start the Upgrade wizard. The upgrade wizard is created as described in Upgrade Wizard overview on page 112.

**7** Enter the parameters in the first three panels as described in Upgrade Wizard overview on page 112.

**8** Select Perform Upgrade with user interaction in the last panel. Press Finish to completed the configuration. The user is returned to the Card Upgrade View. The following figure shows the Upgrade View with the system prompting the user to press the Download button.

## Software Upgrade View




**9** Press Download to request the MG 9000 to perform the download step. When the download is complete, the results are

displayed in the result area of the Software Upgrade View as follows:

- The download step was successful. The step button changes to Apply. The user is prompted to perform the Apply step
- The download step failed. An indication of the failure is indicated. Possible cause of failure could be:
  - communication problems between the GUI client and the mid-tier layer, between the mid tier layer and the MG 9000 Manager, between the MG 9000 Manager and the MG 9000.
  - invalid configuration parameters. The user could abort the upgrade. When the upgrade is aborted, the step button changes back to Upgrade.

**10** Press the Apply button for the MG 9000 to perform the apply step. When the apply is completed the results are displayed in the result area of the card upgrade view as follows:

- The Apply step was successful. The step button changes to Accept. Go to step 11.
- The Apply step failed. An indication of the failure is indicated. Possible cause of failure could be:
  - communication problems between the GUI client and the mid-tier layer, between the mid tier layer and the MG 9000 Manager, between the MG 9000 Manager and the MG 9000. The user must abort the upgrade. After that it could configure again or close.
  - card is locked or involved in a maintenance activity. The system prompts to unlock or wait until the maintenance activity is completed. Press Apply again.

**11** Press Accept to complete the upgrade. The Accept and Abort buttons are disabled. When the Apply is completed, the results are displayed in the result area of the card upgrade view as follows:

- The accept step was successful. Close the Upgrade View.
- The accept step failed. An indication of the failure is indicated. Possible cause of failure could be communication problems between the MG 9000 Manager client and the mid-tier server, between the mid-tier server and the master server, between the master server and the MG 9000. Abort the upgrade. Abort the upgrade by pressing the Abort button to cancel the remainder of the upgrade.Configure again or close.

**12** When the accept is completed, close the upgrade view. Apply patches. Refer to “Applying patches using the NPM GUI” procedure in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450 for patching procedures.

**13** This procedure is complete.

# Card upgrade without user intervention

## When to use this procedure

Use this procedure when it is necessary to upgrade the software in a single card without user intervention. This procedure provides the steps to perform a software upgrade in a single DCC, ITP, ITX, ABI, or DS1 card without user interaction.

***Note:*** This procedure applies to single card upgrades only, not multiple card upgrades.

## Prerequisites

Clear all alarms on the card to be upgraded before proceeding with the upgrade process.

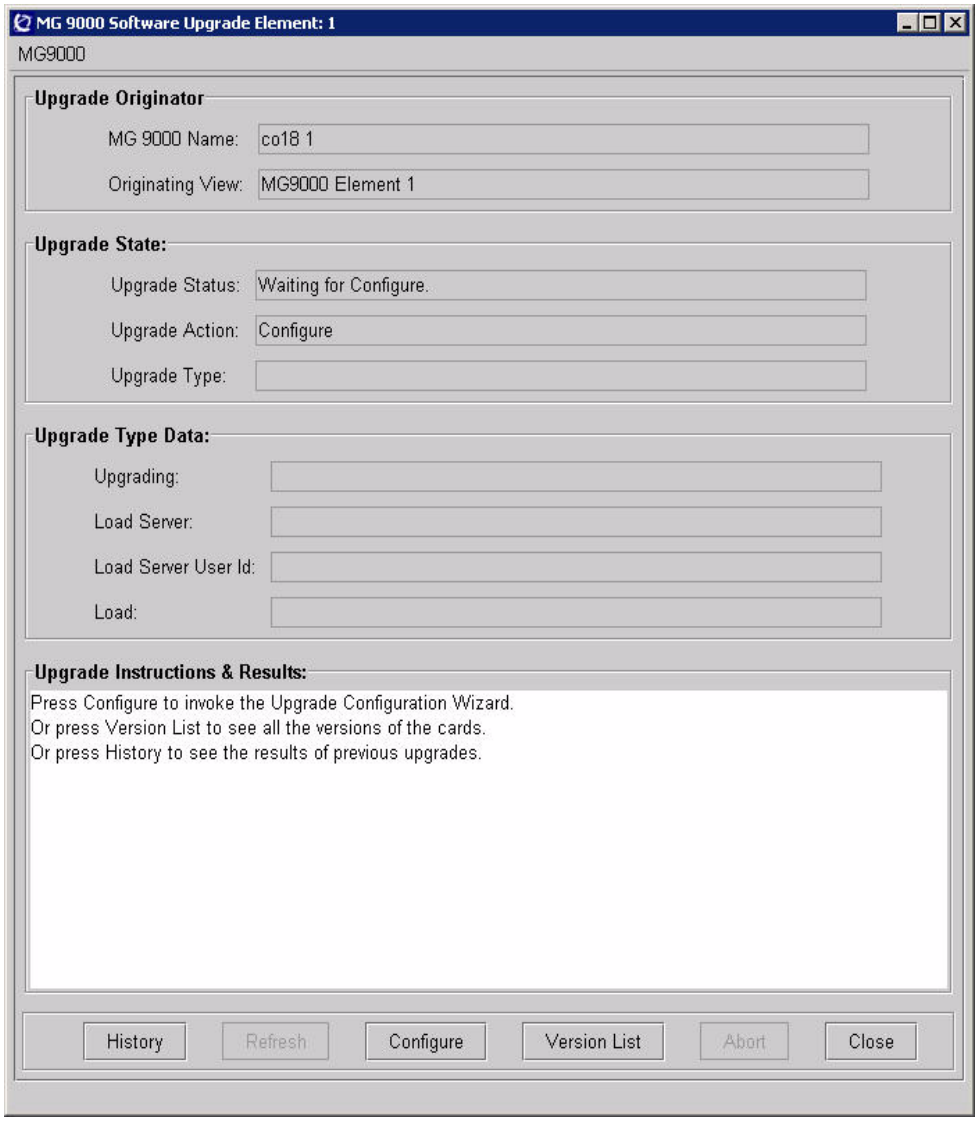
## Action

**Card upgrade without user intervention**

***At the MG 9000 Manager***

1. From the Subnet View, select the network element (NE) containing the card to be upgraded. Double click on the NE icon and the Frame View appears.
2. Double click on the shelf containing the card and the Shelf View appears.
3. Double click on the card to be upgraded and the Card View appears.
4. At the Card View of the card selected for upgrade click the Actions menu.
5. At the Actions menu select Software Upgrade... The Software Upgrade view is created as described in Software Upgrade View on page 99. The Software Upgrade View appears as shown next.

## Software Upgrade View




There are three possible messages in the Software Upgrade View at the time it is created:

- If a previous user closed the view before an abort was completed, the abort may still be in progress. An indication to wait until the abort is completed is displayed. In this case, the

Configure button is disabled. Either wait for the abort to complete or close the view.

A message appears notifying when the abort is complete, and the Configure button is enabled.

- Another user is performing an upgrade on a card on the same MG 9000. In this case, the user can close the view or abort the upgrade in process and start a new upgrade.
- If no upgrade activity is in progress on the selected MG 9000, the user is prompted to press the Configure button to start the upgrade.
- Select Upgrade to continue with the upgrade without user interaction. If the floating IP address has not been provisioned the user is prompted to provision it. After that, continue with the upgrade procedure.

**6** Press the Configure button to start the Upgrade wizard. The Card Upgrade Wizard appears. See Upgrade Wizard overview on page 112.

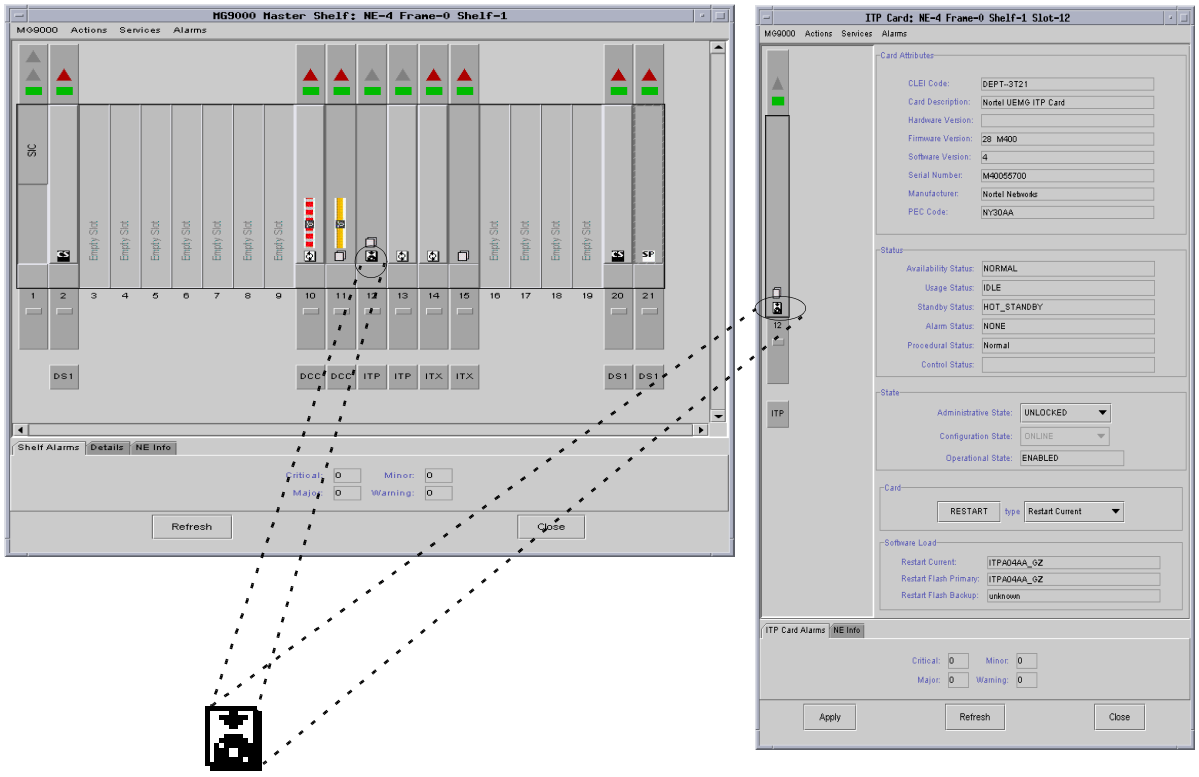
**7** Enter the parameters in the first three panels as described in Upgrade Wizard overview on page 112.

**8** Select “Perform Upgrade without user interaction” in the last panel. Press Finish to complete the configuration.

**9** Messages indicating the progress of the upgrade, download, apply, and accept steps are displayed. If a step fails, a message is displayed indicating the reason. The user can abort and perform the configure step again or close the view.

The download icon appears in the Shelf View and the Card View. The icon remains until the upgrade is completed or aborted.

## Shelf View and Card View with download icon




Software download icon

**10** When the accept is completed, close the upgrade view. Apply patches. Refer to “Applying patches using the NPM GUI” procedure in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450 for patching procedures.

**11** If problems occur, abort the upgrade by pressing the Abort button to cancel the remainder of the upgrade.

**12** This procedure is complete.

# MG upgrades

## When to use this procedure

Use the following procedure when it is necessary to upgrade the software in multiple cards and protection groups without user intervention. This procedure provides the steps to perform a software upgrade in DCC, ITP, ITX, ABI, and DS1 cards without user interaction.

## Prerequisites

Clear all alarms on the cards to be upgraded before proceeding with the upgrade process.

If this procedure is part of the SN06 to SN06.2 upgrade, ensure the NE has been exported and the floating IP address has already been provisioned.

## Action

### MG upgrades

***At the SN06.x MG 9000 Manager***

**1** At the Frame View of the MG 9000 selected for upgrade click the Actions menu.

**2** At the Actions menu select Software Upgrade... The MG 9000 Software Upgrade view is created as described in Software Upgrade View on page 99

**3** Check the Upgrade Originator pane in the MG 9000 Software Upgrade View to ensure the MG 9000 Name and Originating View (NE number) represent the MG 9000 to be upgraded.

**4** Press the Configure button to start the MG Upgrade wizard. The MG Upgrade Wizard, Card Type Selection, Step 1 appears.

**5** Select the card types to upgrade or select all card types by selecting All Card Types. A check appears in the appropriate box next to the selection.

**6** Select Use one load server only to use the same load server for all card types. This is the default. To specify a different load server for each card type, deselect this box. The MG Upgrade Wizard will update to reflect the number of steps in the upgrade process.

Use the following table to determine the next step.

| If upgrading | Do |
|---|---|
| only one card type using one load server | step 7 |
| multiple card types using one load server | step 9 |
| multiple card types specifying a different load server for each card type | step 10 |

**7** In the MG Upgrade Wizard, Select a load server, enter the server address, user identifier, and password for the load server where the load for the selected card type is contained. Click Next.

**8** In the MG Upgrade Wizard, Specify a load, the directory and load name are provided. The upgrade now begins. Go to step 11.

**9** In the MG Upgrade Wizard, Select a load server, enter the server address, user identifier, and password for the load server containing the loads for all the card types to be upgraded.

The system then responds with the MG Upgrade Wizard, Specify a load, in which the directory and load name are entered for the card type (such as, SC0A07AZ_GZ.tar). The system repeats this step in succession for each card type in the following order: DS1, ABI, ITP, ITX, and DCC. The load names are checked for version range validity.

The MG Upgrade Wizard closes, the MG 9000 Software Upgrade View appears with the Upgrade Type Data panel updated to display the upgrade data for all the card types selected for upgrade and reports the card type for which the upgrade is in progress in the MG 9000. Go to step 11.

***Note:*** The MG 9000 upgrades one card type at a time. The MG 9000 Manager schedules the upgrade for the selected card types in sequence.

**10** In the MG Upgrade Wizard, Select a load server, enter the server address, user identifier and password for the load server that contains the image file must be entered.

The system then responds with the MG Upgrade Wizard, Specify a load, in which the directory and image load name are entered for the card type (such as, SC0A07AZ_GZ.tar). The system repeats this step in succession for each card type in the following order: DS1, ABI, ITP, ITX, and DCC. The load names are checked for version range validity.

The MG Upgrade Wizard closes, the MG 9000 Software Upgrade View appears with the Upgrade Type Data panel updated to display the upgrade data for all the card types selected for upgrade and reports the card type for which the upgrade is in progress in the MG 9000.

***Note:*** The MG 9000 upgrades one card type at a time. The MG 9000 Manager schedules the upgrade for the selected card types in sequence.

**11** This procedure is complete.

# Upgrading the MG 9000 from SN06.x to SN07

## When to use this procedure

Use the following procedure when it is necessary to upgrade the MG 9000 from SN06.x to SN07 using MG 9000 Patch Image load files.

***Note:*** The MG 9000 cards are upgraded in the following order: DS1, ABI (DS-512), ITP, ITX, and DCC.

### What is an MG 9000 Patch Image (9PI) load file?

A 9PI is a pre-patched MG 9000 load image file and is identified by the .tar extension on the filename. The patches contained in the image are not required to be applied following the upgrade. However, patches for the MG 9000 are administered using the Network Patching Manager (NPM) patching system so the NPM needs to be taught about the applied patches. Any device that has been upgraded to a pre-patched load must be audited (by the NPM) following the upgrade for the NPM to determine the patch content. Any pre-applied patches need to be placed in the NPM database (using the getpatch command). Also, any additional patches required but not included in the image will need to be applied. For information and procedures for patching the MG 9000 software using the NPM, refer to *ATM Solutions Upgrade*, NN10261-450 or *IP Solutions Upgrade*, NN10344-450.

To display the content of an SN07 patched image without having to load the file into a card and have the NPM perform an audit, login to the machine where the load files are located, change to the directory where the load file resides and enter the following at the command line on one line:

```
> strings SC0A07BB_GZ.tar | awk
'/patchlist_begin/'/patchlist_end/'
```

where SCOA07BB_GZ.tar is an example of a patched image file name

The following is an example of the output in response to the previous command:

```
patchlist_begin
SCO01UBB
SCO02UBB
SCO03UBB
SCO04UBB
SCO05UBB
SCO06UBB
SCO07UBB
SCO10UBB
SCO12UBB
SCO13UBB
SCO17UBB
patchlist_end
```

## Prerequisites

Perform the upgrade in the SN06.x Subnet View.

Ensure the NE has been exported and the floating IP address has already been provisioned.

## Action

### Upgrading the MG 9000 from SN06.x to SN07

#### *At the MG 9000 Manager*

1. At the Frame View of the MG 9000 selected for upgrade click the Actions menu.
2. At the Actions menu select Software Upgrade... The MG 9000 Software Upgrade view is created as described in Software Upgrade View on page 99.
3. Check the Upgrade Originator pane in the MG 9000 Software Upgrade View to ensure the MG 9000 Name and Originating View (NE number) represent the MG 9000 to be upgraded.
4. Press the Configure button to start the MG Upgrade wizard. The MG Upgrade Wizard, Card Type Selection, Step 1 appears.
5. Select “All Card Types” to upgrade all cards. A check appears in the box next to the selection.
6. Select “Use one load server only” to use the same load server. Click the Next button.

**7** In the MG Upgrade Wizard, Select a load server, enter the server address, user identifier, and password for the load server where the SN07 load for the selected card type is contained. Click Next.

**8** In the MG Upgrade Wizard, for each card specify an SN07 load, the directory and load name are provided. Respond to each step requesting the load name for the card. Ensure you use the latest pre-patched image load file provided by Nortel located on the SDM in directory /swd/mg9k/. The following represent SN07 load names, though the ones listed here may not be the latest available:

- DS1G07AZ_GZ
- ABIG07AZ_GZ
- ITPA07AZ_GZ
- ITXA07AZ_GZ
- SCOA07AZ_GZ (DCC-OC3) or SCIA07AZ_GZ (DCC DS1-IMA)

Click on Next and repeat this step for each card type. Click on Finish.

**9** At the Software Upgrade View, click on Upgrade to start the upgrade process.

***Note:*** All upgraded nodes (cards) display a major alarm which remains until the NE is controlled by an upgraded MG 9000 Manager.

**10** This procedure is complete.

If the MG 9000 Manager is a one-server configuration, go to step 8 on page 16 of the MG 9000 Manager and MG 9000 SN06.x to SN07 upgrade checklist (one-server) and continue with the upgrade process.

If the MG 9000 Manager is a two-server configuration, go to step 13 on page 30 of the MG 9000 Manager and MG 9000 SN06.2 to SN07 upgrade checklist (two-server) and continue with the upgrade process.

# Downgrading the MG 9000 from SN07 to SN06.x

## When to use this procedure

Use the following procedure when it is necessary to downgrade the MG 9000 from SN07 to SN06.x using MG 9000 Patch Image load files.

***Note 1:*** The MG 9000 cards must be downgraded in the following order: DCC, ITX, ITP, ABI (DS-512), and/or DS1.

***Note 2:*** During a downgrade, the GWC cannot be downgraded until all MG 9000s that subtend from it are downgraded.

**WARNING**
**Loss of clock synchronization**
If the MG 9000 must be downgraded from SN07 to SN06.x, and the MG 9000 is synched to DCCBits (external timing), the BITS interface cable must be transferred from the DCC cards (RJ45 connector) to the ITX cards (DB9 connector with wire-wrap). The technician must manually provision ITXBits timing using the local craft interface (LCI). Refer to *MG 9000 Configuration Management*, NN10096-511. If the MG 9000 was provisioned for Network (internal timing), no changes are required.

### What is an MG 9000 Patch Image (9PI) load file?

A 9PI is a pre-patched MG 9000 load image file and is identified by the .tar extension on the filename. The patches contained in the image are not required to be applied following the upgrade. However, patches for the MG 9000 are administered using the Network Patching Manager (NPM) patching system so the NPM needs to be taught about the applied patches. Any device that has been upgraded to a pre-patched load must be audited (by the NPM) following the upgrade for the NPM to determine the patch content. Any pre-applied patches need to be placed in the NPM database (using the getpatch command). Also, any additional patches required but not included in the image will need to be applied. For information and procedures for patching the MG 9000 software using the NPM, refer to *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.

## Prerequisites

Ensure the MG 9000 to be downgraded does not exist in the SN07 Subnet View.

Ensure the downgrade is performed from the SN06.x Subnet View.

Ensure the PEC codes are not for new SN07 hardware by checking the hardware versions. If the new hardware is not removed, the SN06.x loads will fail to load with a corrupt loadfile error.

Ensure that if the OC-3 ports have been channelized, they are manually unchannelized prior to downgrading.

## Action

### Downgrading the MG 9000 from SN07 to SN06.x

***At the MG 9000 Manager***

1. At the Frame View of the MG 9000 selected for upgrade click the Actions menu.
2. At the Actions menu select Software Upgrade... The MG 9000 Software Upgrade view is created as described in Software Upgrade View on page 99.
3. Check the Upgrade Originator pane in the MG 9000 Software Upgrade View to ensure the MG 9000 Name and Originating View (NE number) represent the MG 9000 to be upgraded.
4. Press the Configure button to start the MG Upgrade wizard. The MG Upgrade Wizard, Card Type Selection, Step 1 appears.
5. Select All Card Types to downgrade all cards. A check appears in the appropriate box next to the selection
6. Select Use one load server only to use the same load server.
7. In the MG Upgrade Wizard, Select a load server, enter the server address, user identifier, and password for the load server where the SN06 load for the selected card type is contained. Click Next.
8. In the MG Upgrade Wizard, for each card specify an SN06.x load, the directory and load name are provided. Respond to each step requesting the pre-patched image load file for the card. Ensure you use the correct pre-patched load on the SDM in directory /swd/mg9k/. The following represent SN06 load names, though the ones listed here may not be the latest available:
   - SCOA06DN_GZ.tar (DCC-OC3) or SCIA06DN_GZ.tar (DCC DS1-IMA)
   - ITXA06DN_GZ.tar
   - ITPA06DN_GZ.tar

- DS1G06DN_GZ.tar
- ABIG06DN_GZ.tar

Click on Finish.

**9** At the Software Upgrade View, click on Upgrade to begin the downgrade. The downgrade process starts.

**10** Downgrade the software in the MTA and xDSL cards to SN06.x loads using the Downloading software into the MTA card on page 141 and Downloading software into the xDSL card on page 143 procedures.

***Note:*** Perform the downgrade of the MTA card and xDSL card from the SN06.x Subnet View.

**11** This procedure is complete.

# Downloading software into the MTA card

## When to use this procedure

Use this procedure when it is necessary to update software onto an MTA card. The Software Download Manager menu option provides access to a Software Download Manager window.

## Prerequisites

If the software download is part of the SN06.x to SN07 upgrade, ensure the floating IP address has already been provisioned.

## Action

### Downloading software into the MTA card

***At the SN06.x MG 9000 Manager***

1 At the Subnet View, double click on the MG 9000 that has the MTA card to which software is to be downloaded. The Frame View appears.

2 At the Frame View, double click on the shelf in which the MTA card resides. The Shelf View appears.

3 At the Shelf View, double click on the slot in which the MTA card resides. The card view appears.

4 To request a download, select the Locked option for the Administrative Status in the Status box. The card must be Locked prior to requesting a download.

5 From the MTA Card View menu level, select Actions->Software Download Manager

6 Enter data in the fields as follows:

- File Path - the path and name of the file on the SDM to be downloaded to the card (/mg9k/<loadname>)
- IP address - the file location (IP address)
- Server userName - the login name for the server where load resides
- Server password - the password for the server where load resides
- select Force Download if forced download is required

7 Select the Download button at the bottom of the Software Download Manager window.

Once the download is complete, the Load Status field indicates if the download was successful, and the software load being used by the card is displayed under Restart Current in the Software Load pane.

***Note:*** After the software download is performed, a message appears stating that the MTA card is restarted.

Perform the download again, since the MTA card has a Primary and Backup load. When a download is performed, the Primary load becomes the Backup load and the new load becomes the Primary load. Performing the download twice makes the new load the Primary and the Backup load and guarantees the current load is the new load.

**8** After the second download is complete, from the MTA Card View set the Administrative Status of the MTA card to Unlocked by selecting the Unlocked option in the Status box.

**9** This procedure is complete. If this action is part of an MG 9000 upgrade, return to the upgrade checklist to continue with the upgrade process.

# Downloading software into the xDSL card

## When to use this procedure

Use this procedure when it is necessary to download updated software onto an xDSL card. The Software Download Manager menu option provides access to a Software Download Manager window.

## Prerequisites

Perform this activity during periods of low traffic.

If the software download is part of the SN06.x to SN07 upgrade, ensure the floating IP address has already been provisioned.

## Action

**Downloading software into the xDSL card**

***At the SN06.x MG 9000 Manager***

1 At the Subnet View, double click on the MG 9000 that has the xDSL card to which software is to be downloaded. The Frame View appears.

2 At the Frame View, double click on the shelf in which the xDSL card resides. The Shelf View appears.

3 At the Shelf View, double click on the slot in which the xDSL card resides. The card view appears.

4 To request a download, select the Locked option for the Administrative Status in the Status box. The card must be Locked prior to requesting a download.

5 From the xDSL Card View menu level, select Actions->Software Download Manager

6 Enter data in the fields as follows:

- File Path - the path and name of the file to be downloaded to the card (/mg9k/<loadname>)

  ***Note 1:*** For cards with no patchables (no .tar file), include the .bin extension (such as, DSLA07BW.bin) as /mg9k/DSLA07BW.bin.

  ***Note 2:*** In certain offices, the file path may be /swd/mg9k/

- IP address - the file location (IP address)

- Server userName - the login name for the server where load resides
- Server password - the password for the server where load resides
- select Force Download if forced download is required. The force option is needed only when the card must be reloaded with the same load that already exists on the card.

**7** Select the Download button at the bottom of the Software Download Manager window. When the download begins the download icon appears on the card.

Once the download is complete, the download icon disappears and the initialization icon appears. Once initialization is complete, the icon disappears and the software load used in the card is displayed in the Software Load section of the Card View.

**8** If necessary, repeat steps 3 through 7 for all xDSL cards in the MG 9000 network element that must be upgraded. Otherwise skip this step.

**9** Unlock the cards that were locked in step 4.

**10** This procedure is complete. If this action is part of an MG 9000 upgrade, return to the upgrade checklist to continue with the upgrade process.

## Upgrade history

The Upgrade History is a view that is accessed from the Software Upgrade View that reads information about upgrades performed on an MG 9000. The Upgrade History contains:

- the time the upgrade was performed
- the type of upgrade
- the card the upgrade was performed
- the full path of the load name
- the final status

All the entries status is completed or aborted. The last entry may have a different status since an upgrade is in progress.

The following buttons are provided in the Upgrade History:

- Delete - used to delete a history entry. An attempt to delete an entry for an upgrade in progress will fail.
- Refresh - used to update the view with the latest data since the view is not dynamically updated.
- Close - used to exit the Upgrade History view.

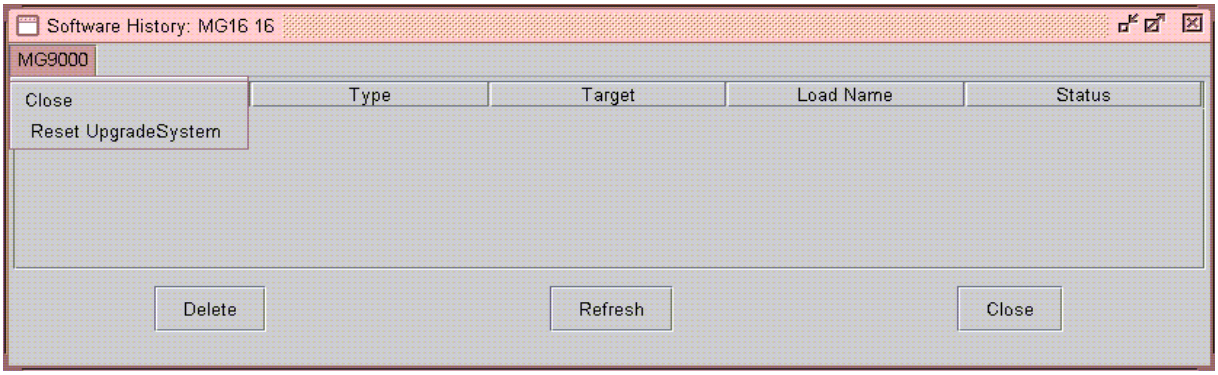
From the menu bar, the following MG9000 items are available

- Close - used to exit the Upgrade History view
- Reset Upgrade System - used to reset the upgrade system back to idle (that is, the upgrade process is abandoned where it is). This action could leave the cards in a mixed state, and the loads in the

cards will not be reverted back to the original loads. Clear the card fault or replace the faulty card and try the upgrade again.

The following figure shows the Reset Upgrade System command.

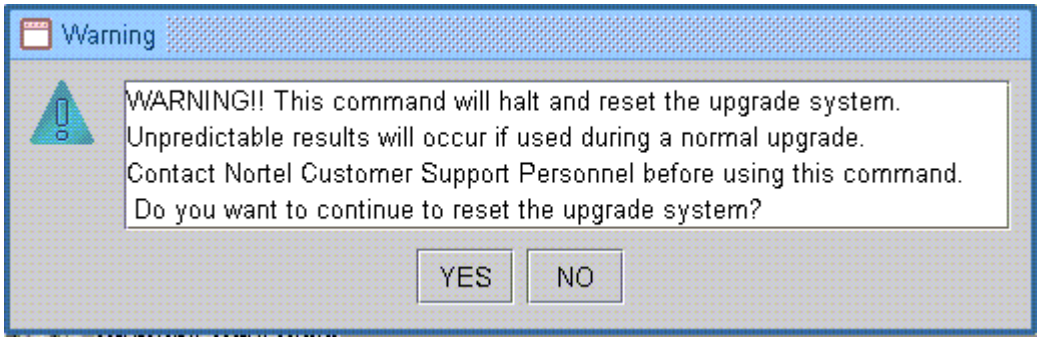
**Reset Upgrade System command**




The Reset Upgrade System command requires emsadm permission and is considered a drastic step. Do not use this command unless directed to do so by Nortel Networks customer support.

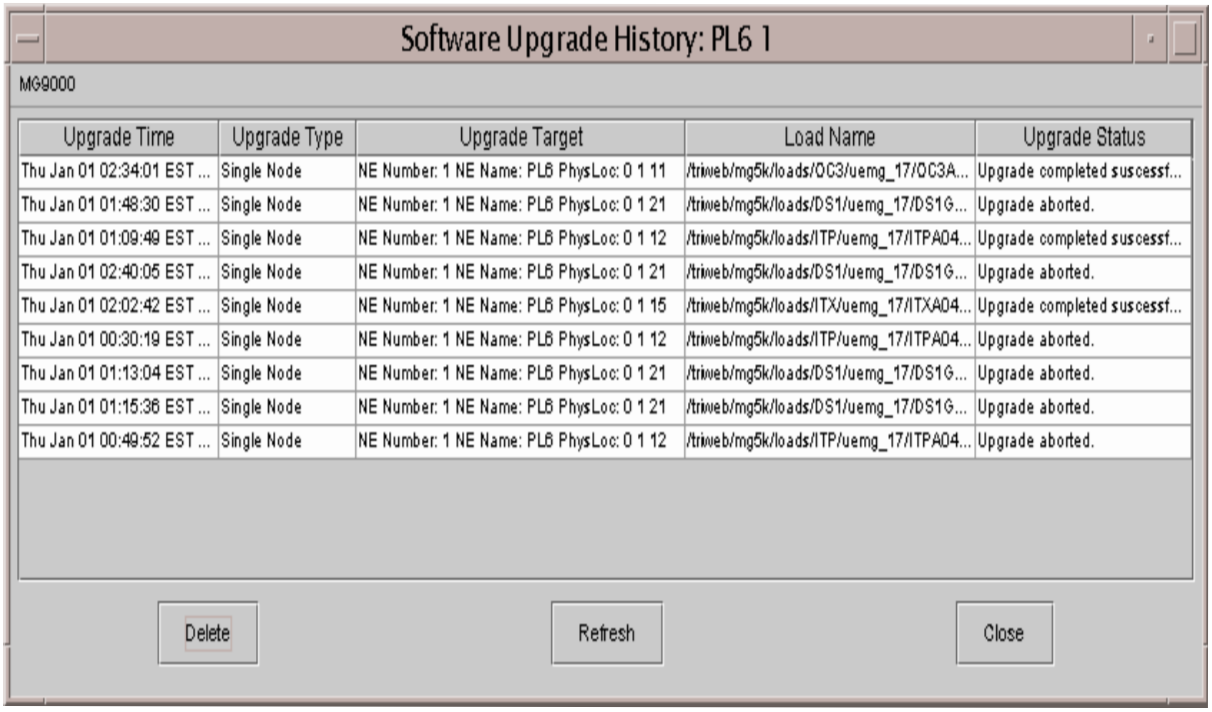
The following figure shows the warning message that appears when the Reset Upgrade System command is used.

**Reset Upgrade System command warning**




The following figure shows the History View.

## Software upgrade History View



## Patching the MG 9000

The MG 9000 is patched using the Network Patching Manager (NPM) patching system. Any device to be patched must first be audited to determine the load name compatibility with the patch before applying the patch.

For information and procedures for patching the MG 9000 software using the NPM, refer to the Succession Patching chapter in *ATM Solutions Upgrades*, NN10261-450 or *IP Solutions Upgrades*, NN10344-450.