McAfee Network Security Platform 10.1

Upgrading Baseboard Management Controller (BMC) in NS9500 and NS7x50 Sensors

Instructions for the upgrading

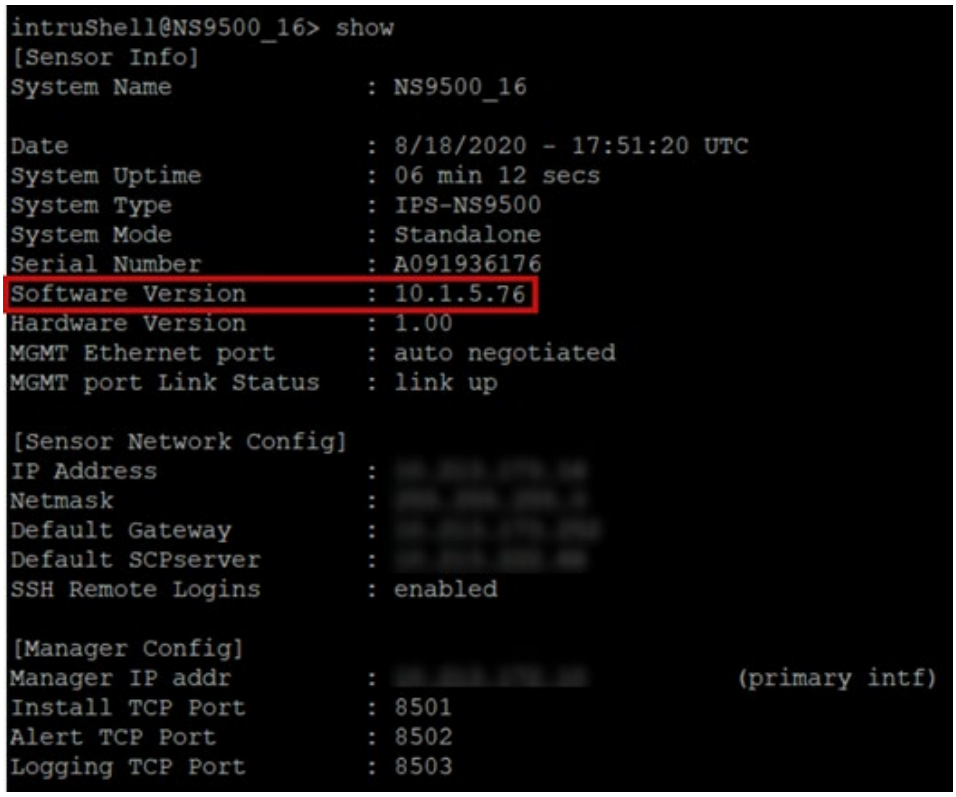
Before you begin

1. If your Sensors are running 10.1.5.65 version, you do not have to perform any additional steps.
2. This BMC firmware update is for NS9500 and NS7x50 models only.
3. Schedule downtime and bypass all inline and span traffic through the Sensor prior to upgrade.
4. A connection to the Sensor via console session is recommended but not required. SSH sessions will disconnect during the upgrade process. User can *ping -t Sensor-Management-IP-Address*' during the entire process to determine accessibility.
5. Customers on 9.x: Upgrade your deployment – both Network Security Manager and Network Security Sensor Software to the latest 10.1 versions available. The hotfix requires the Sensor to be managed by a 10.1 Network Security Manager.
6. Customers on 10.x: If you have not upgraded the sensor to 10.1.5.75, you can choose to load this 10.1.5.76 (BMC Hotfix for NS9500 and NS7x50 only) hotfix directly. An upgrade to 10.1.5.75 is not a pre-requisite to loading this hotfix build. The hotfix requires the sensor to be managed by a 10.1 Network Security Manager.
7. Check the rescue image version on the Sensor, using the *show rescueimages* CLI command. Do not attempt to upgrade if the output lists more than a single rescue image version. In such a scenario, contact McAfee support.
8. The NS7x50 rescue image version must be **9.1.5.15** or newer. Do not attempt to upgrade if your rescue image version does not meet the minimum requirement. In such a scenario, contact McAfee support.
9. The NS9500 rescue image version must be **9.2.5.49** or newer. Do not attempt to upgrade if your rescue image version does not meet the minimum requirement. In such a scenario, contact McAfee support.
10. In case of NS9500 Stack, you will have to upgrade each Sensor in the stack individually.
11. The 10.1.5.76 hotfix must update a valid Sensor rescue image to support a console less access via SSH to the rescue device. If this update fails, the *checkSysFwSUpgrade* CLI command will prompt the user and disallow the upgrade. If the update fails, contact McAfee support.

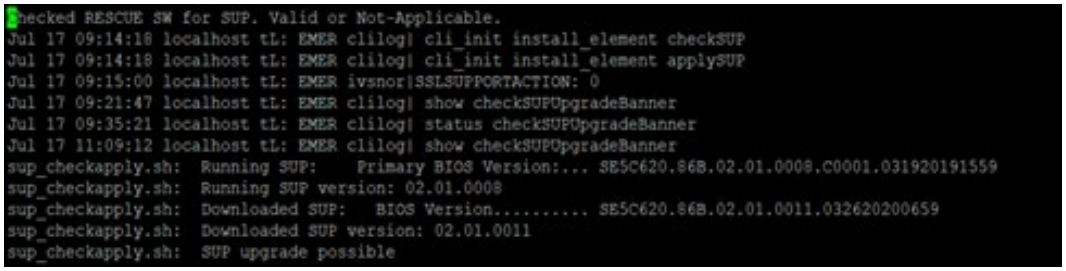
Update the BMC of the Sensor using the steps below:

Task

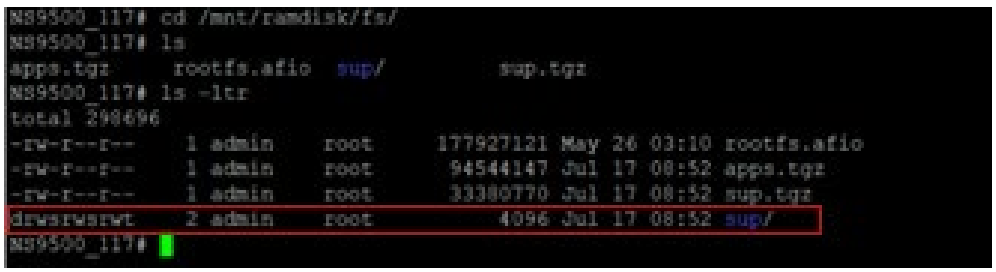
1. Upgrade the Sensor to version 10.1.5.76.



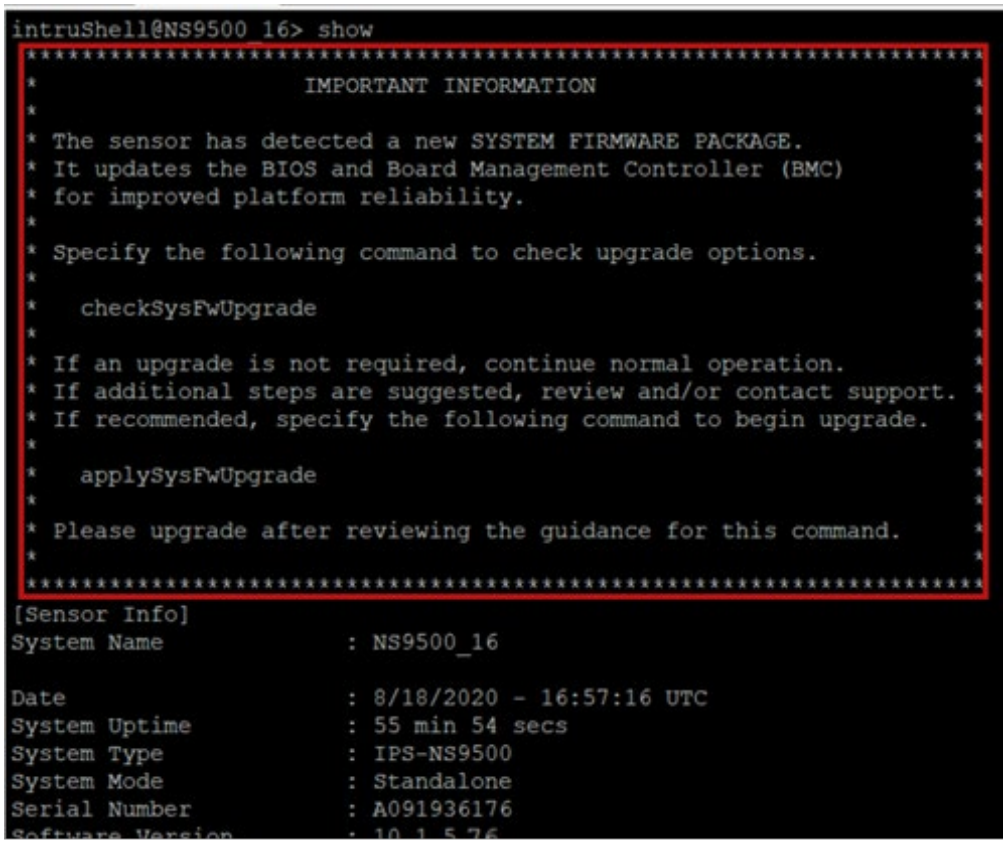
2. Use the *vi /usr/local/etc/sensor.dbg* command to check the trace log to verify that the image is loaded correctly.



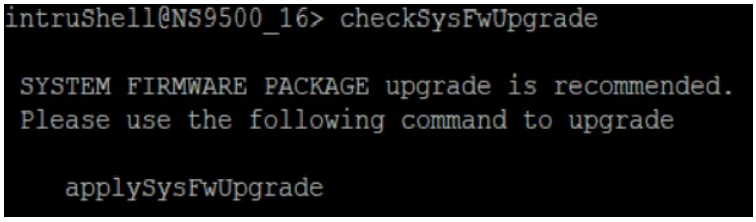
3. After you load the software image, use the *cd /mnt/ramdisk/fs/* command to verify that the SUP package *sup.tgz* is placed under the *fs* folder and expanded into a directory called *sup/*.



4. Verify if the new software firmware package information is displayed in the *show* and *st* commands.



5. Execute the *checkSysFwUpgrade* command.



6. Verify that the current and downloaded versions of the *SUP* are displayed in the */usr/local/etc/sensor.dbg* trace log.

```
NS9500_16# cd /usr/local/etc/
NS9500_16# grep sup_ sensor.dbg
sup_checkrescue.sh: Begin(134) Tue Aug 18 16:02:06 UTC 2020
sup_checkrescue.sh:  NS9500 RESCUE SW check required.
sup_checkrescue.sh:  No RESCUE SW marker detected (RC:10).
sup_checkrescue.sh:  Internal RESCUE SW: 9.2.5.88
sup_checkrescue.sh:  Minimum RESCUE SW: 9.2.5.49
sup_checkrescue.sh:  RESCUE SW valid.
sup_checkrescue.sh:  Update RESCUE SW: 9.2.5.88
sup_checkrescue.sh: End(134,RC:0) Tue Aug 18 16:02:36 UTC 2020
sup_checkapply.sh: Begin(1,134) Tue Aug 18 16:53:21 UTC 2020
sup_checkapply.sh:  NS9500_1.00
sup_checkapply.sh:  Running SUP:    Primary BIOS Version:... SE5C620.86B.00.01.0014.C0001.070920180847
sup_checkapply.sh:  Running SUP version: 00.01.0014
sup_checkapply.sh:  Downloaded SUP:   BIOS Version.......... SE5C620.86B.02.01.0011.032620200659
sup_checkapply.sh:  Downloaded SUP version: 02.01.0011
sup_checkapply.sh:  SUP upgrade possible
sup_checkapply.sh: End(1,134,RC:0) Tue Aug 18 16:53:23 UTC 2020
NS9500_16# cd /tftpboot/
NS9500_16# ls -la sup*
-rw-r-----    1 admin    root             0 Aug 18 16:53 sup_upgradeMarker
-rw-r--r--    1 admin    root             0 Aug 18 16:02 sup_validrescueMarker
-rwxr-xr-x    1 admin    users           88 Aug 13 21:55 suppAlerts*
```

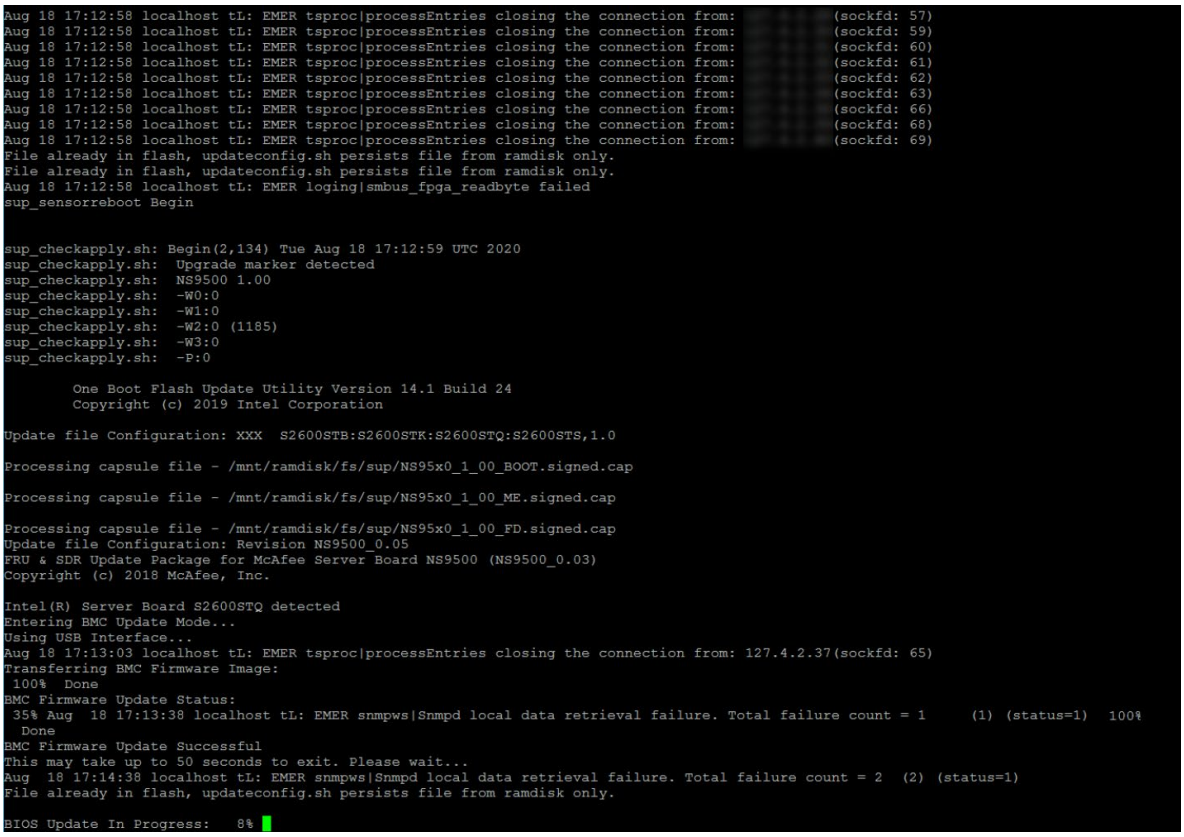
7. To continue with the upgrade, execute *applySysFwUpgrade* command. A banner with instructions is displayed.

```
intruShell@NS9500_16> applySysFwUpgrade
*************************************************************************
*                    IMPORTANT INFORMATION                              *
*                                                                       *
* You have chosen to upgrade the SYSTEM FIRMWARE PACKAGE.               *
* This upgrade will take 10 minutes and reboot the sensor.              *
* It will boot from the INTERNAL RESCUE DEVICE. This is normal.         *
* Issue another 'reboot' from the RESCUE CLI.                           *
* It will boot again from SSD with updated firmware.                    *
*                                                                       *
* If you wish to reboot the sensor without upgrading the                *
* SYSTEM FIRMWARE PACKAGE, use the 'reboot' command instead.            *
*                                                                       *
* If you wish to proceed with this upgrade, please execute              *
* the following command again...                                        *
*                                                                       *
*   applySysFwUpgrade                                                   *
*                                                                       *
*************************************************************************
```

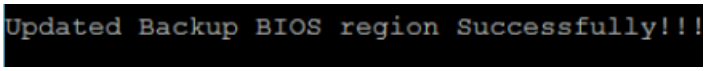
8. Review and then execute the *applySysFwUpgrade* command again to start the firmware upgrade.

```
intruShell@NS9500_16> applySysFwUpgrade

 The SYSTEM FIRMWARE PACKAGE upgrade is in progress...
```



9. Once the upgrade is successful, the console screen goes blank and the message **"Updated Backup BIOS region Successfully!!!"** is displayed. The system then boots up from the **INTERNAL RESCUE DEVICE**. Once the boot up is complete, the Sensor comes up with the *setme login*. Reboot the Sensor manually using the **RESCUE CLI**.



10. Alternatively, once the upgrade is successful without a console session, use ***ping -t* SENSOR-IP-ADDRESS** and wait for the INTERNAL RESCUE DEVICE to be reachable. This can take another 5 to 10 minutes. Once the boot up is complete, login using SSH since you will not see the *setme login* without a console connection. Reboot the Sensor manually using the **RESCUE CLI** or by connecting to the Sensor using **SSH.**

11. Login to the Sensor and execute the *show* command. If the update is successful, the new firmware information as seen in **step 4** will not be displayed.

```
intruShell@NS9500_16> show
[Sensor Info]
System Name               : NS9500_16

Date                      : 8/18/2020 - 17:51:20 UTC
System Uptime             : 06 min 12 secs
System Type               : IPS-NS9500
System Mode               : Standalone
Serial Number             : A091936176
Software Version          : 10.1.5.76
Hardware Version          : 1.00
MGMT Ethernet port        : auto negotiated
MGMT port Link Status     : link up

[Sensor Network Config]
IP Address                : 10.213.173.16
Netmask                   : 255.255.255.0
Default Gateway           : 10.213.173.252
Default SCPserver         : 10.213.222.66
SSH Remote Logins         : enabled

[Manager Config]
Manager IP addr           : 10.213.172.10          (primary intf)
Install TCP Port          : 8501
Alert TCP Port            : 8502
Logging TCP Port          : 8503
```

12. Go to *fs* folder using *cd /mnt/ramdisk/fs/* command to verify that the **SUP** package is no longer displayed.

```
sens_172_219# cd /mnt/ramdisk/fs/
sens_172_219# ls -ltr
total 266092
-rw-r--r--    1 admin    root     177927121 Jul 16 09:36 rootfs.afio
-rw-r--r--    1 admin    root      94544147 Jul 16 09:36 apps.tgz
```