IBM System Networking Element Manager 6.1.1

# Upgrade Instructions

# Overview

This document provides instructions to upgrade the System Networking Element Manager Solution from version 6.1.0 to 6.1.1. The upgrade is performed on a running version of the SNEM 6.1.0 virtual machine, using the fix-pack (**snem_patch6.1.1.tar.gz**).

The fix-pack adds new device support to the System Networking Element Manager Solution by upgrading each of the individual applications, as follows:

- IBM Tivoli Netcool Configuration Manager
  - IBM Layer 2-3 Gigabit Ethernet Switch Module v 5.2.4
- IBM Tivoli Network Manager 1.0 for SYstem Networking Element Manager
  - IBM Layer 2-3 Gigabit Ethernet Switch Module v 5.2.4
- IBM Tivoli Netcool/OMNIbus
  - IBM Layer 2-3 Gigabit Ethernet Switch Module v 5.2.4
- System Networking Element Manager 6.1.2
  - RackSwitch G8264T v 6.8
  - RackSwitch G8316 v 6.8, 7.2
  - IBM System Networking Distributed Virtual Switch 5000V v 1.0
  - IBM Flex System 10Gb Virtual Fabric Scalable Switch v 7.2
  - IBM Flex System 1Gb Ethernet Scalable Switch v 7.2

## Upgrade instructions

This document describes the procedure to upgrade System Networking Element Manager version 6.1.0 to 6.1.1

## Before you begin:

Verify the tar ball contents:

```
# tar -ztf snem_patch6.1.1.tar.gz
```

- snem_patch6.1.1/
- snem_patch6.1.1/snem_itncm/
- snem_patch6.1.1/snem_itncm/ad_scripts/
- snem_patch6.1.1/snem_itncm/ad_scripts/mapModel.xml
- snem_patch6.1.1/snem_itncm/ad_scripts/RegexList.xml
- snem_patch6.1.1/snem_itncm/ad_scripts/mapOS.xml
- snem_patch6.1.1/snem_itncm/ad_scripts/mapType.xml
- snem_patch6.1.1/snem_itncm/ad_scripts/mapVendor.xml
- snem_patch6.1.1/snem_itncm/IBMBNTSwitchzoe1_5_x.bin
- snem_patch6.1.1/snem_itncm/IBMBNTSwitchzoe5_2_x.bin
- snem_patch6.1.1/snem_itncm/IBMBNTSwitchzoe5_1_x.bin
- snem_patch6.1.1/snem_itnm/
- snem_patch6.1.1/snem_itnm/agents/
- snem_patch6.1.1/snem_itnm/agents/IBMSwitch.pl
- snem_patch6.1.1/snem_itnm/agents/AlteonSwitch.agnt
- snem_patch6.1.1/snem_itnm/agents/IBMSwitch.agnt

- snem_patch6.1.1/snem_itnm/aoc/
- snem_patch6.1.1/snem_itnm/aoc/BNT1GL2L3ESMCopper.aoc
- snem_patch6.1.1/snem_itnm/aoc/BNT.aoc
- snem_patch6.1.1/snem_itnm/aoc/BNT1GL2L3ESMFiber.aoc
- snem_patch6.1.1/snem_itnm/aoc/NortelAlteonSwitch.aoc
- snem_patch6.1.1/snem_itnm/cfg/
- snem_patch6.1.1/snem_itnm/cfg/ClassSchema.cfg
- snem_patch6.1.1/snem_itnm/cfg/ConfigSchema.cfg
- snem_patch6.1.1/snem_itnm/mibs/
- snem_patch6.1.1/snem_itnm/mibs/RFC1757.mib
- snem_patch6.1.1/snem_itnm/mibs/RFC1643.mib
- snem_patch6.1.1/snem_itnm/mibs/RFC2037.mib
- snem_patch6.1.1/snem_itnm/mibs/RFC1573.mib
- snem_patch6.1.1/snem_itnm/mibs/GbESM-1G-L2L3.mib
- snem_patch6.1.1/snem_itnm/mibs/RFC1493.mib
- snem_patch6.1.1/snem_itnm/mibs/RFC1850.mib
- snem_patch6.1.1/snem_itnm/mibs/dot1x.mib
- snem_patch6.1.1/snem_nckl/
- snem_patch6.1.1/snem_nckl/ibm-preclass.snmptrap.lookup
- snem_patch6.1.1/snem_nckl/ibm.master.include.rules
- snem_patch6.1.1/snem_nckl/ibm.master.include.lookup
- snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.include.snmptrap.rules
- snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.adv.include.snmptrap.rules
- snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.sev.snmptrap.lookup
- snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.user.include.snmptrap.rules
- snem_patch6.1.1/snem_comp/
- snem_patch6.1.1/snem_comp/6.1.2.2_install_lin.sh
- snem_patch6.1.1/snem_comp/SNEMConsoleModule.war

## Installation procedure

Complete the following steps to perform the upgrade.

Use the following command to extract the files from the tarball to a local directory:
**# tar -zxvf snem_patch6.1.1.tar.gz**

**IBM Tivoli Network Manager**

1. Execute the following copy commands:

   **Note**: Answer **Yes** if you are prompted to overwrite any of the files during the copy operations.

   **# cp snem_patch6.1.1/snem_itnm/aoc/*.aoc /opt/IBM/tivoli/netcool/precision/aoc/**

   **# cp snem_patch6.1.1/snem_itnm/mibs/*.mib /opt/IBM/tivoli/netcool/precision/mibs/**

   **# cp snem_patch6.1.1/snem_itnm/agents/IBMSwitch.pl /opt/IBM/tivoli/netcool/precision/disco/agents/perlAgents/**

   **# cp snem_patch6.1.1/snem_itnm/agents/*.agnt /opt/IBM/tivoli/netcool/precision/disco/agents/**

   **# cp snem_patch6.1.1/snem_itnm/cfg/*.cfg /opt/IBM/tivoli/netcool/etc/precision/**

2. Change directory to `/opt/IBM/tivoli/netcool/` and execute the following commands:

   **# source ./env.sh**

   **# ./precision/bin/ncp_agent_registrar -register AlteonSwitch**

   **# ./precision/bin/ncp_agent_registrar -register IBMSwitch**

   Sample output:

```
[root@snem netcool]# source ./env.sh
[root@snem netcool]# ./precision/bin/ncp_agent_registrar -register
AlteonSwitch
ncp_agent_registrar ( IBM Tivoli Network Manager Discovery Agent
Registrar )
Copyright (C) 1997 - 2010 By IBM Corporation.  All Rights Reserved.

See product license for details.
IBM Tivoli Network Manager Version 1.0 (Build 0) created by ncpbuild
at 10:55:01 Fri Nov 18 GMT 2011

ncp_agent_registrar done.

[root@snem netcool]# ./precision/bin/ncp_agent_registrar -register
IBMSwitch
ncp_agent_registrar ( IBM Tivoli Network Manager Discovery Agent
Registrar )
Copyright (C) 1997 - 2010 By IBM Corporation.  All Rights Reserved.
See product license for details.

IBM Tivoli Network Manager Version 1.0 (Build 0) created by ncpbuild
at 10:55:01 Fri Nov 18 GMT 2011

ncp_agent_registrar done.
```

3. Change directory to `/opt/IBM/tivoli/netcool/precision/bin`
   Execute the following DB2 commands to configure DB2 suitable for MIB Reload Transaction:

   **# su - ncim**

   **# source sqllib/db2profile**

   **# db2 connect to NCIM**

   **# db2 update db cfg for NCIM using LOGFILSIZ 20000**

   **# db2 update db cfg for NCIM using LOGPRIMARY 80**

   **# db2 update db cfg for NCIM using LOGSECOND 160**

   **# db2 disconnect NCIM**

   **# exit**

4. Use the following command to load all the new MIBs:

   **# ./ncp_mib -override -force**

   **Note 1**: It may take 20-30 minutes to load the MIB file into the database

   **Note 2**: While loading the MIB, you might see some warning messages, which can be ignored.

5. Stop and restart NCP services by executing the following commands:

   **# service ncp stop**

   **# service ncp status**

   **# service ncp start**

   Sample output:

```
[root@snem netcool]# service ncp stop
[root@snem netcool]# service ncp status
Network Manager:
ncp_ctrl               NOT RUNNING
[root@snem netcool]# service ncp start
```

**Note 1**: After you execute the **`service ncp stop`** command, wait for approximately one minute while the NCP services terminate.

**Note 2**: After you execute the **`service ncp start`** command, wait approximately five minutes so that all the NCP services are running. Use the following command to verify the state of NCP services: **`service ncp status`**

6. Login to TIP as `itnmadmin` to add IBMSwitch agent in discovery scope.
   a. Click **Network Discovery Configuration** listed under **Discovery** in the launch panel.
   b. Click **Full Discovery Agents** tab on Network Discovery Configuration workspace.
   c. Expand **Full Layer 2 and Layer 3 Discovery > Ethernet** and select the IBMSwitch agent checkbox to enable and save the configuration.
   d. Click **Partial Rediscovery Agents** tab on Network Discovery Configuration workspace.
   e. Expand **Full Layer 2 and Layer 3 Discovery > Ethernet** and select BNTSwitch and IBMSwitch agent checkbox to enable and save the configuration.

**Note:** If the target network contains a L2-3 GbESM device (IBM Layer 2-3 Gigabit Ethernet Switch Module), you must execute the discovery again to get the proper device classification and device data in IBM Tivoli Network Manager.

### IBM Tivoli NetCool Configuration Manager

1. Change directory to `snem_patch6.1.1/snem_itncm/` and execute the following commands:

   **# service itncm stop**

   **# sh ./IBMBNTSwitchzoe1_5_x.bin LAX_VM /opt/IBM/tivoli/ netcool/ncm/jre/bin/java -i console**

   **# sh ./IBMBNTSwitchzoe5_1_x.bin LAX_VM /opt/IBM/tivoli/ netcool/ncm/jre/bin/java -i console**

   **# sh ./IBMBNTSwitchzoe5_2_x.bin LAX_VM /opt/IBM/tivoli/ netcool/ncm/jre/bin/java -i console**

   **# service itncm start**

2. Change directory to `/opt/IBM/tivoli/netcool/ncm/drivers/bin` and execute the following command:

   **# ./smartModelTier2Upgrade.sh -all**

3. Copy all the xml files from `snem_patch6.1.1/snem_itncm/ad_scripts/` to the following directory: `/opt/IBM/tivoli/netcool/ncm/autodiscovery/xml/`

4. Restart ITNCM:

   **# service itncm stop**

   **# service itncm start**

### IBM Tivoli Netcool/OMNIbus

Netcool Knowledge Library (NcKL) rules for the IBM Layer 2-3 Gigabit Ethernet Switch Module:

1. Copy the files listed below to the following directory: `/opt/IBM/tivoli/netcool/etc/rules/include-snmptrap/ibm/`

   **Note**: Answer **Yes** if you are prompted to overwrite any of the files during the copy operations.

   – snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.sev.snmptrap.lookup
   – snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.include.snmptrap.rules
   – snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.adv.include.snmptrap.rules
   – snem_patch6.1.1/snem_nckl/ibm-BNT-GbESM-1G-L2L3-MIB.user.include.snmptrap.rules
   – snem_patch6.1.1/snem_nckl/ibm.master.include.rules
   – snem_patch6.1.1/snem_nckl/ibm.master.include.lookup
   – snem_patch6.1.1/snem_nckl/ibm-preclass.snmptrap.lookup

2. Stop and restart NCP services by executing the following commands:

   **# service nco stop**

   **# service nco status**

   **# service nco start**

### System Networking Element Manager Application

This procedure upgrades the application from version 6.1.1 to 6.1.2

1. Change directory to `snem_patch6.1.1/snem_comp/` and execute the following commands:

   **# service snemservice stop**

   **# chmod +x ./6.1.2.2_install_lin.sh**

   **# ./6.1.2.2_install_lin.sh**

   Follow the instructions when prompted by the installer. The `snemservice` restarts automatically.

2. Delete the existing SNEM Console Module by executing following commands

   **# cd /opt/IBM/tivoli/tipv2/profiles/TIPProfile/bin**

   **# ./wsadmin.sh**

   **Note**: In the Login at the Target Server window, use `itnmadmin` credentials to open the session.

   **# $AdminApp update isc modulefile { -operation delete -contenturi SNEMConsoleModule.war -custom forceRemove=true}**

   **# $AdminConfig save**

   **# quit**

3. Deploy the SNEM Console Module. Copy the `SNEMConsoleModule.war` file to the following directory: `/opt/IBM/tivoli/tipv2/profiles/TIPProfile/installableApps/`

   **# cp snem_patch6.1.1/snem_comp/SNEMConsoleModule.war /opt/IBM/tivoli/tipv2/profiles/TIPProfile/installableApps/**

4. Change directory to `/opt/IBM/tivoli/tipv2/profiles/TIPProfile/bin`

   **# cd /opt/IBM/tivoli/tipv2/profiles/TIPProfile/bin**

5. Execute the following commands:

   **# ./wsadmin.sh**

   **Note**: In the Login at the Target Server window, use `itnmadmin` credentials to open the session.

   **# $AdminApp update isc modulefile { -operation add -contents ../installableApps/SNEMConsoleModule.war -contenturi SNEMConsoleModule.war -contextroot /SNEMConsoleModule -usedefaultbindings -MapWebModToVH {{.* .* default_host}}}**

Sample output:

```
com.ibm.isclite.DeployBundleActivator.start(BundleContext context)
Entry
WASX7327I: Contents of was.policy file:
//
// Template policy file for enterprise application.
// Extra permissions can be added if required by the enterprise
// application.
//
// NOTE: Syntax errors in the policy files will cause the enterprise
// application FAIL to start.
//       Extreme care should be taken when editing these policy
//       files. It is advised to use the policytool provided by the
//       JDK for editing the policy files
//       (WAS_HOME/java/jre/bin/policytool).

grant codeBase "file:${application}" {
};

grant codeBase "file:${jars}" {
};

grant codeBase "file:${connectorComponent}" {
};

grant codeBase "file:${webComponent}" {
};

grant codeBase "file:${ejbComponent}" {
};

Update of isc has started.
ADMA5058I: Application and module versions are validated with
versions of deployment targets.
ADMA5009I: Extracting application archive to
/opt/IBM/tivoli/tipv2/profiles/TIPProfile/wstemp/wstemp/app_133b56cba
5c/ext/SNEMConsoleModule.war.
ADMA5064I: FileMergeTask completed successfully for isc.
ADMA5005I: The application isc is configured in the WebSphere
Application Server repository.
ADMA5005I: The application isc is configured in the WebSphere
Application Server repository.
CWLAA10007I: Explanation: The help plug-in of the Integrated
Solutions Console module was deployed successfully. User action: No
user action required.
CWLAA10001I: Explanation: The Integrated Solutions Console module was
deployed successfully. User action: No user action required.
ADMA5005I: The application isc is configured in the WebSphere
Application Server repository.
ADMA5113I: Activation plan created successfully.
ADMA5005I: The application isc is configured in the WebSphere
Application Server repository.
ADMA5011I: The cleanup of the temp directory for application isc is
complete.
Update of isc has ended.
```

**# $AdminConfig save**

**# quit**