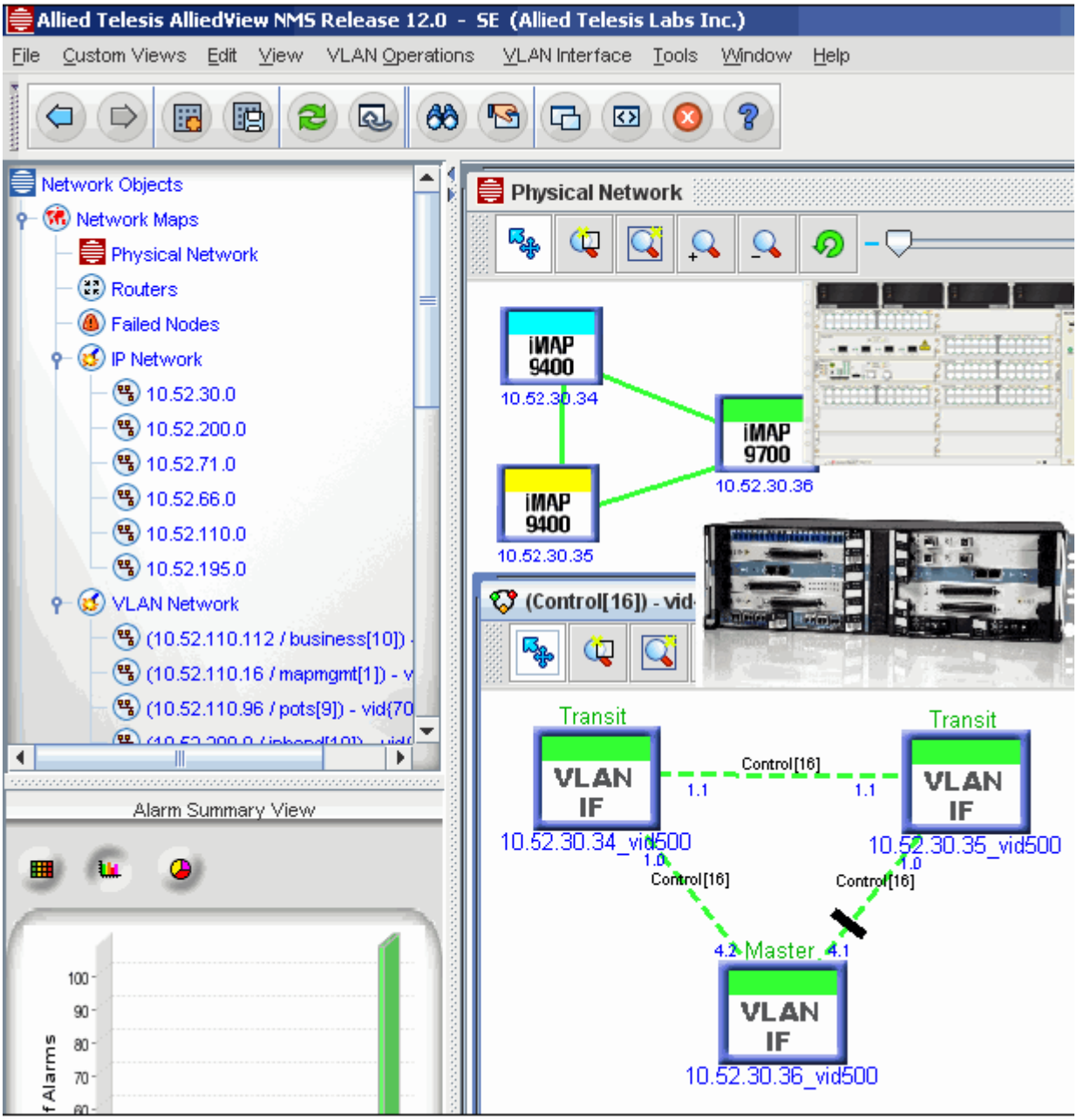


Allied Telesis™ Allied*View*™ NMS System 12.1 SP1 Installation Guide Issue 2

613-001543 Rev B

Introduction

Congratulations on your purchase of the Allied*View*™ Network Management System product. This product allows users to query all aspects of Allied Telesis products in their network.

Who Should Read This Guide?

This document is for users who need to deploy the AlliedView NMS product on Windows or Solaris platforms. For in-depth knowledge of the NMS and its applications, refer to the *AlliedView NMS Administration Guide* and the *NMS User Guide*.

About this Guide

This Guide covers all aspects of the AlliedView NMS 12.0 installation, including:

- The hardware and software requirements
- Any new features for installing, starting, and uninstalling the AlliedView NMS software
- The instructions for installing, restarting, and uninstalling the AlliedView NMS server / client software

This document describes the installation of the AlliedView NMS.

The content of this Guide is organized as follows:

Chapter 1 describes how to prepare for the installation

Chapters 2 describes how to install the AlliedView NMS on the Windows and Solaris platform

Chapter 3 describes how to install the AlliedView NMS Service Pack for 12.0.

Chapter 4 describes how to start up the AlliedView NMS Server and clients

Chapter 5 describes how to shut down the AlliedView NMS.

Chapter 6 describes how to uninstall the AlliedView NMS

Chapter 7 describes how to install and uninstall a Service Pack.

Chapter 8 gives installation scenarios and includes references when needed to other sections or documents.

The Appendices include how to enable anonymous ftp, how to activate the NMS software license, and the Licence Key form.

Reason for Update

For AlliedView NMS release 12.0, there were the following changes:

- The R12.0 upgrade procedure was different than in previous releases, with an upgrade tool that is used only in release 12. Refer to Section 3.1.

- The name of the NMS Administrative Service has changed from Telesyn NMS to AlliedView NMS. Refer to 4.1.1.
- The GUI path to perform various actions on the NMS, as well as the default path to the NMS home directory, has Allied Telesis added. Refer to 4.1.2 and 2.2.
- There is a new logon screen. Refer to 4.3.

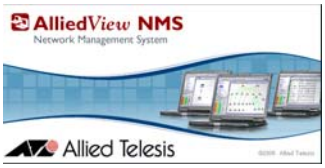
These changes and the procedure to upgrade to R12.0 are included in this Guide.

This issue concentrates on installing and uninstalling **R12 SP1 and any other R12 Service Packs**; this procedure is the same as in previous releases and is documented in Section 7.

Service and Support

For information about support services for Allied Telesis, contact your Allied Telesis sales representative or visit the website at www.alliedtelesis.com.

Table of Contents



1. Preparing for Installation

1.1 Types of Installation

There are two basic types of AlliedView NMS installations: a full installation and an Upgrade Pack. A full installation is used when installing the NMS for the first time on a host machine. A full installation copies all of the files required to run the NMS to your hard drive. The software is delivered on a CD-ROM or is downloaded from the web. (Please contact or local ATI representative, as the website requires an email address and password, at http://www.alliedtelesis.com/support/software/restricted/login.aspx.) Either method provides the necessary files, documentation, and the installer program that steps you through the installation process.

AlliedView NMS **Upgrade** Packs are designed to upgrade your NMS to the next major software release. Upgrade packs are mandatory and may not be skipped.

Service Packs are designed to service your AlliedView NMS with software bug fixes and are optional.

Service packs are inclusive of the previous SP so it is only necessary to apply the latest version. For example, if SP 3 is latest version applying it will also apply the contents of SP 1 and SP 2.

1.2 System Requirements

1.2.1 Client, Browser, and Server

The system requirements for the AlliedView NMS are listed in the following table.

TABLE 1-1 AlliedView NMS System Requirements - Numbers in bold and ( ) are Recommended

Requirement	Windows	Solaris
Enterprise Edition Server (EE) Windows Only	OS: Windows Server 2003 or 2008 (XP acceptable) **Less than 500 Nodes**: Processor: Intel Xeon E5530, 2.4GHz, 8M Cache (or equivalent) RAM:2GB Disk: 20GB DVD/CD Drive - Drive is optional **Greater than 500 nodes**: Processor: Dual Intel Xeon X5550, 2.66GHz, 8M Cache (or equivalent) RAM: 4GB Disk: 20GB DVD/CD Drive - Drive is optional	Not Applicable
Service Provider Edition (SE)	OS: Windows Server 2003 or 2008 Processor: - Intel Xeon dual core processor 2GHz, or equivalent - (**Intel Xeon quad core processor 2.4GHz, or equivalent**) RAM: 4 GB (**4GB**) Disk: 20GB (**20GB**) Monitor: 1280x1024 resolution	OS: Solaris 10 Machine: SPARC Enterprise T1000 **(T5120)** Processor: - UltraSPARC T1 1.0 GHz **- (UltraSPARC T2 1.2 GHz)** RAM: 4GB **(8GB)** Disk: 20 GB **(20GB)** Monitor: 1280x1024 resolution
NMS Client	OS: Windows 2003/2008/XP/Vista Processor: 1 GHz, RAM: 2GB Java JRE version 1.6.0_16 Monitor: 1280x1024 resolution	OS: Solaris 10 Processor: 1 GHz, RAM: 2GB Java JRE version 1.6.0_16 Monitor: 1280x1024 resolution
Browser (Platform Independent)	Explorer 7.0 and above Mozilla 3.0 and above	Mozilla 3.0 and above

1.3 Getting Started

If you are not familiar with the AlliedView NMS, you may want to review the product documentation prior to installation to familiarize yourself with the AlliedView NMS. There are two user documents provided in addition to this Guide: the *AlliedView NMS Administration Guide*, and the *NMS User Guide*. The *NMS Administration Guide* describes the tasks associated with the administration of the AlliedView NMS. The *NMS User Guide* describes the NMS user interface and how it is used. You may need to refer to the *NMS Administration Guide* during the installation process. Locate this document before you start.

Release Notes are provided with each installation CD. These notes contain important information regarding the release or Upgrade Pack you are installing. Before installing your AlliedView NMS software or Upgrade Pack, carefully review the Release Notes and follow any special instructions that may be provided.

Note: You may want to print the Release Notes for future reference.

The preparation required depends on the type of installation you are performing. If you are performing a full installation, refer to 1.4. If you are performing an Upgrade Pack installation, refer to 1.5.

1.4 Preparing for a Full Installation

Before starting the installation, you must verify that the host machine or machines on which you plan to install the AlliedView NMS meet the requirements described in Table 1-1. If any host machine upgrades are necessary, you must perform these upgrades prior to installing the AlliedView NMS. Upgrading host machines is not covered in this document. You will need to refer to the documentation provided with your host machines for these procedures. Do not install or upgrade the AlliedView NMS on a machine until the machine meets the stated requirements.

Caution: The AlliedView NMS server must have a static (rather than dynamic) IP address. Otherwise, traps will not be routed correctly.

If the host machines meet the requirements, you are now ready to begin the installation process. An installation CD-ROM is provided with your AlliedView NMS. If you have not already done so, locate and unpack this CD-ROM.

You are now ready to begin. If you are installing the NMS on a Windows platform, refer to 2.2. If you are installing the NMS on a Solaris platform, refer to 2.3.

Note: Only one version of the NMS may exist on the systems. Uninstall previous versions of the NMS or use the Upgrade Pack process to upgrade.

1.5 Preparing for an Upgrade to 12.0

To upgrade to R12.0, there is a special procedure that must be followed. This is explained in Section 3.

2. Installation (Service Provider / Enterprise Edition)

2.1 Overview

The AlliedView NMS software is loaded on one server, which provides all the required functionality.

Note: Anonymous FTP is used by the NMS to manage certain devices, and therefore must be enabled on the server. Refer to Appendix A for instructions.

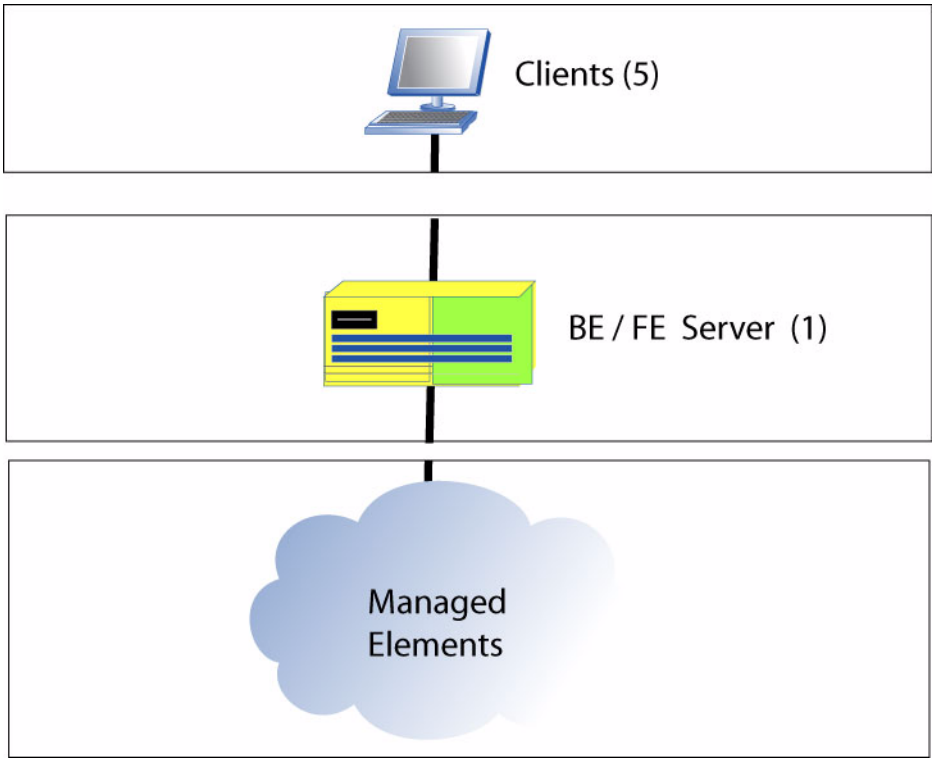


FIGURE 2-1 Single Server Configuration

2.2 Installing on a Windows Platform (Service Provider and Enterprise Edition)

To install the AlliedView NMS on a Windows platform, follow these steps.

1. For a CD-ROM, insert the installation CD-ROM in the CD-ROM drive. After approximately 60 seconds, the InstallShield® Wizard **Installer** screen will appear, as shown Figure 2-2.
2. For a download from the Allied Telesis restricted website, click on **AlliedView NMS** in the pull down, find the NMS R12.0 for Windows panel, and select the type of NMS 12 for Windows Installation package (Service Provider or Enterprise Edition). Click on the link, and you are prompted to download the following files:
   - `AlliedViewNMS_12_0_SE_Windows.exe` (Service Provider)
   - `AlliedViewNMS_12_0_EE_Windows.exe` (Enterprise)

   Save the file to the server, and then double click to launch. After approximately 60 seconds, the InstallShield® Wizard **Installer** screen will appear, as shown Figure 2-2

FIGURE 2-2 AlliedView NMS Installation Wizard Screen

3. On the **Installer** screen, click **Next**. This will display the license agreement page shown in the following figure.

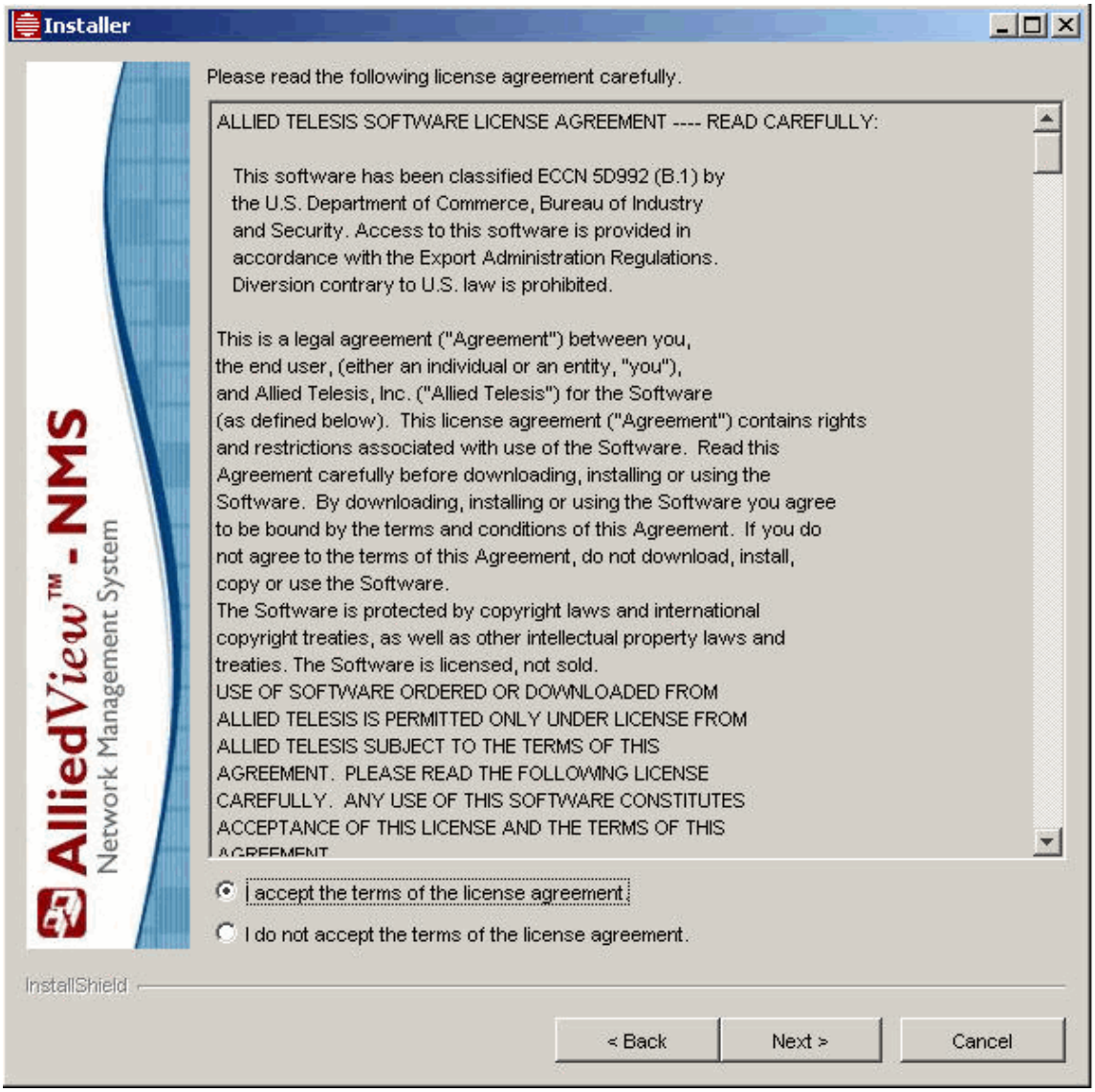


FIGURE 2-3 AlliedView NMS Installation Wizard License Agreement

4. Carefully read the license agreement, click the **I accept the terms of the license agreement** radio button, and then click **Next**.

*Note: If you do not wish to proceed with the installation, click **Cancel** to exit.*

The next screen will specify the installation directory. Refer to the following figure.

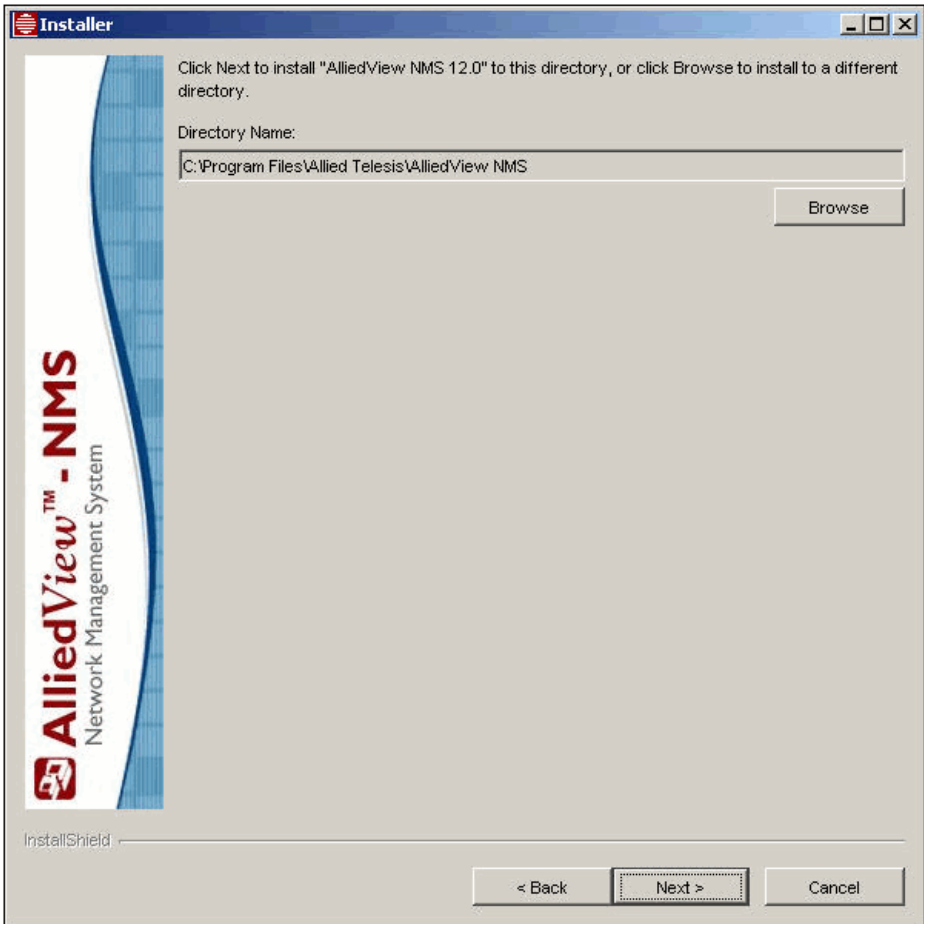


FIGURE 2-4 Specify Directory path

5. Although you can change this directory, it is highly recommended that you use the default directory provided. Click **Next**.
6. The next screen displays the selected installation directory and indicates the total size of the installation (in Mb). If you need to make a change, click **Back** and make the change. If you wish to exit, click **Cancel**. Otherwise, click **Next**.
7. This will display the installation progress window shown in the following figure.

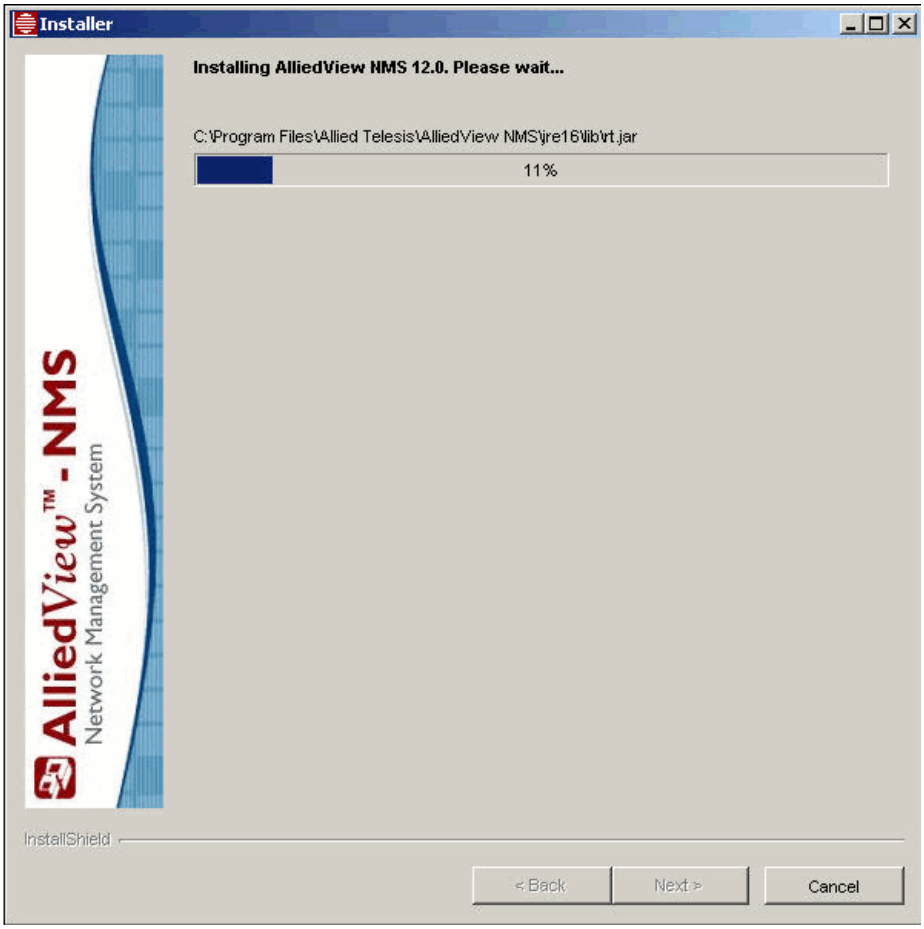


FIGURE 2-5 AlliedView NMS Installation Wizard Installation Progress

The progress bar tracks the progress of the installation. It will take a few minutes for the installation to complete. When the installation completes, the Services window, shown in the following figure, will appear.

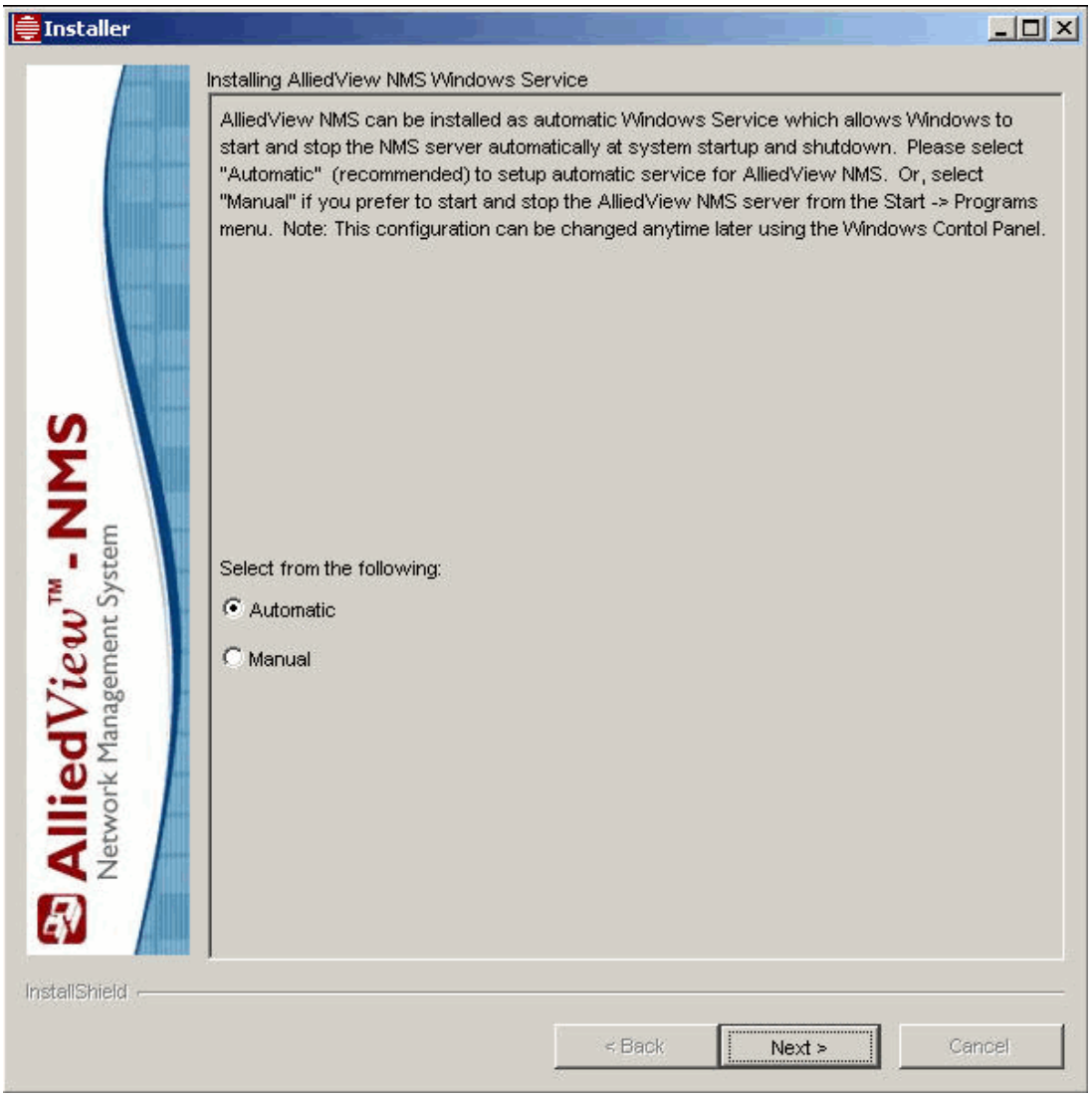


FIGURE 2-6 AlliedView NMS Installation Wizard File Installation

8. The screen in Figure 2-6 prompts you to choose whether to install the AlliedView NMS as a Windows service, which allows the AlliedView NMS to automatically start up on Windows startup and shut down on Windows shutdown.

Note: It is highly recommended that you install the AlliedView NMS as a Windows Service.

Select **Automatic** if you want the AlliedView NMS as a service. Otherwise select **Manual**. Click **Next**.

9. The next screen will confirm the successful installation of the AlliedView NMS. Click **Next**.
10. The next window will ask you whether you want to restart your computer now or at a later time. If you want to restart now, select **Yes**. Otherwise, select **No**. Refer to the following figure.

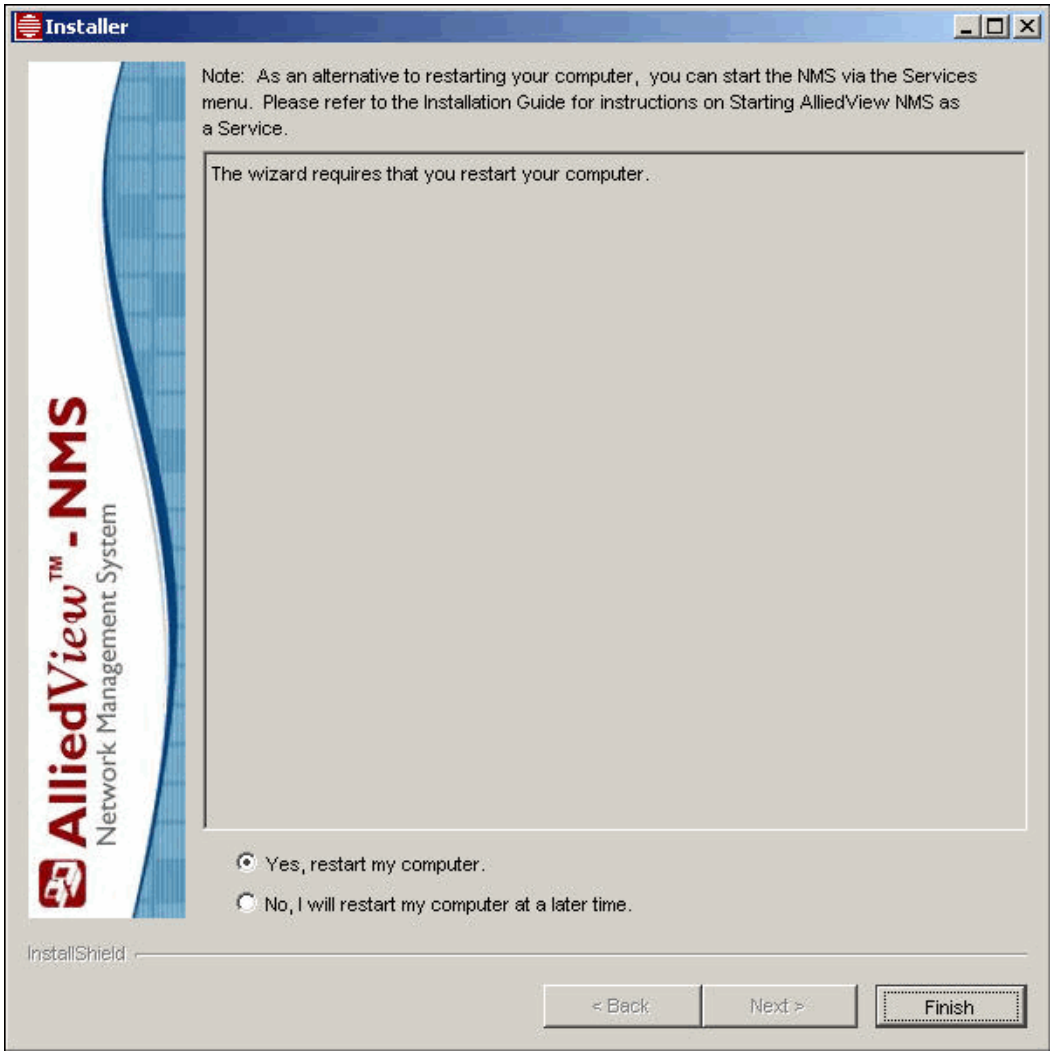


FIGURE 2-7 AlliedView NMS Installation Wizard File Restart Option

*Note: If you selected **Yes**, your computer will restart when you click **Finish**. Before restarting your computer, if you have any Windows applications open other than the AlliedView NMS Installation Wizard, close them now. If you selected **No**, this is not necessary, with a note that the NMS can be started using the Services menu.*

11. Click **Finish** to complete the process.

If you selected **Automatic** to restart in the previous window, when your computer restarts, the NMS server starts, and then you will get the AlliedView NMS Client logon window. If you want to log in, enter **root** as the username and **public** as the password, and then click **Connect**. Otherwise, click **Cancel** to terminate the login process.

*Note: The InstallShield adds the NMS Client startup program to your Windows **Startup** menu, which means the client will start automatically when a user logs into Windows.*

If you do not want the client to start automatically, remove ***AlliedView NMS Client*** from your Windows ***Startup*** menu by right-clicking on it, and then selecting ***Delete*** from the pop-up menu.

You have completed the installation process. To start the AlliedView NMS, refer to Chapter 4.

2.3 Installing on a Solaris Platform (Service Provider Only)

To install the AlliedView NMS on a Solaris platform as a daemon, follow these steps:

1. On the machine on which the AlliedView NMS is to be installed, log in as **root** or as a user with root privileges.
2. Insert the installation CD-ROM into the CD-ROM drive.
3. Start the Wizard manually by executing the **AlliedViewNMS_12_0_SE_Solaris.bin** file.

Note: For best performance first copy the Installer (`AlliedViewNMS_12_0_SE_Solaris.bin`*) to a hard drive location.*

Note: The Solaris Installer requires 1.5 GB of temporary disk space to properly complete the installation process. It is recommended the `/tmp` *directory be used for this purpose.*

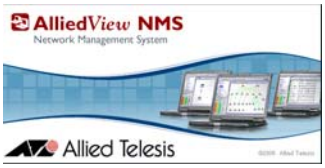
Note: Finally, it is recommended that a log file be created so any problems during installation can be tracked. The recommended command syntax is therefore:

```
% AlliedViewNMS_12_0_SE_Solaris.bin -is:tempdir /tmp -is:log /tmp/
nms_install_log.txt
```

4. Once the Installation Wizard starts, follow the instructions provided by the Installation Wizard. The instructions are identical to those provided during the installation on the Windows platform. For specific information on following the Wizard instructions, refer to Chapter 2.

*Note: The default installation directory for the AlliedView NMS on the Solaris platform is /**opt/AlliedTelesis/AlliedViewNMS**. Although you can change this directory, it is highly recommended that you use the default directory provided.*

5. Once installation is complete, start the AlliedView NMS. Refer to Chapter 4.



3. Installing the R12.0 Upgrade Pack - Service Provider Edition Only

3.1 Overview

An upgrade pack is used to bring your AlliedView NMS to the next major software release. The process is identical for both Windows and Solaris. In R12.0 the same upgrade pack is used for Solaris and Windows.

*Note: Since various software components of the NMS have been replaced in R12.0, the procedure in to upgrade to R12.0 is different for this release; you **must** follow these steps to ensure a successful upgrade.*

Note: Since the Enterprise Edition is newly released in R12.0, there is no upgrade procedure.

3.2 Upgrading the NMS Server

3.2.1 Prerequisites

The following conditions must be met so that the upgrade can proceed without error. (Some of these are explained in more detail during the specific steps.)

- The server must be running at R11 SP5 or R11 SP5.x.

Note: The R11 software will be referred to as R11 SP5 from here forward.

- The R11 SP5 installation directory should be examined and cleaned prior to applying the R12.0 Service Pack. Examples are TFTP and swdownload directories (for Windows).
- The upgrade must be performed on the same physical server.
- The server must have enough disk space to hold the software needed for the R12.0 upgrade. This would include the current R11 SP5 installation, at least one R11 SP5 backup, and the R12.0 installation (100G).

The upgrade to R12.0 involves these main steps:

1. Ensure that the current NMS is at release R11 SP5 and ready to be upgraded.
2. Make a backup of the R11 SP5 system, then shut down the NMS R11 SP5 server.
3. Verify that all processes are shut down (Apache, java.exe, mysqld.exe) as follows:

- Windows
  - Ensure that the TelesynApache and Telesyn NMS services are set to manual and are stopped.
  - You can check the Windows Task Manager to make sure that NMS, Apache and MySQL are not running by looking for any java.exe, Apache.exe and mysqld.exe processes
  - If any of these processes are still running after ensuring that the NMS server is shutdown and the Windows services are stopped, you can use the `ShutDown.bat` script to attempt to stop them
  - There is also an `AT_ShutDownMySQL.bat` that can be use if the mysqld.exe process fails to stop running.
- Solaris
  - Ensure that the AlliedViewNMS is stopped by shutting down the R11 NMS server (ShutDown.sh).
  - Ensure that the AlliedViewNMS service is removed using the R11 `AT_regdaemon.sh –dereg` script. This will prevent R11 from starting should the server reboot unexpectedly.
  - You can check to see if any of the R11 processes are running by using the `ps` command and looking for processes that have the R11 path.

- Similar to Windows, if you see any R11 processes running, you can use the `ShutDown.sh` and the `AT_ShutDownMySQL.sh` scripts to attempt to stop these processes.

4. Install R12.0 on the **same** server. The R12.0 install uses a different path than R11 SP5. The default paths are:

- Windows
  - R11 default path is `C:\Program Files\Allied Telesyn\AlliedView NMS`
  - R12 default path is `C:\Program Files\Allied Telesis\AlliedView NMS`
- Solaris
  - R11 default path is `/opt/AlliedViewNMS`
  - R12 default path is `/opt/AlliedTelesis/AlliedViewNMS`

Use the R12 Update Manager application for this process.

Note: Once the R12.0 install is running successfully, and all data verified, you may un-install R11 SP5. Note that you do not need to restart the server once this is done, since there would be an interruption of the NMS during the restart.

3.2.2 Prepare the Server

The server to be upgraded must be running at release R11 SP5 and R11 SP5.x. In addition, the server should be examined and any unnecessary files removed. Examples of such files are:

- Unused files in the Software Downloads directory (`swdownload`)
- Unused files in the tftp directory

Note: To upgrade to R11 SP5, you must use the upgrade procedure in the NMS AlliedView Installation Guide for release R11.0. The upgrade procedure described here is for R12.0 only.

3.2.3 Back up the R11 SP5 and Shut down the R11 SP5

Perform a backup of the R11 SP5, following these steps. (These are the standard steps as described in detail in the Allied*View* NMS Administration Guide).

1. Choose from the main menu ***Tools -> NMS Database Backup***, and the option **On Demand**. A dialog box appears with a reminder that the database will be paused during the backup.
2. Clicking OK starts the backup process window. When finished, the window will show whether the backup was successful and where the backup was written to.
3. Shut down the R11 SP5 server. Refer to 5.2 for the main steps and 3.2.1 on ensuring all relevant processes are shut down.

3.2.4 Install R12.0 (New Install)

The installation of a R12.0 new install will, by default:

- Place the applications and files in a new location (different path) than the R11 SP5 installation.
- Create an NMS service that is different than the R11 SP5 service.

To install R12.0, follow the steps that are in 2.2.

Be sure to choose either the default directory path for the R12.0 files or a path that is different than the R11 SP5.

Note: Do not start the NMS server, or restart your computer.

3.2.5 Perform the Upgrade with the R12.0 Upgrade Manager

Follow these steps:

1. On the R12 install, launch the Update Manager, using one of the following methods:

- For Windows, go to the directory shown in FIGURE 3-1 and double-click `Updatemanager.bat`, or follow the program path GUI as shown in FIGURE 3-2.
- For Solaris, go to the `<NMS home>/bin` directory and input `./UpdateManager.sh`
- For the Solaris console version, input ./UpgradeManager.sh -c (The ppm and backup files must be in `<NMS_home>`, or you can give the full path when prompted.)

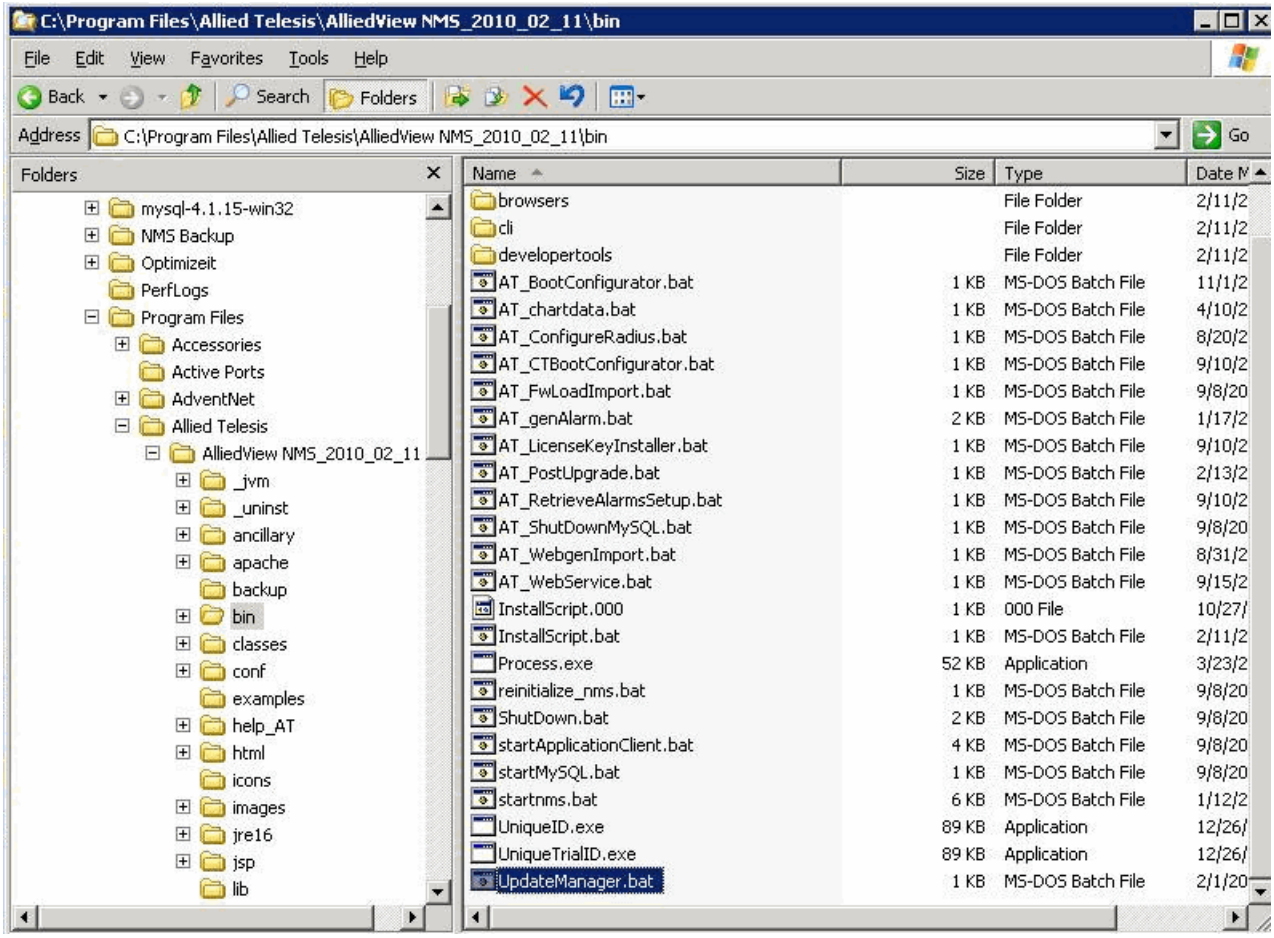


FIGURE 3-1 Launching the Update Manager (Double-click the File)

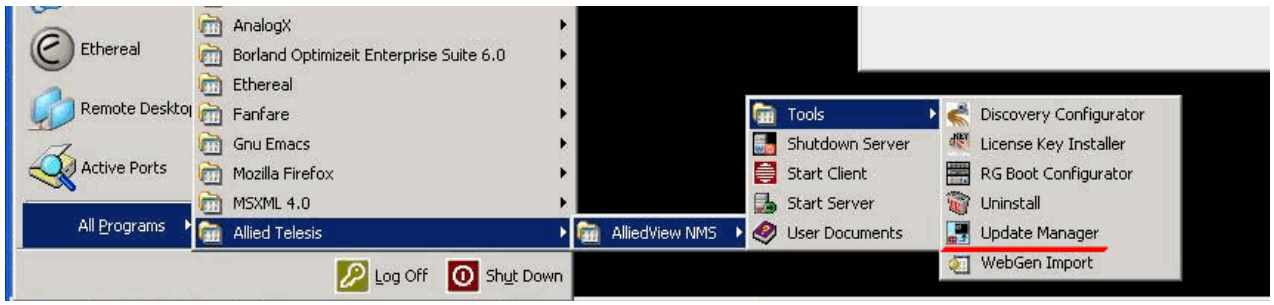


FIGURE 3-2 Launching the Update Manager (GUI Path)

2. The AlliedView Update Manager GUI appears. In the Update panel, select the Browse button to find the R12 ppm file that is going to be used, as shown in the following figure.

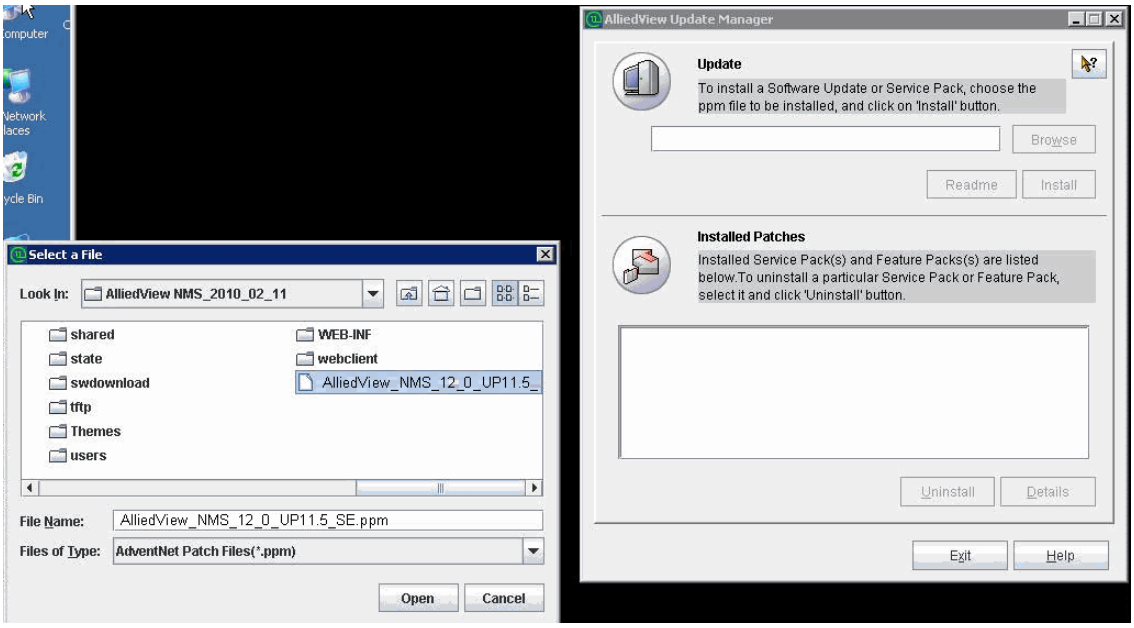


FIGURE 3-3 Selecting the ppm file

3. Select the R12 ppm file and Click on **Open**. The **Install** and **Readme** buttons are now active. (The Readme file and the R12 Release Notes also explain the what the ppm file does.)
4. Click on **Install**. The Installation Wizard appears and reads in the ppm file. The system then prompts you to select the R11 SP5 backup file, as shown in the following figure.

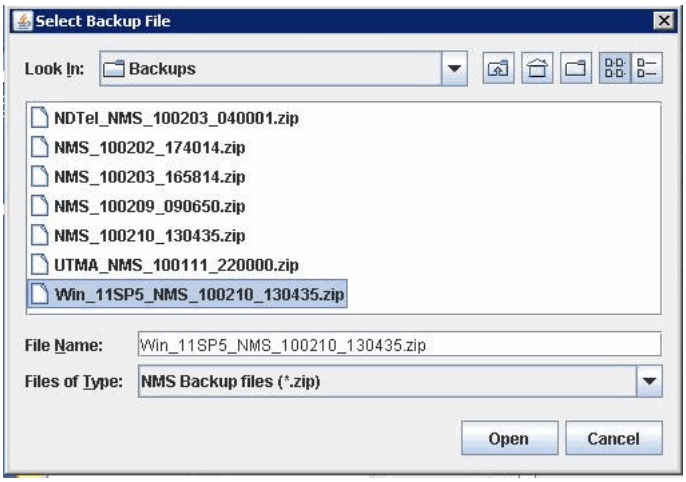


FIGURE 3-4 Selecting the Backup File

5. Select **Open**. The Installation Wizard now extracts the files. (This should take approximately 10-15 minutes, depending on the size of the files.)
6. When the Installation Status reaches 100%, the message “Post invocation” appears, and then the message “Updating Database” appears as the database is converted. The time for this to finish depends on the size of the database. When this is complete, the message “Service Pack installed successfully” appears.

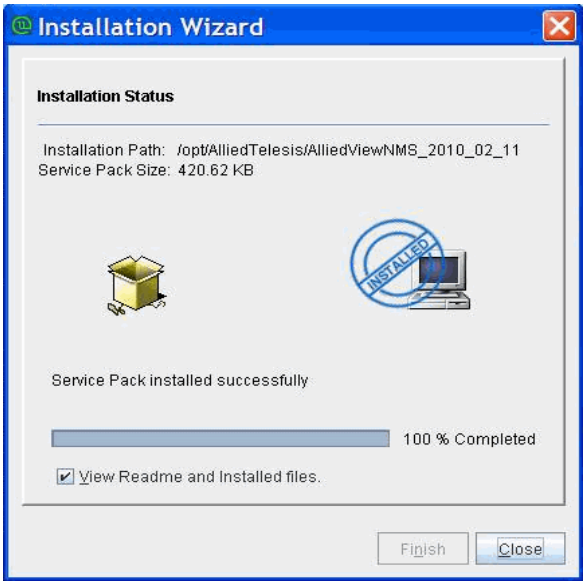


FIGURE 3-5 Update Manager Complete (Service Pack Installed)

7. Select Close to close the Installation Wizard. The AlliedView Update Manager GUI now contains the installed Service Pack, as shown in the following figure. (You can click on **Details** to get additional information on the Service Pack.).

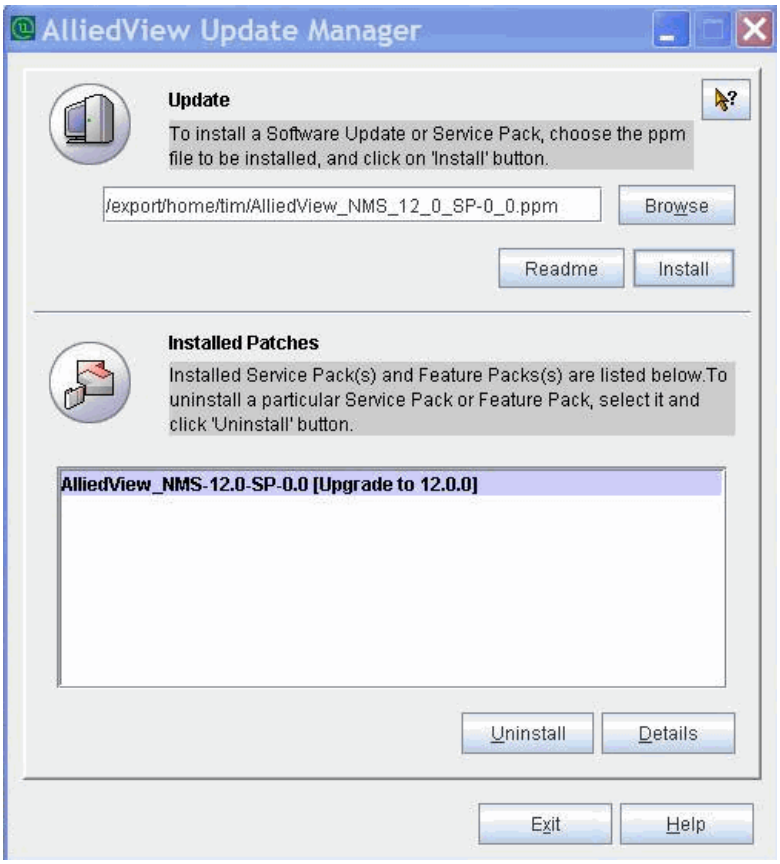


FIGURE 3-6 Service Pack Installed

8. Click on **Exit**. The Service Pack is installed.

3.2.6 Start the R12.0 NMS Server

Refer to Section 4.

3.2.7 Ensure R12.0 is Running Correctly

Once R12.0 is installed and running, you should verify that all functions of the NMS function correctly. Example functions to verify are:

- Client launches successfully.
- All applications for devices launch and work as previously.
- All user IDs and passwords work.
- Security access features work the same as previously.
- All network maps have the correct devices and labels.
- Network Inventory has the correct devices and labels.
- The alarm panel has no unexpected status change.
- tftp and swdownload

Note: At this point you have the option to uninstall R11 SP5. Note that you do not need to restart the NMS server when prompted, since would take the NMS server temporarily out of service.

If any of these do not seem to work as previously, or there is some problem that should not be occurring, contact your Allied Telesis representative before taking any recovery action such as what is included in 3.2.8.

3.2.8 Recovery (Uninstall R12.0 and Restart the R11.0 SP5 Software)

If, as described in Section 3.2.7, you have upgraded to R12.0 and now, after consulting with ATI, R11.0 SP5 must be reinstalled, follow this procedure. The main steps to perform are:

- Uninstall the R12.0 Update Pack, the AlliedView_NMS-12.0-SP-0.0 (using the Update Manager and selecting the Uninstall option).
- Uninstall the NMS R12.0 software.
- Restart the R11 SP5 software.

These steps are outlined in detail below.

1. Shut down any client connections and the NMS R12.0 server. Refer to Section 5.
2. Relaunch the AlliedView Update manager, to bring up the screen in Figure 3-7. Click **Uninstall**.

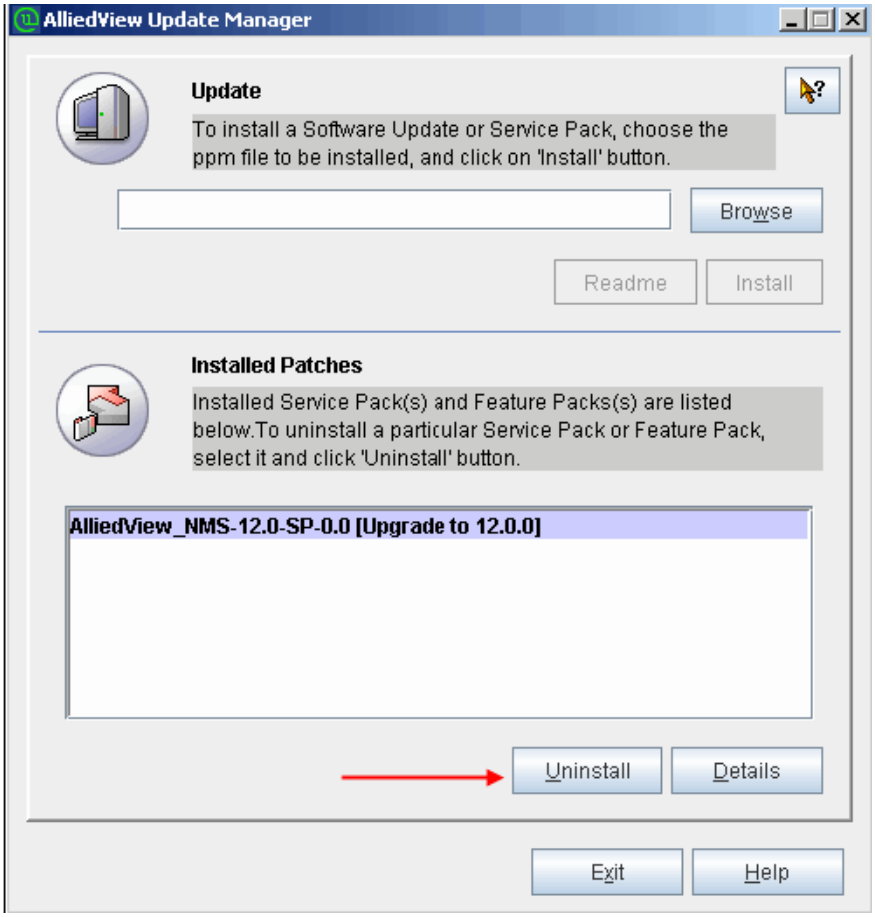


FIGURE 3-7 Uninstalling the R12.0 AlliedView Update

3. A confirmation screen appears asking whether to proceed with the Uninstall. Refer to Figure 3-8. Select **Finish** to proceed, and the Progress screen shows the uninstallation taking place, as shown in Figure 3-9.

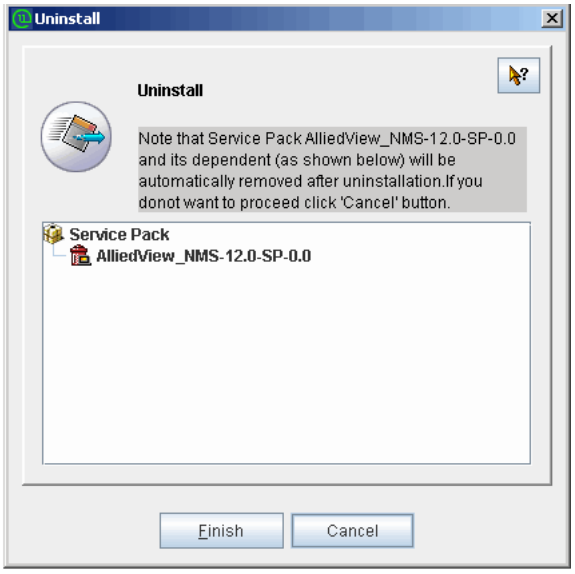


FIGURE 3-8 Confirm Uninstalling (Select Finish)

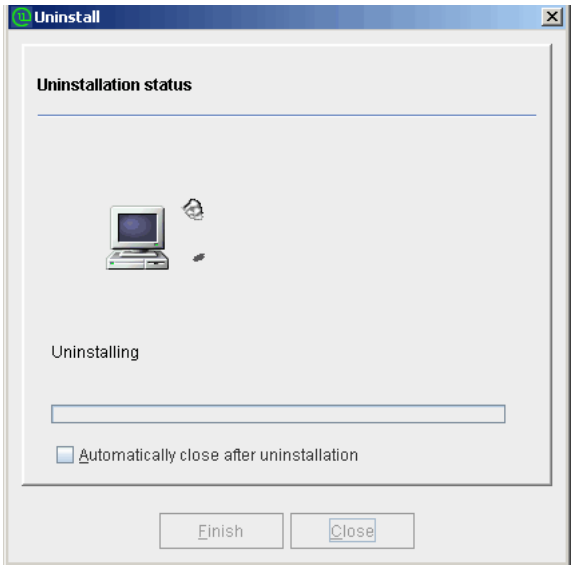


FIGURE 3-9 Uninstallation Progress Screen

4. When completed, the Uninstalled label appears, as shown in Figure 3-10.

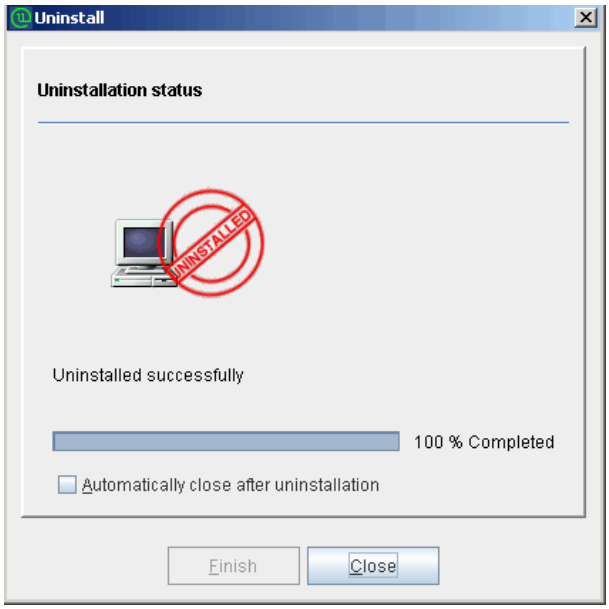


FIGURE 3-10 Upgrade Pack Uninstallation Complete

5. Uninstall NMS R12.0. Refer to Section 6.
6. Restart NMS R11 SP5. In the Services window, select Telesyn NMS (R11 SP5) service. Refer to Figure 3-11.

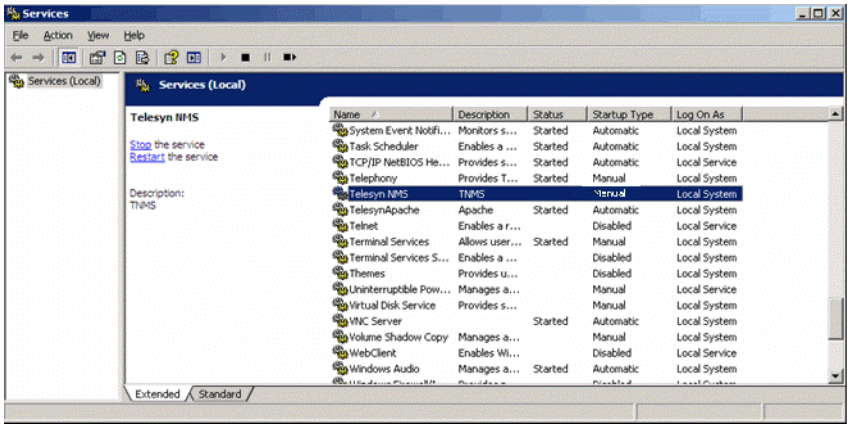


FIGURE 3-11 Service Window for NMS R11 SP5 Release

7. Right-click and select **Properties**. The Properties window opens, as shown in Figure 3-12. In the Startup type drop-down, select Automatic (recommended), and then Click **OK.**

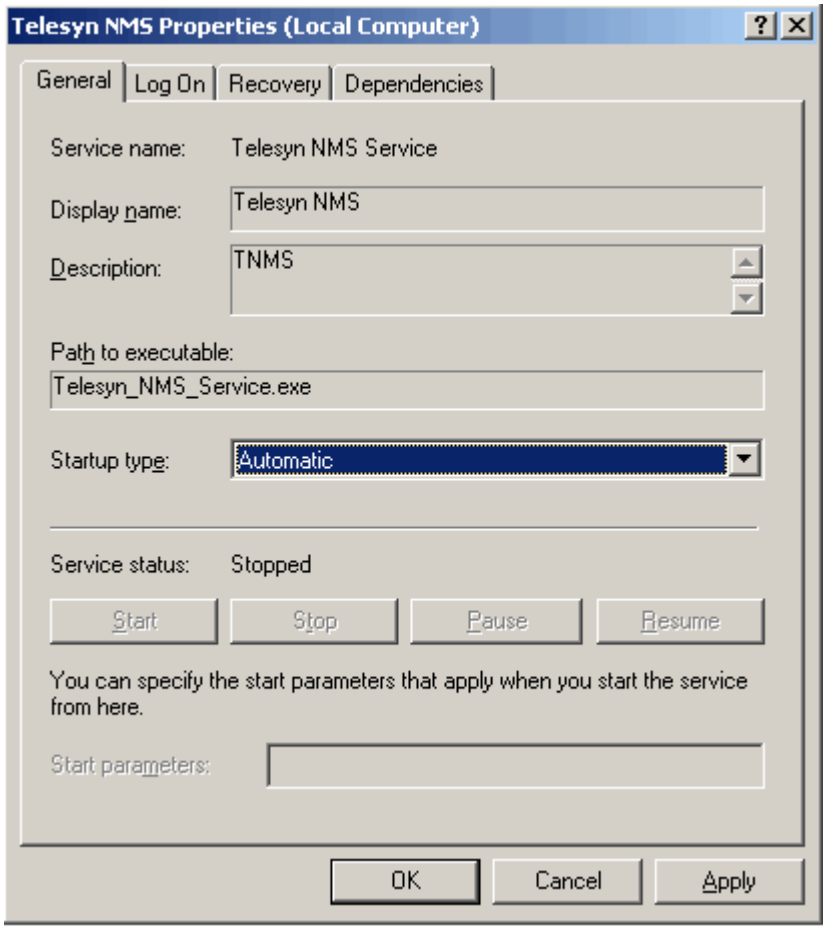


FIGURE 3-12 Properties for Service Window

8. Repeat Steps 6 and 7 for TelesynApache service (usually the next item after TelesynNMS in the Service window.) Refer to Figure 3-13.

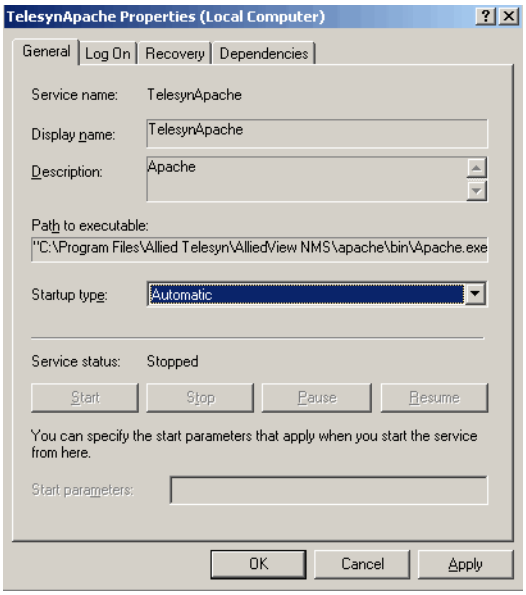


FIGURE 3-13 Selecting Properties for TelesynApache Service

9. In the Services window, right-click TelesynApache service, and select **Start** (Figure 3-14). Repeat for Telesyn NMS service.

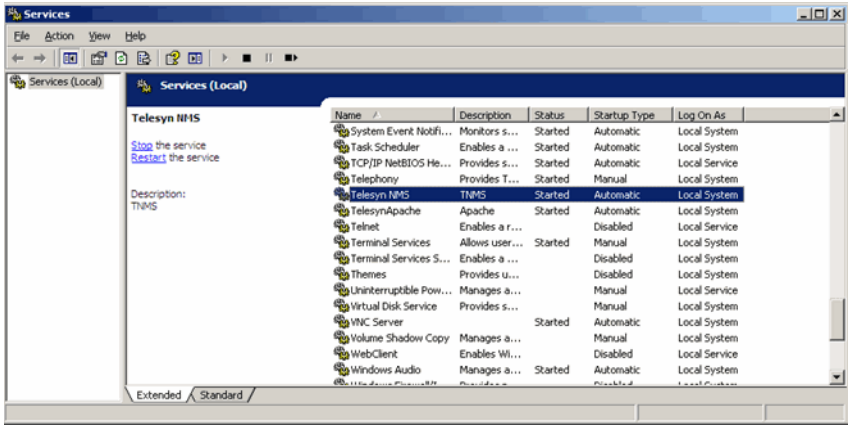
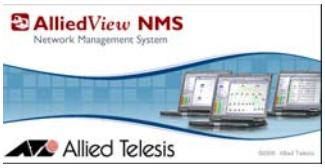


FIGURE 3-14 Restarting TelesynApache Service

10. You can now start NMS R11 SP5 clients and use the R11 SP5 server.



4. Starting Up AlliedView NMS 12.0

4.1 Starting the AlliedView NMS Server on Windows

If you chose to install the AlliedView NMS as a Windows automatic Service, the AlliedView NMS Server will start automatically when your computer is restarted. If you left the ***AlliedView NMS Client*** menu item in your Windows ***Startup*** menu, the AlliedView NMS Client will also start automatically when your computer is restarted. In this case, no further action is required, as both the server and client will be started automatically when a user logs in.

If you chose not to install the AlliedView NMS as an automatic Service, you will have to start it manually. Likewise, if you removed the ***AlliedView NMS Client*** item from your Startup menu, you will have to start the client manually. There are two ways in which you can manually start the AlliedView NMS Server: from the ***Start*** menu or from the **Administrative Tools Services** window. The following sections describe how this is done.

Note: If you have a invalid or expired license key, you will receive a message and the startup will terminate. Refer to starting the NMS, you must have a valid license key. For information on license keys, refer to Section 12.

Note: In the Windows Application Event viewer, the error "AlliedView NMS service hung on starting" is occasionally observed at system start up. To verify NMS service started correctly, connect the NMS Client. If successful, the message may be ignored. Otherwise attempt to restart the AlliedView NMS service via the Windows Service Manager. If the problem persists, contact Allied Telesis Support.

4.1.1 Starting the NMS Server from the Services Window

When you installed the AlliedView NMS software, item **AlliedView NMS** was added to your Windows Services. To see this item, follow these steps:

1. Select ***Start*** -> ***Settings*** -> ***Control Panel*** to access the **Control Panel** on your computer.

*Note: You can also double-click **My Computer**, and then double-click **Control Panel** in the **My Computer** window.*

2. In the **Control Panel**, double-click the **Administrative Tools** folder.
3. In the **Administrative Tools** folder, double-click **Services**. The **Services** window will appear.
4. In the **Services** window, scroll down until you find item **AlliedView NMS**. This item is the AlliedView NMS Service. Refer to the following figure for an example.

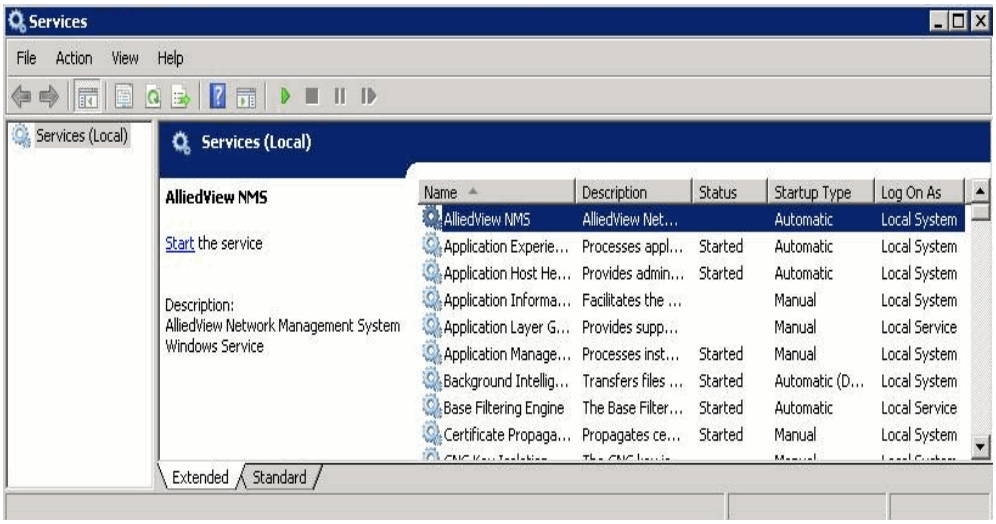


FIGURE 4-1 AlliedView NMS Automatic Service

If you chose not to install the NMS as an automatic Service, the AlliedView NMS service Startup Type will be shown as Manual and the Status field will be blank in the **Services** window as shown in the previous figure.

Note: If AlliedView NMS is an automatic Service, the Startup Type will be Automatic.

To manually start the AlliedView NMS Service, right-click **AlliedView NMS** in the **Services** window, and then select ***Start*** from the pop-up menu. The **Service Control** pop-up window may appear briefly, and then the AlliedView NMS Status field will change to Started in the **Services** window. Allow approximately 60 seconds for the server to initialize. After the 60-second initialization period, the AlliedView NMS Server will be ready to accept client connections.

4.1.2 Starting the NMS Server from the Start Menu

Note: Using the Services window (see 4.1.1) is the recommended way to start the NMS server.

To start the AlliedView NMS Server from the ***Start*** menu, select ***Start -> Programs -> Allied Telesis -> Allied-View NMS -> Start Server***. The **AlliedView NMS** window will appear. In the window title bar, you will see DO NOT CLOSE. Do not close this window as it will cause the server process to fail.

Several messages will scroll by in the **AlliedView NMS** window as the server software initializes. You will see the following message in the **AlliedView NMS** window when the server is ready:

```
Please connect your client to the web server on port: 9090
```

At this point, the server is ready to accept client connections. You can iconify the two server windows to get them out of your way, but *do not close either window*. If you need to shut down the server, refer to Chapter 5.

4.2 Starting the AlliedView NMS Server on Solaris

To start the AlliedView NMS Server on a Solaris platform, perform the following steps:

1. Log on as **root** or as a user with root privileges.
2. Change your current directory (**cd**) to **/opt/AlliedTelesis/AlliedViewNMS/bin**.
3. Execute file **./startnms.sh &** (& is optional)
4. Allow the server to initialize.

4.3 Starting the Client (Logon Screens)

4.3.1 Overview

The AlliedView NMS application client may be run locally on the AlliedView NMS server, or remotely on any java-enabled Windows, Solaris, or Linux system, The local installation is installed during the normal AlliedView NMS server installation process (Section 2) and the Remote Client is installed using the Java Web Start technology via the remote client's java-enabled web browser. The local and remote functionality is identical.

4.3.2 Local Application Client

The application client is installed on the server during the installation.

4.3.2.1 Windows

In Windows it can be accessed by choosing ***Start -> Programs -> Allied Telesis -> AlliedView NMS -> Start Client***.

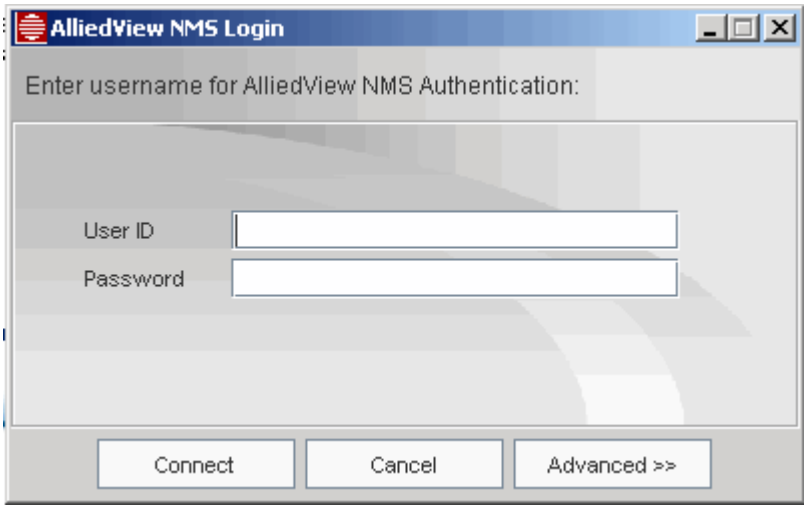


FIGURE 4-2 Application Client Logon Window

Clicking on Advanced brings up other options.

4.3.2.2 Solaris

In Solaris it can accessed by going to `<NMS_home>/bin,` then `./startApplicationClient.sh`

4.3.3 Remote Client - Java Web Start[1]

4.3.3.1 Overview

Java Web Start is a helper application that allows the AlliedView NMS client to run the AlliedView NMS remotely via the Internet as a user application rather than as an HTML client. Java Web Start is installed from the AlliedView NMS Server via HTTP and must be installed on the client machine before the user can use it. A first-time installation is typically performed on a new client machine or when the AlliedView NMS is first deployed. The AlliedView NMS Server must be running in order to install the Java Web Start Client.

1. Registered Trademark ® Sun Microsystems. All rights reserved.

4.3.3.2 Installing Java Web Start Client

From your Web browser, enter the following address

```
http://<server ip address>:9090
```

where server ip address is the IP address of the AlliedView NMS Server.

The AlliedView NMS logon screen will appear as shown in the following figure.

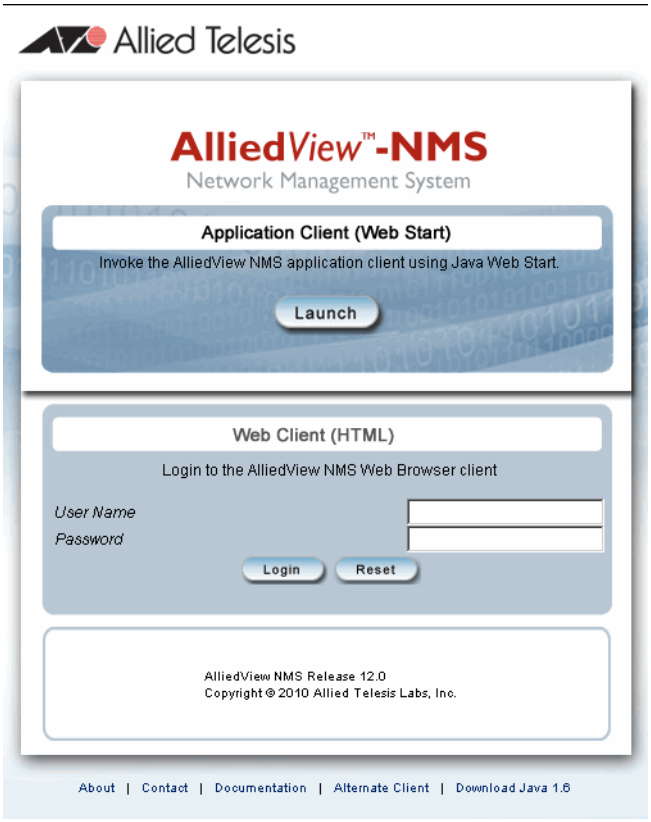


FIGURE 4-3 AlliedView NMS Client Logon Screen

1. Click **Launch** on the **Application Client (Web Start)** from the Logon and allow the application to load. This will download Java Web Start from the AlliedView NMS as shown in the following figure.

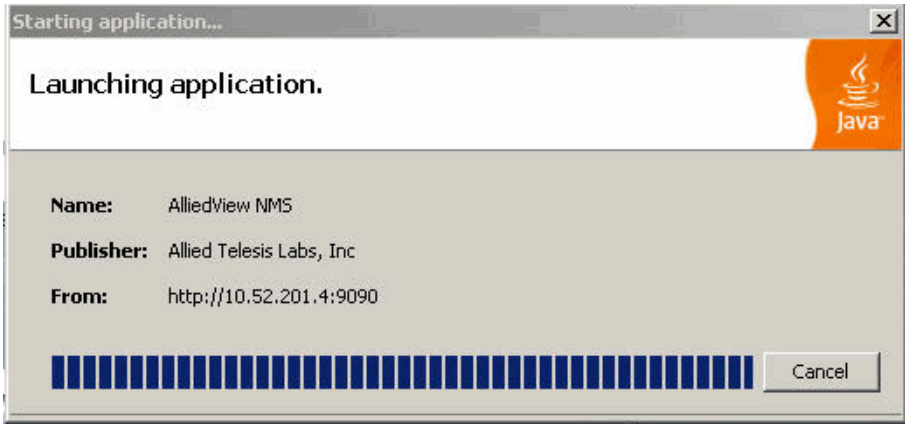


FIGURE 4-4 Java Web Start Download

2. If Java Web Start is not installed, you will be given the option of installing it from the Sun Web site. You can also install it from the AlliedView NMS Logon screen (refer to Figure 4-3) by clicking on **Download Java 1.6.**

Note: Installing from the AlliedView NMS Logon screen (refer to Figure 4-3) *is preferred since it will always contain the correct version of the jre software.*

For Solaris, click the **Sun Microsystem's Binary Code Agreement** link and read the license agreement.

3. A digital signature screen then appears, asking if you trust the origin of the application, as shown in the following figure. Select **Run**.

FIGURE 4-5 Digital Signature Screen

4. When the **AlliedView NMS Authentication** window appears, enter **root** as the username and **public** as the password, and then click **Connect**. The **AlliedView NMS Application** screen will appear, with the IP Topology screen. Refer to the *AlliedView NMS Administration Guide* and the *AlliedView NMS User Guide* for more information.

*Note: It is highly recommended that you change your password immediately upon first logging in. The **root** username and **public** password are defaults for the AlliedView NMS. Leaving the default password may make your NMS vulnerable to unauthorized access. Refer to the AlliedView NMS Administration Guide for information on changing the password.*

5. Verify that the client can log in and that the AlliedView NMS starts up and displays properly on the client machine.
6. If you wish to exit the AlliedView NMS, from the panel-specific menu, select ***File -> Exit***.

4.3.4 HTML Client

For starting the AlliedView NMS Client for simple network monitoring over a slow dialup link, it is recommended that you use the HTML client. To start the AlliedView NMS HTML Client, follow these steps:

1. In your Web browser, enter the following address:
   `http://<server ip address>:9090`

   where server ip address is the IP address of the AlliedView NMS Server. The AlliedView NMS logon screen shown in Figure 4-3 will appear.

2. In the Web Client (HTML) section, enter **root** as the username and **public** as the password, and then click **Login**. The HTML Client view will appear.

*Note: It is highly recommended that you change your password immediately upon first logging in. The **root** username and **public** password are known defaults for the AlliedView NMS. Leaving the default password may make your NMS vulnerable to unauthorized access. Refer to the NMS Administration Guide for information on changing the password.*

3. Refer to the *AlliedView NMS User Guide* and the *AlliedView NMS Administration Guide* for information on using the HTML interface.

4.3.5 Client Limitations

- The Java Web Start Client may throw exception InvalidClassException.

  Java Web Start is a client-side technology that downloads software from the AlliedView NMS Server via HTTP and executes it on the local (client) host. The AlliedView NMS Java Web Start client makes use of this technology to keep client software synchronized with the NMS Server software when the NMS is upgraded. However, the AlliedView NMS Java Web Start Client does not handle the case where the server is downgraded from a new version to an older version.

  For example, if a user has the AlliedView NMS 12.0 server running on a host, and then replaces it with the AlliedView NMS 11.0, the Java Web Start clients that had downloaded the 12.0 software must remove their current Java Web Start Client and download it again from the AlliedView NMS 11.0 Server.

  If the AlliedView NMS Web Start client is not re-installed as described above, the UnmarshallException and InvalidClassException messages will be seen in the Java Web Start console.

- By default, a maximum of five users may be logged in on the AlliedView NMS at any given time.

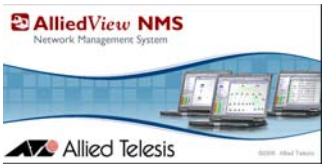
  The AlliedView NMS supports a maximum of five simultaneous client sessions. If a user attempts to log in when five users are already connected, the user's login attempt will fail with an error message indicating that the maximum number of client sessions has been reached. The user will be able to log in when one or more of the current users logs out.

Note: There is a license option to allow more than five clients.

4.3.6 Other Logon Screen Links

At the bottom of the NMS Logon screen are the following links:

- About - This includes an overview of the product and a link to the Allied Telesis website.
- Contact - This creates an email addressed to ATI Sales.
- Documentation - This includes links to the pdf versions of the Administration Guide and User Guide, and to the online help (How to Use Online Help screen appears first).
- Alternate Client - This will run the NMS client as an applet rather than a Web Start client.
- Download Java 1.6 - This brings up a form to download Java 1.6.0_16 from the NMS Server.



5. Shutting Down the AlliedView NMS

5.1 Shutting Down a AlliedView NMS Client

5.1.1 Application Client

For an NMS client running as a user application, to shut down the client, simply select ***File -> Exit*** from the Panel-Specific Menu, or click the **X** in the upper-right-hand corner of the screen. The **Confirmation Message** dialog box will appear. Click **Yes** in the dialog box to shut down the client.

5.1.2 HTML Client

For a AlliedView NMS HTML client, select ***File -> Logout*** from the AlliedView NMS Panel-Specific Menu.

5.2 Shutting Down the AlliedView NMS Server

5.2.1 Windows

To shut down the AlliedView NMS Server on a Windows platform, follow these steps:

1. Select ***Start -> Programs -> Allied Telesis -> <AlliedView NMS load> -> Shutdown Server***. The Shutdown Server window will appear. *Do not close this window*. Shortly afterwards, the **Shutdown AlliedView NMS Server** dialog box will appear.

*Note: Click **Cancel** if you decide not to shut down the server.*

2. In the **Shutdown AlliedView NMS Server** dialog box, enter the **root** user password in the **Password** field.
3. If you want to change the shutdown mode:
   1. Click **Settings**. This will display the **Mode of Shutdown** window.
   2. In the **Mode of Shutdown** window, select the desired mode.
   3. Click **OK**.
4. Click **OK**. Allow a few seconds for the server to shut down. The **Server Shutdown** dialog box will appear when the shutdown is complete.
5. Click **OK** in the **Server Shutdown** dialog box.

5.2.2 Solaris

To shut down the AlliedView NMS Server on a Solaris platform, follow these steps:

1. Log in as **root** or as a user with root privileges.
2. Change your current directory (**cd**) to **<NMS_HOME>/bin**.
3. Execute file **ShutDown.sh**.

6. Uninstalling the AlliedView NMS

6.1 Overview

The process for uninstalling the AlliedView NMS depends on the operating system being used.

6.2 Windows

To uninstall the AlliedView NMS from a computer running Windows, follow these steps:

1. Shut down any client connections and the server. Refer to Section 5.
2. ***Select Start -> Programs -> Allied Telesis -> AlliedView NMS_load->Tools -> Uninstall***. The AlliedView NMS InstallShield will appear, as shown in Figure 1.

FIGURE 6-1 Uninstall NMS R12.0 - Initial Screen

3. Click **Next**. This will display the next window, which shows the location from where the software will be uninstalled, as shown in Figure 2. Continue by selecting Next. There will a progress screen, and then a Finsih screen, as shwon in Figures 3 and 4.

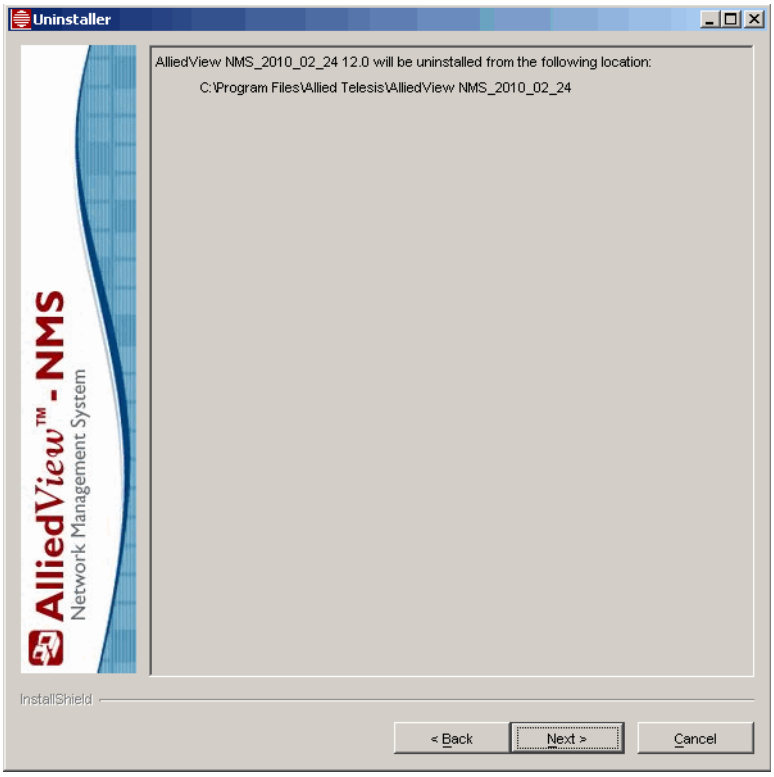


FIGURE 6-2 Uninstall - Path to R12.0 Software Directory

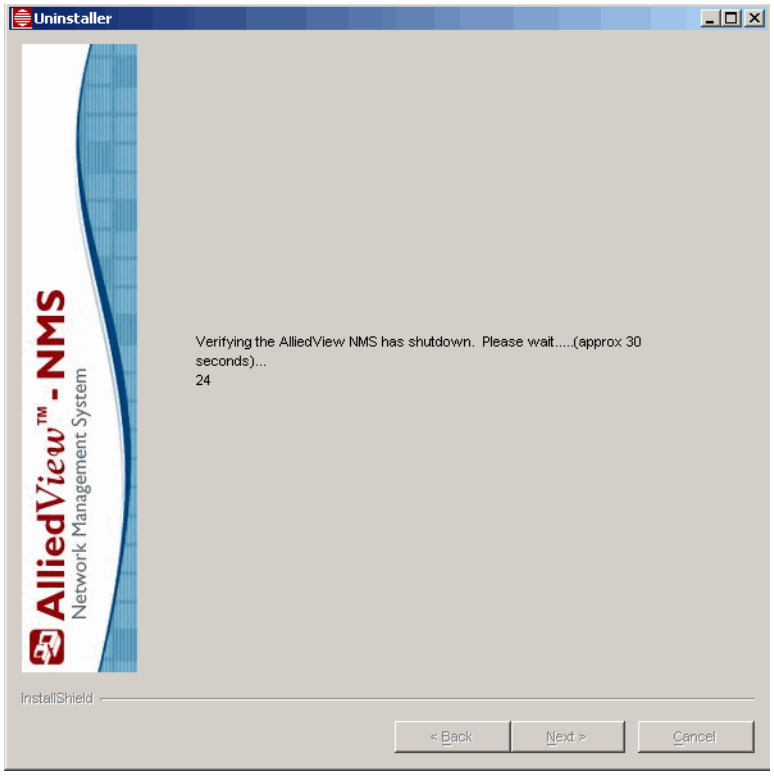


FIGURE 6-3 Uninstall AlliedView NMS R12.0 - Progress

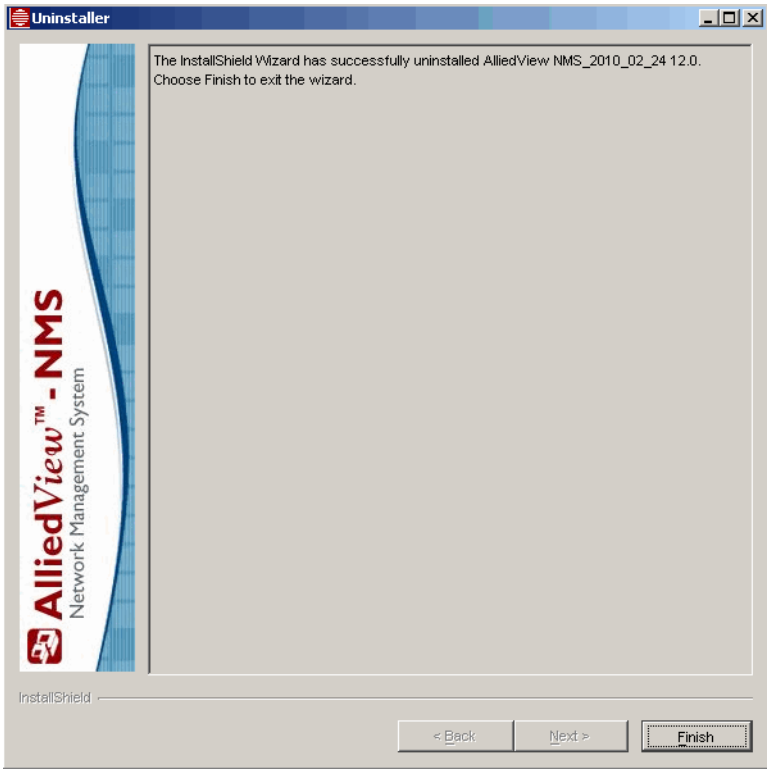
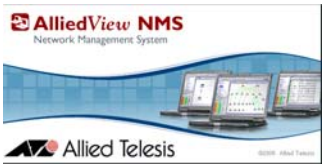


FIGURE 6-4 Uninstall AlliedView NMS R12.0 - Finish

6.3 Solaris

To uninstall the AlliedView NMS from a computer running Solaris, follow these steps:

1. Log in as root or as a user with root privileges.
2. Change your current directory (**cd**) to **<NMS_HOME>/_uninst**.
3. Execute file **uninstaller.bin**.



7. Installing and Uninstalling a 12.0 Service Pack (R12 SPx)

Note: Uninstalling the NMS Upgrade Pack for R12.0 is covered in Section 3, since in R12.0 the Upgrade Pack is unique in how it is installed and removed. This Section assumes that the upgrade to 12.0 is successful, and the user is now installing the R12 Service Pack.

7.1 Installing the R12 Service Pack

7.1.1 Overview

The service pack is used to bring your AlliedView NMS to a point release within the major software release. The process is identical for both Windows and Solaris. In 12.0 the same service pack is used for Solaris and Windows.

Note: Prior to this procedure, perform a server backup.

7.1.2 Upgrading the NMS Server

1. Shut down the NMS Server. Refer to Chapter 5.

Caution: You must shut down the AlliedView NMS server; otherwise, the AlliedView NMS server cannot successfully install the upgrade pack.

2. In your **<NMS_HOME>\bin** directory and locate file **UpdateManager**. Execute this file. This will bring up the **AlliedView NMS Update Manager** window shown in the following figure.

*Note: Use the **UpdateManager.bat** file for Windows, or the **UpdateManager.sh** file for Solaris.*

*Note: In addition to starting the update manager from the bin directory with the command, you can instead start it from **Start -> Programs -> Allied Telesis ->AlliedView NMS -> Tools -> Update Manager***

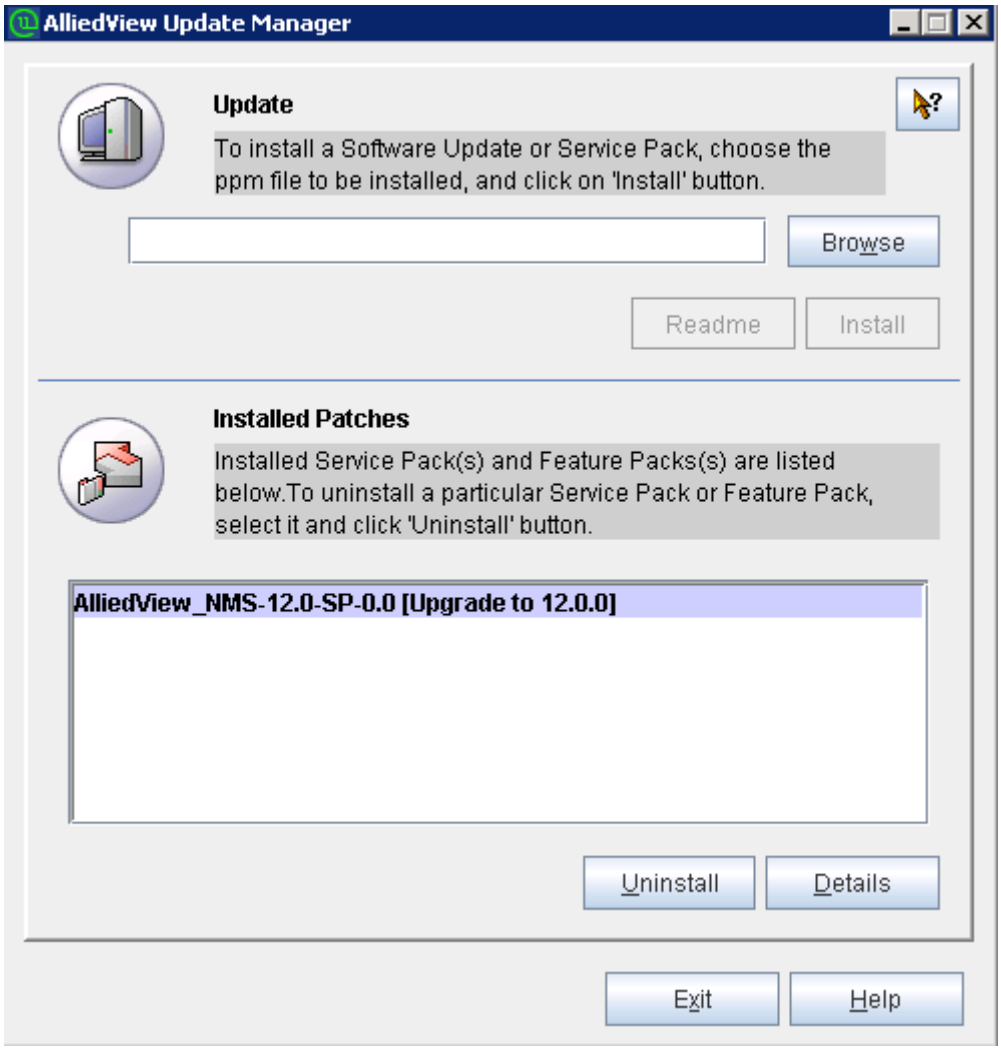


FIGURE 7-1 AlliedView NMS Update Manager

FIGURE 7-2 AlliedView NMS Update Manager Installation Wizard

3. In the Installation Wizard window, click **Browse**. This will bring up the **Select a File** window. Refer to the following figure.

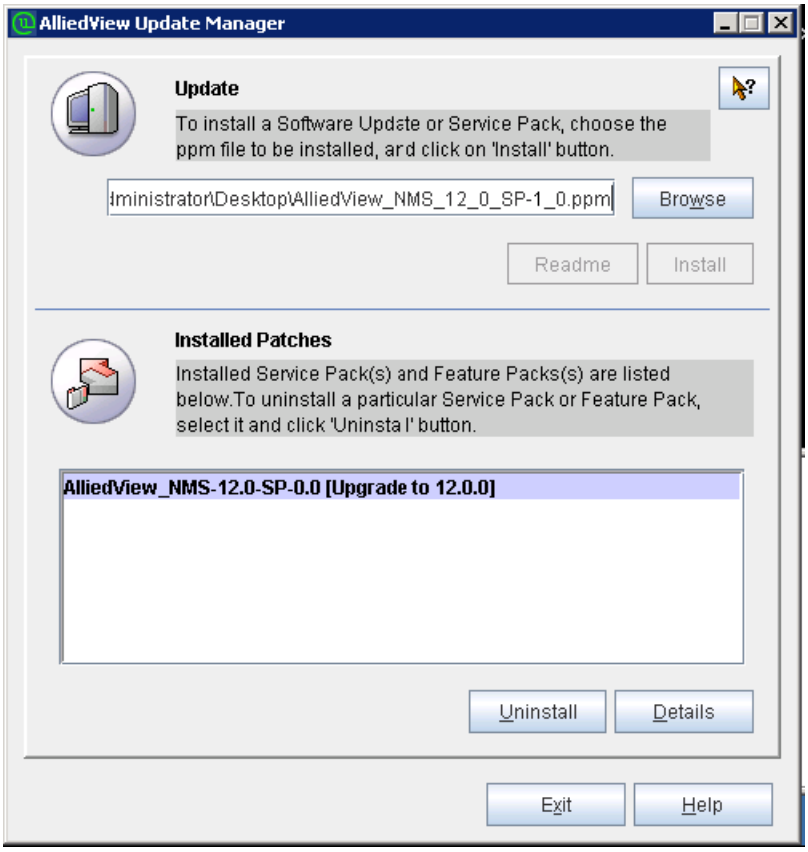


FIGURE 7-3 AlliedView NMS Select a File Window

4. In the **Select a File** window, navigate to the Service Pack file located on the installation CD-ROM. This file will have a **.ppm** file extension. Double-click this file, or select the file and then click **Open**. This will close the **Select a File** window.
5. In the **Installation Wizard** window, if you wish to view the **Readme** file for this update, click **Readme**.
6. Click **Install** to apply the update. The update process will begin. The **Installation Wizard** window will track the progress as shown in the following figure.

*Note: If you do not wish to view the **Readme** file and the installation log file upon completion, uncheck the **View Readme and Log** checkbox. This can be done during the installation process.*

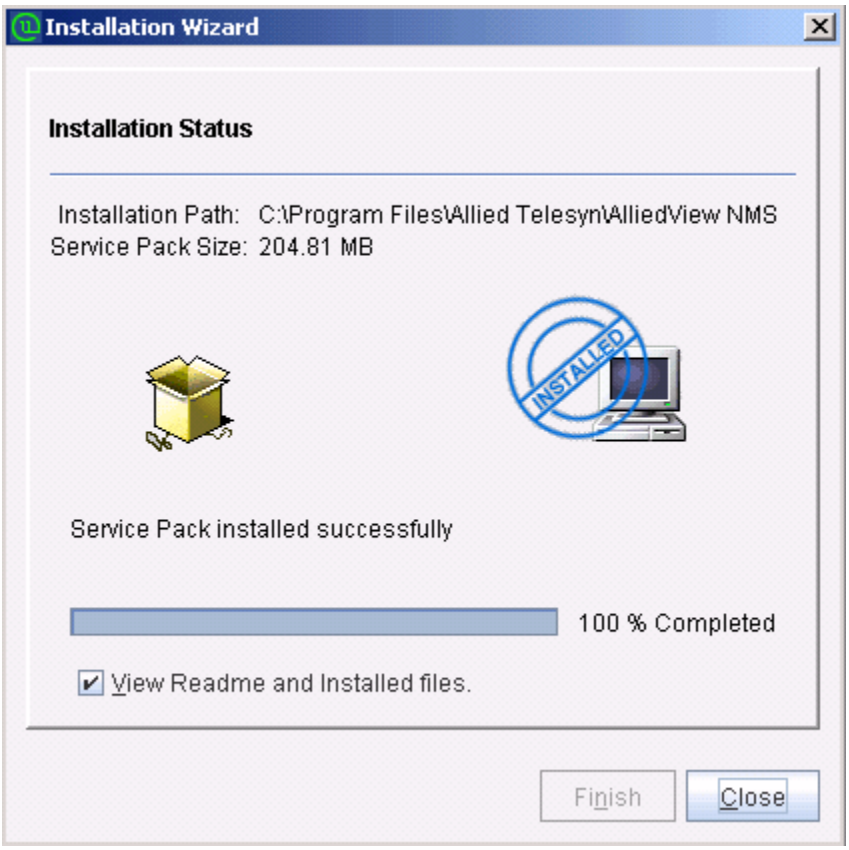


FIGURE 7-4 AlliedView NMS Update Manager Installation Wizard Update In Progress

7. Allow the installation to complete, and then click **Close**.
8. The **AlliedView NMS Update Manager** window will now show the installed Service Pack as shown in the following figure.
9. The Service Pack is now installed. Click **Exit** to exit the AlliedView NMS Update Manager.

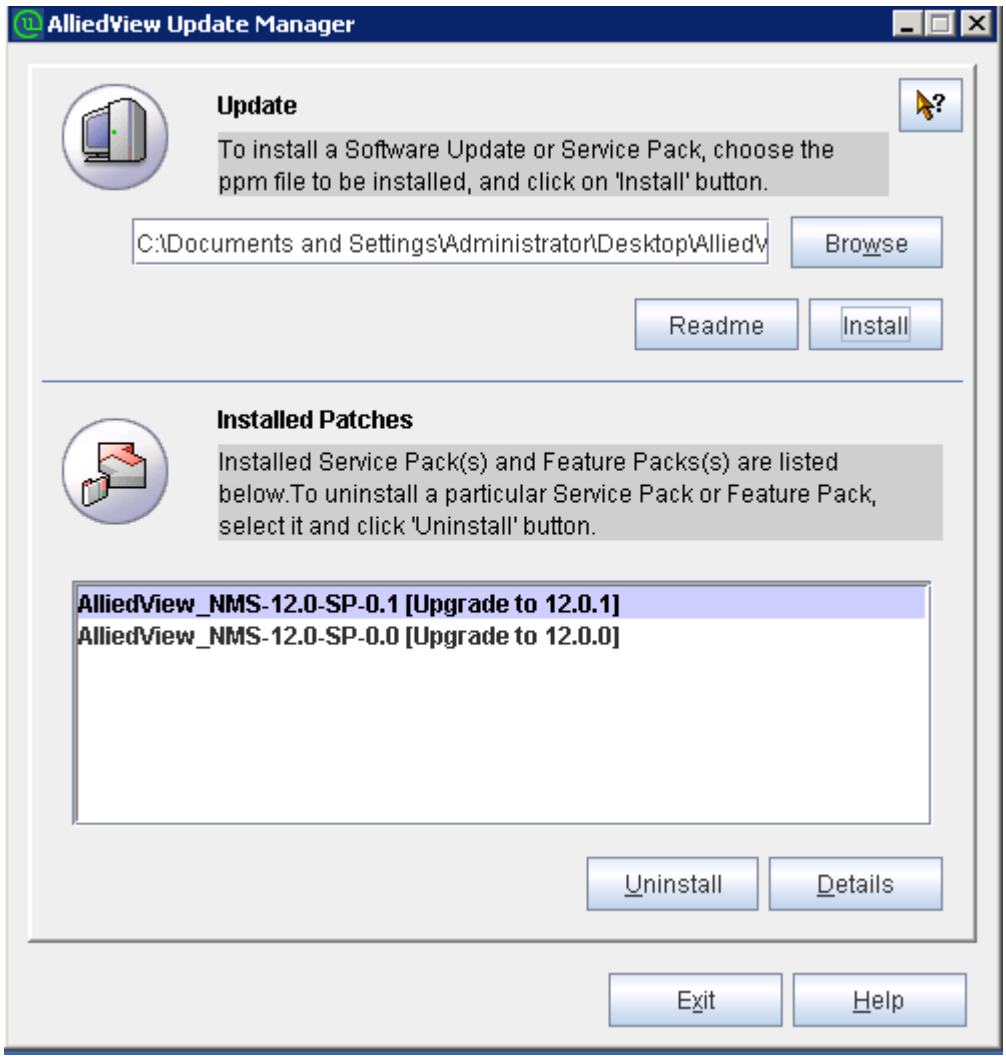


FIGURE 7-5 Update Manager Showing the Installed Service Pack

10. Start the NMS Server. Refer to Chapter 4.
11. The installation is now complete.

7.1.3 Ensuring the Service Pack is Running Correctly

Once the R12.0 Service Pack is installed and running, you should verify that all functions of the NMS function correctly. Refer to 3.2.7 for types of tests to run.

If any of these do not seem to work as previously, or there is some problem that should not be occurring, contact your Allied Telesis representative before taking any recovery action, such as uninstalling the Service Pack (refer to 7.2).

7.2 Uninstalling an AlliedView NMS Service Pack

Note: Uninstalling an NMS Service Pack is only necessary if the Service Pack is determined to be faulty and must be removed.

Note: The uninstallation procedure is identical for Windows and Solaris.

To uninstall a AlliedView NMS Service Pack, perform the following steps:

1. Shut down the NMS Server. Refer to Chapter 5.
2. In your **<NMS_HOME>\bin** directory, locate file **UpdateManager**. Execute this file. The **AlliedView NMS Update Manager** window will appear as shown in the following figure.

Note: Use the UpdateManager.bat file for Windows, or the UpdateManager.sh file for Solaris.

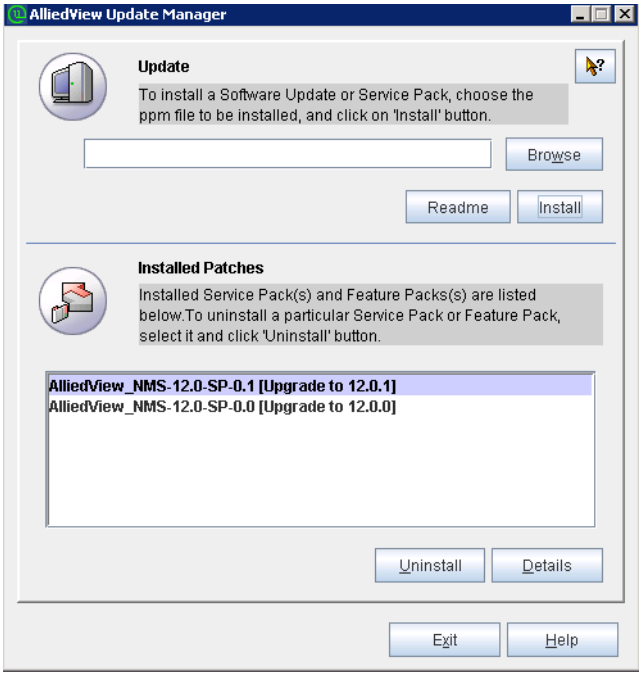


FIGURE 7-6 NMS Update Manager Window Showing Installed Service Packs

3. Click on the Service Pack you want to remove, and then click **Uninstall**.

Caution: If you choose more than one SP to uninstall, the NMS will choose the lowest version of software and all higher versions.

4. The **Uninstall** window will appear as shown in the following figure.

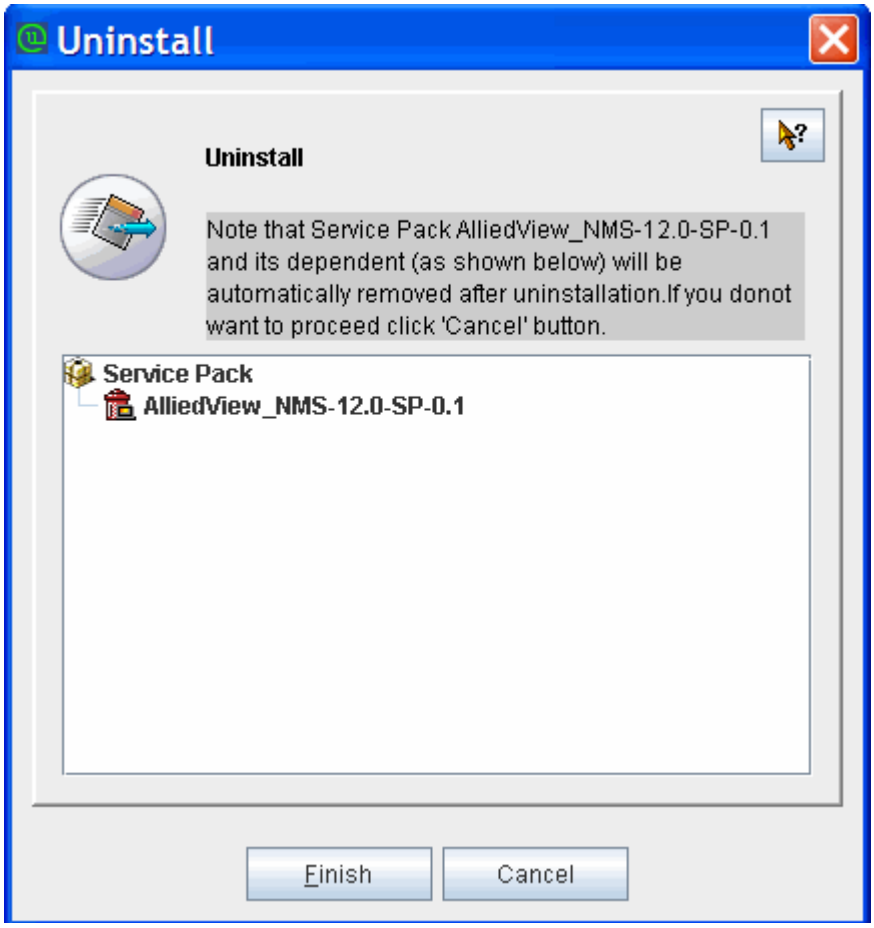


FIGURE 7-7 NMS Update Manager Uninstall Window

5. Click **Finish**. The uninstallation process will begin. The **Uninstall** window will track the progress as shown in the following figure.

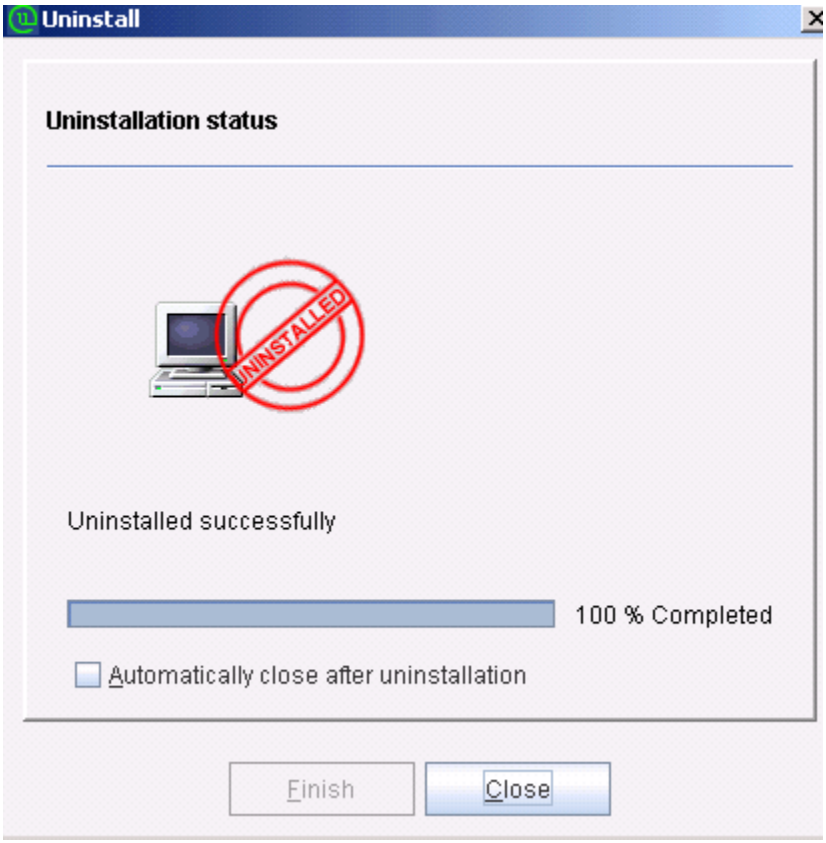


FIGURE 7-8 NMS Update Manager Uninstall Progress

*Note: If you want the **Uninstall** window to close after the uninstallation is complete, check the **Automatically close after uninstallation** checkbox. You can do this during the uninstallation process.*

6. Allow the uninstallation process to complete. If the **Uninstall** window did not close automatically, click **Close** to close it. The **AlliedView NMS Update Manager** window will no longer show the uninstalled Service Pack.
7. In the **AlliedView NMS Update Manager** window, click **Exit** to exit the NMS Update Manager. The Service Pack is now removed.
8. Restore the database files. Refer to the *Allied View NMS Administration Guide*.
9. Start the NMS Server. Refer to Chapter 4.
10. For each PC running the the NMS WebStart java client, delete the temporary files. For example, for Windows XP:

    a. Access the Java Control Panel (such as ***Start -> Control Panel***, then open the Java Control panel).

    b. In the General tab, Temporary Internet Files panel, select **Settings**, then in the **Temporary Files Setting** window, select **Delete Files**.

    c. In the Delete Temporary Files window, select both types of files, then **OK**. Refer to the following figure.

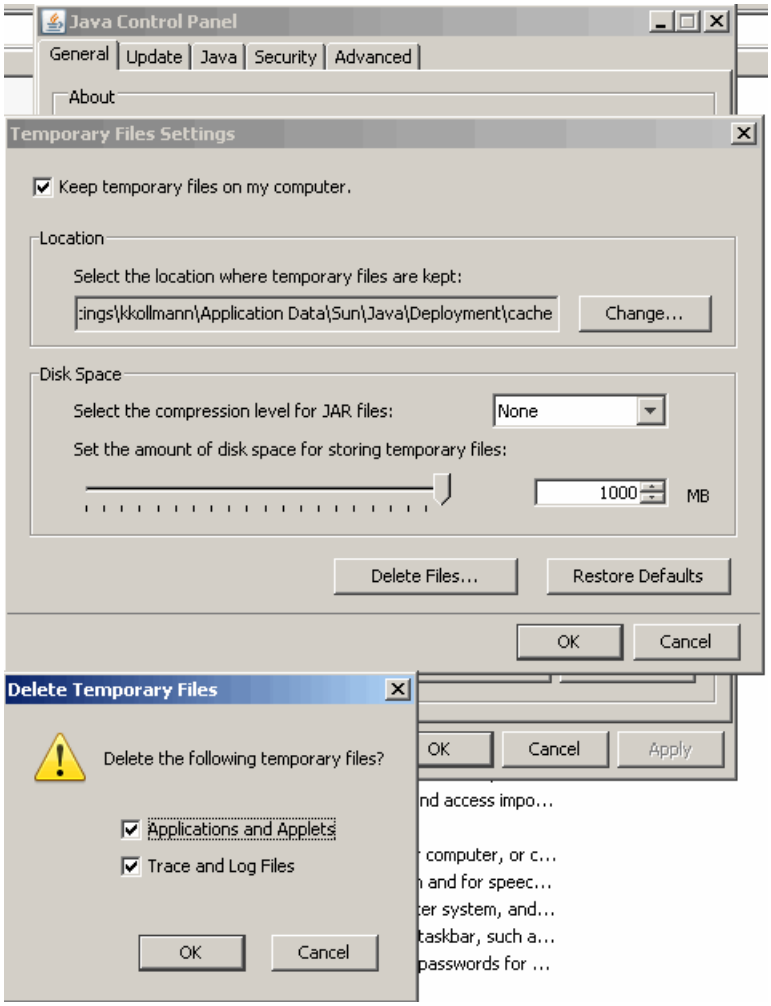
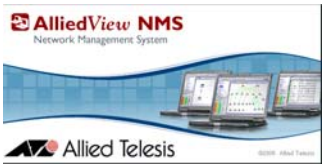


FIGURE 7-9

d. Once the files are deleted, the *Delete Temporary Files* window closes.

e. Click **OK** on Temporary Files Settings and the Java Control Panel.

11. The uninstall procedure is complete.



8. Adding the NMS to a Network

The previous sections of this Guide have shown how the various components of the AlliedView NMS are installed on the server and clients. The NMS Administration Guide explains how the NMS programs and configuration discover the network devices so that they are displayed and managed by the AlliedView NMS interface.

The following lists the steps to go through the installation of the NMS and the network devices to ensure that all devices are able to be discovered, the AlliedView NMS and the devices are physically connected, and the NMS is polling and receiving the appropriate data from the devices.

8.1 NMS and iMAP/AT Device Software Version Compatibility

For every version of the AlliedView NMS, there is a list of devices that the version of AlliedView NMS will support, as well as the software version of these devices.

Caution: Refer to the AlliedView NMS Administration Guide for the list of devices and their software versions supported by the latest version of the AlliedView NMS. If there is any question about compatibility, consult with your authorized Allied Telesis representative.

8.2 Configuring a New NMS with New Devices

If the AlliedView NMS is being installed for the first time and a new network is being configured, the network, the devices, and the network interface to other networks need to be configured, as well as the AlliedView NMS.

Caution: Ensure the AlliedView NMS and the devices have layer 3 connectivity; if this is not done, the devices will not be able to communicate with the AlliedView NMS server.

TABLE 8-1 Steps for a New AlliedView NMS with New Devices

Step	Details / Reference	Notes
1. Evaluate Network Configuration Requirements	Ensure all network configuration information is recorded and what changes (such as Network VLANs) will be required	
2. Install the AlliedView NMS on the Server	Refer to Section 2.	For the latest version of a AlliedView NMS release, the CD may contain a Service Pack that must be installed as well. Refer to Section 3.
3. Confirm the telnet server is working	This must be done for each device	For Rapier devices, the default is on. For iMAP devices, use `>enable telnet`.
4. Start up the SNMP agent	This must be done for each device	
5. Physically connect the AlliedView NMS to the network	For any issues specific to Windows or Solaris, refer to their connectivity Guides.	
6. Start the AlliedView NMS	On the NMS, select ***Start ->AlliedTelesis-> <Load_Name> -> Start Client***. (If you did not set the NMS server as Autostart, you will have to select ***Start Server*** first.) When the NMS GUI appears, the only network that appears is the one the server is a member of.	Be sure the default user id and password for Rapier devices (friend, friend), iMAP devices (officer, officer) and the NMS (root, public) is changed.
7. Use the Discovery Configurator to Prepare for the Discovery Process	Select ***Tools -> Discovery Configurator*** to bring up the Discovery Configurator Window. Then follow the tabs: - General Attributes - CLI Login - Protocol (always SNMP only) - Network and Node Discovery Refer to the Administration Guide, Section 3	The Discovery Configurator is used to configure the attributes of the discovery process, and so it is critical that these be set up correctly.
8. Use the Security Administrator	Set up NMS users with passwords and scope of control. Refer to the Administration Guide, Section 4.	

TABLE 8-1 Steps for a New AlliedView NMS with New Devices (Continued)

Step	Details / Reference	Notes
9. Import Link Profiles	Create an excel spreadsheet and place it in `<NMS Home>\state`. Refer to the Administration Guide, Section 6.7.3.	Since the physical link configuration for an existing network can be large and complex, the Network VLAN Manager can have an Excel spreadsheet of the physical links imported. This will populate the Physical Network map, and any existing Network VLANs that use those links will be configured.
10. Set Device Attributes	Refer to the Administration Guide, Section 5.	
11. Configure Applications	Refer to the Administration Guide, Sections 5 and 6.	With all devices discovered and being monitored, it is now possible to configure applications such as VLANs, HVLANs, and Network VLANs.
12. Perform a AlliedView NMS Backup	Make a backup of both the AlliedView NMS file, the database, and devices Refer to the Administration Guide, Section 3.4, and Section 5.	Do this on a schedule to ensure whenever changes due to Steps 11 and 12 are captured and archived.

9. Appendix A - Enabling Anonymous FTP

9.1 Overview

Use the following steps to enable anonymous FTP on the Backend Server. Refer to the AlliedView NMS Administration Guide for how this works.

9.2 Windows 2003

1. ***Control Panel -> Add/Remove Programs -> Add/Remove Windows Components***
2. Select (without checking) Internet Information Services (IIS)

Note: For Windows 2003, Internet Information Services is under Application Server -> Details.

3. Click on Details
4. Check File Transfer Protocol Server, which will check its dependencies
5. Click Okay
6. Load the CD if prompted and enter the path `D:\ENGLISH\WIN2000\ADV_SERV\I386`

The default configuration will consist of:

- Anonymous access only, with passwords under Windows control
- Read access only
- Root is `C:\inetpub\ftproot`
- Logging is enabled

Write access has to be enabled. Other defaults may be modified. If the ftp root directory is modified, then it has to be added to the AlliedView NMS config file conf\AT_server.properties.

1. ***Control Panel -> Administrative Tools -> Internet Services Manager***
2. Select the host
3. Select the “Default FTP Site”
4. Right click and select Properties
5. Select the “Home Directory” tab and enable Write access.

Note: Currently, Step 5 is required for GenBand devices; otherwise GenBand backups to the backup directory will fail.

9.3 Windows 2008

1. Access the **Control Panel.**
2. In Control Panel Window, select **Administrative Tools**
3. In the Administrative Tools window, select **Server Manager**
4. In the Server Manager window, expand (if needed) **Roles Summary** and **Roles**, and then select **Add Roles**. Refer to the following figure.

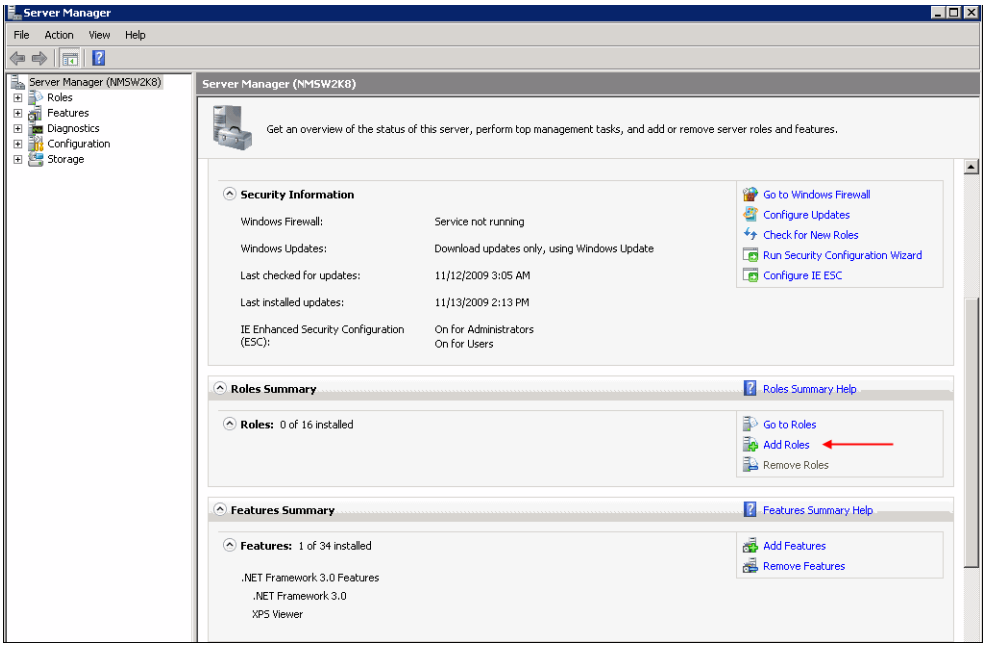


FIGURE 9-1 Adding a Role

5. The Add Roles Wizard with an overview appears. Select **Next.**
6. The Server Roles window appears. Select Web Server (IIS). You may get a pop-up to add required features. Refer to the following figure.

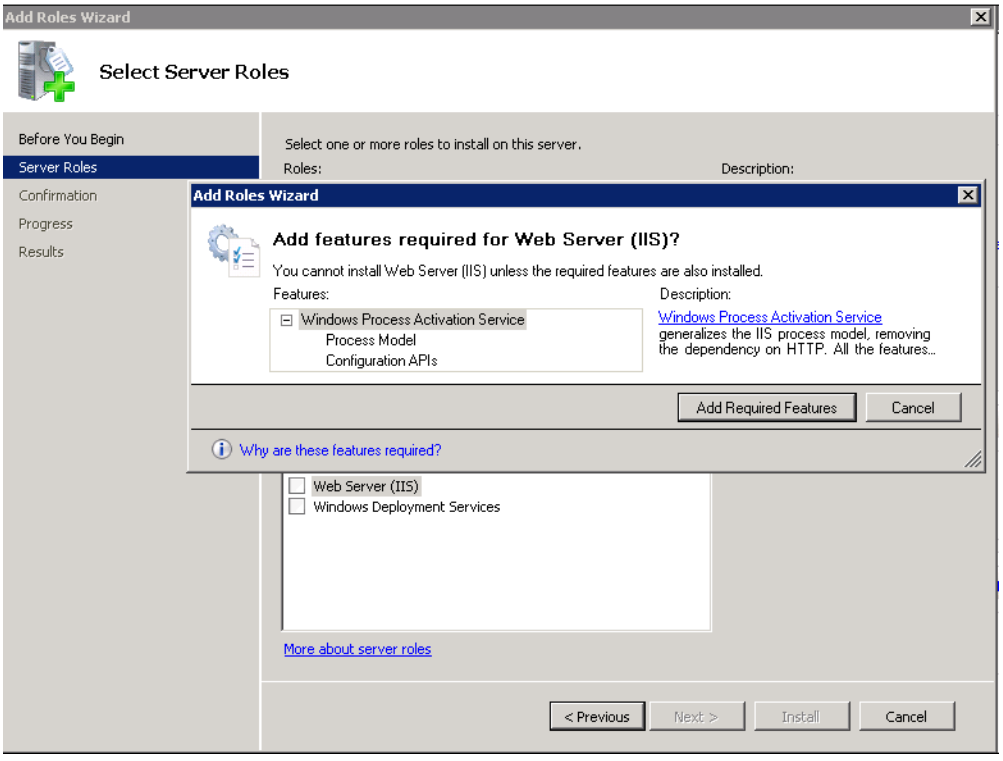


FIGURE 9-2 Adding Required Services for Web Server (IIS)

7. Select **Add Required Features.** The Web Server (IIS) tic box is now selected. Select **Next.**
8. The Introduction to Web Server (IIS) window reappears, where you can get additional information. Select **Next**.

9. In the Select Roles Services window, select FTP Publishing Service. A pop-up may appear for Required Role Services. Refer to the following figure.

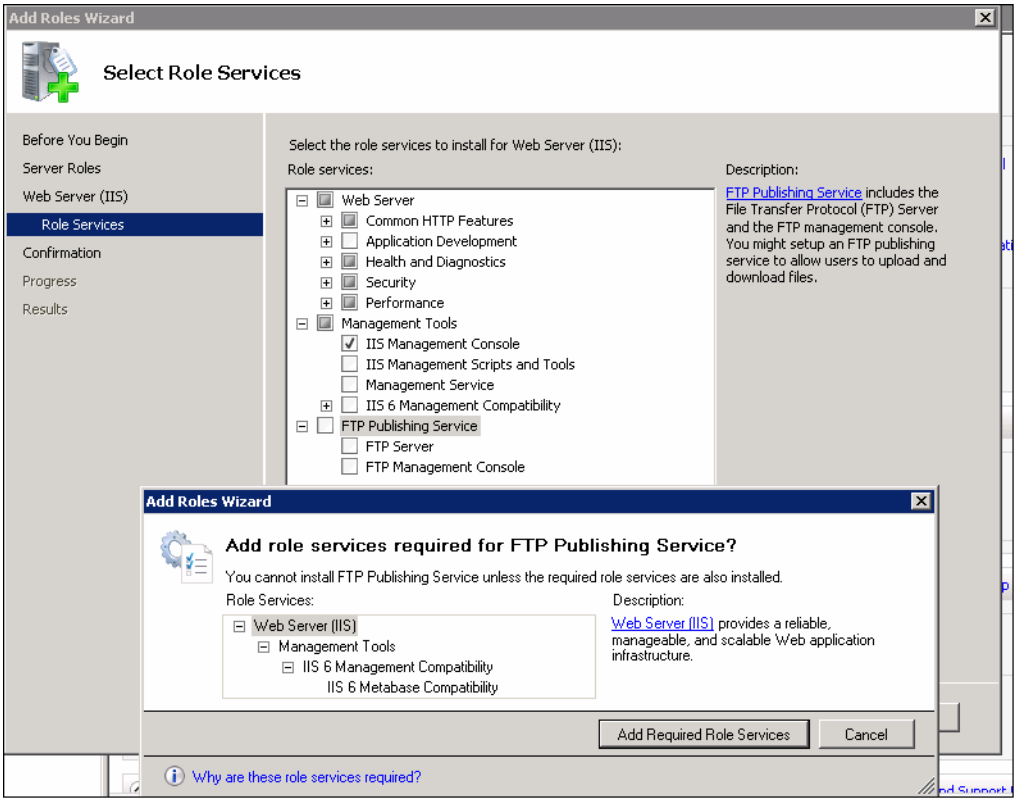


FIGURE 9-3 Adding Role Services

10. Select **Add Required Role Services**, then select Next.
11. In the Confirmation window, select **Install.**
12. The Progress window appears, and when finished the Results window shows the installation has succeeded. Select **Close**.
13. Go back to the Server Manager window, and select the link **WebServer (IIS)**.
14. In the Web Server IIS window, select FTP Publishing Service and Select Start. Refer to the following figure.

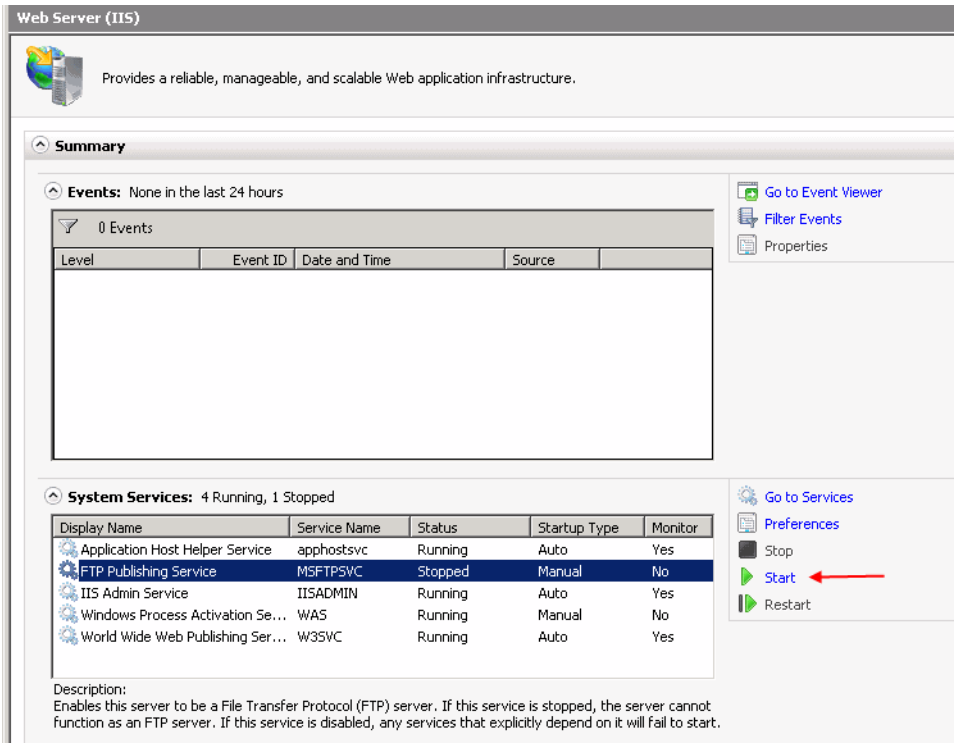


FIGURE 9-4 Starting the FTP Publishing Service

15. Once the status is Running, click on **Go to Services**.
16. In the Services window, right click on FTP Publishing Services and select **Properties**.
17. In the properties window, change the Startup Type to *Automatic* and select **Apply**. Refer to the following figure.

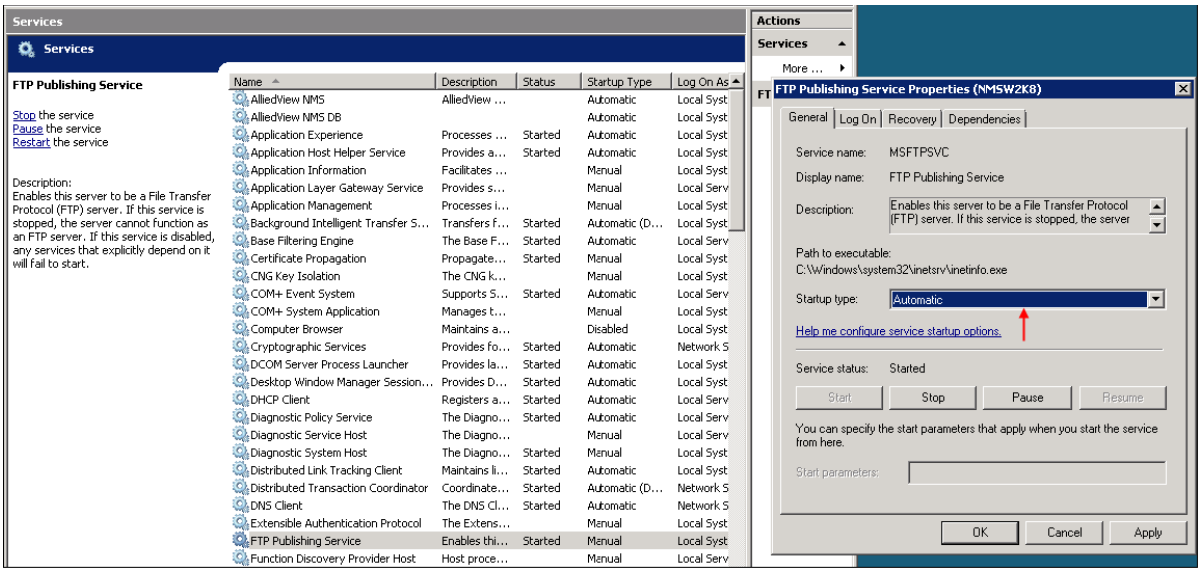


FIGURE 9-5 Setting Startup to Automatic

18. Go back to the Web Server (IIS) window. The FTP Publishing Service should be set to Status=Started and Startup Type= Automatic.
19. Restart the server.

20. Select ***Start*** > ***Administrative Tools*** > ***Internet Information Services (IIS) 6.0 Manager*** as shown in the following figure.

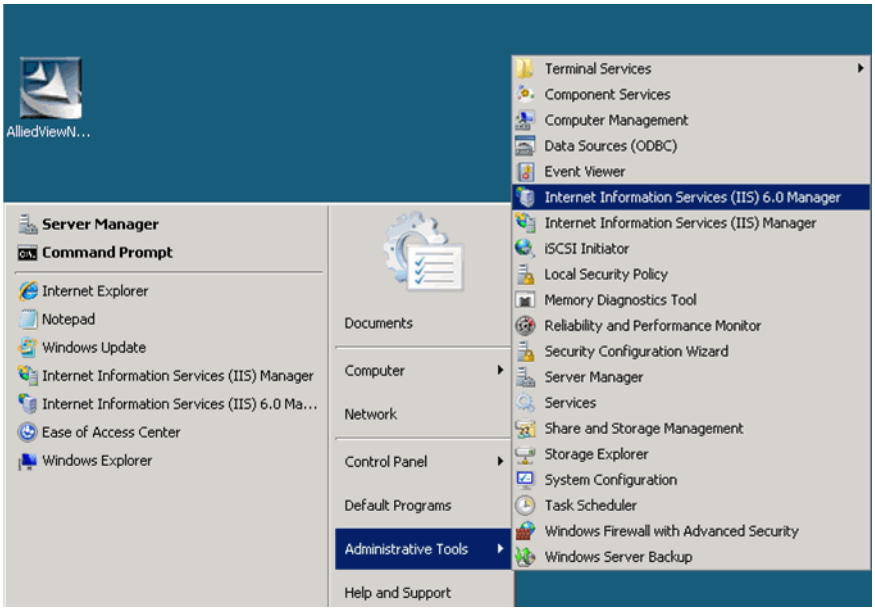


FIGURE 9-6 Bring up IIS 6.0 Manager

21. The IIS 6.0 Manager window opens. Expand the tree in left panel to the Default FTP Site.

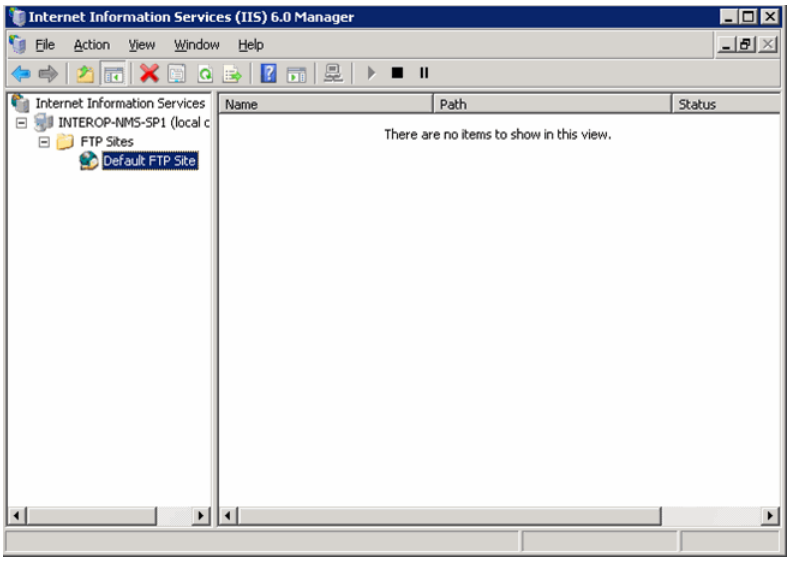


FIGURE 9-7 IIS 6.0 Manager

22. Right-click Default FTP Site, and select **Properties**. The *Default FTP Site Properties* window opens. In the Home Directory tab, check the Write checkbox, as shown in the following figure. Click **OK**.

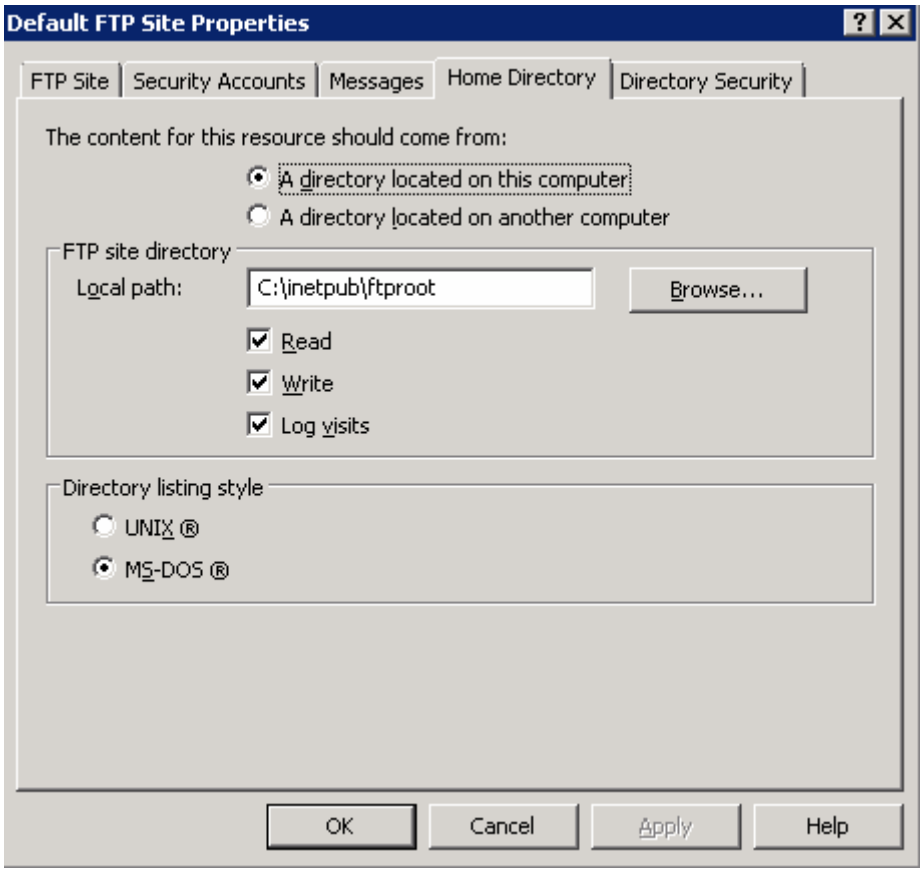


FIGURE 9-8 Selecting Write Checkbox in Home Directory

23. In the IIS 6.0 Manager window, right-click **Default FTP Site**, and select **Permissions**. The following window opens.

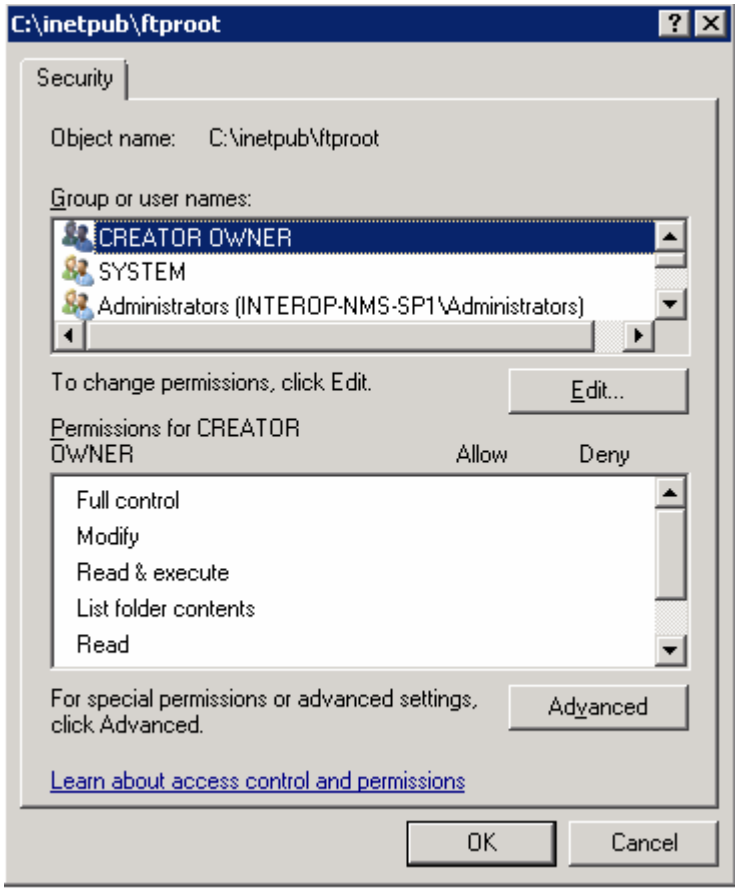


FIGURE 9-9 ftproot Window

24. Click **Edit**. The Permissions window opens. Select **Users**, and click the Write checkbox, as shown in the following figure.

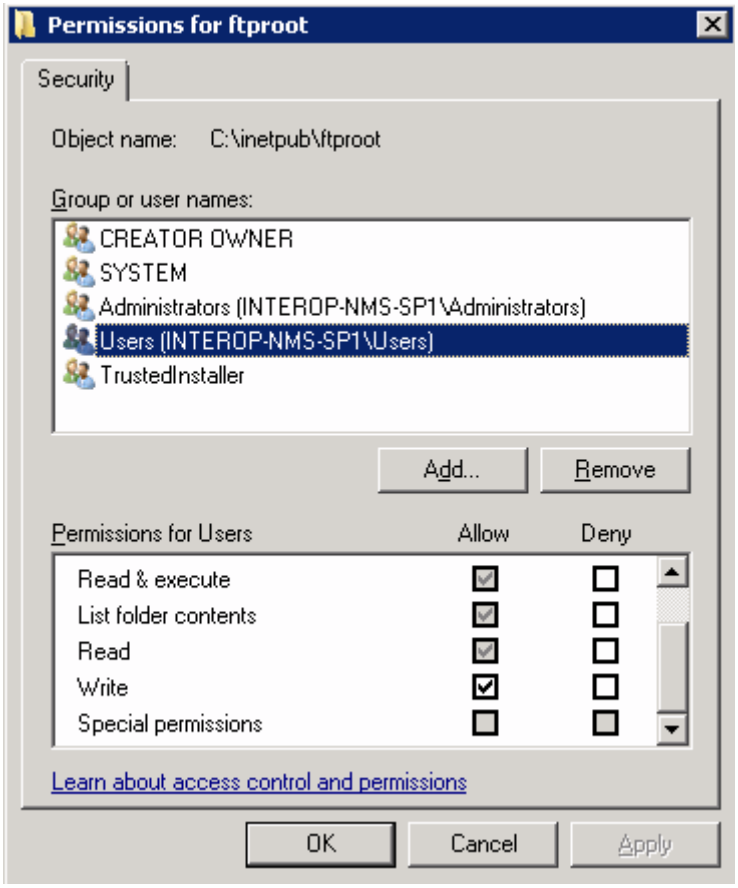


FIGURE 9-10 Setting Write Permission for Users

25. Click OK, then click OK again.

9.4 Solaris

Configuring FTP on Solaris can be a complex and difficult task if your system has been altered from the original installation. On the other hand, it's a relatively straight-forward task if your system does not deviate from the default Solaris installation.

Due to variations among UNIX and Solaris systems, however, this procedure cannot be reliably automated. What follows is a procedure that can be followed on an **unaltered** system that will configure anonymous FTP service suitable for AlliedView NMS.

This procedure assumes the ftp root directory will be `/opt/ftp`. Shell commands to execute this procedure are provided at the end of this section. If your system has been altered from the original installation or `/opt` has not been mounted with enough memory to handle file transfers (100 MB), you will have to modify this procedure accordingly. FTP configuration is extensively documented in the Solaris man pages and on the web. For more information, options, details, and security considerations, see the man pages for in`.ftpd` or `ftpd` and `ftpaccess` or contact your system administrator.

Note: This procedure may require 30 minutes or more-depending on your particular Solaris installation and how much it differs from the default installation.

The AlliedView NMS will need read/write file access to the FTP pub directory and FTP clients (iMG/RG and GenBand) will need retrieve and upload server permissions.

Note: The following procedure assumes the ftp home directory and anonymous ftp root directory will be /opt/ftp. If you decide to use a different directory because of system constraints, then replace all occurrences of /opt/ftp with your directory name throughout the procedure.

9.4.1 Creating the Anonymous FTP Account

1. Begin the configuration procedure by logging in as root and creating the ftp account with the useradd command. (Shell commands are listed at the end of this section)
2. Set the `/etc/passwd` and `/etc/shadow` entries for anonymous usage. The ftp entry in `/etc/passwd` needs to look something like:

   ```
   ftp:x:30000:30000:Anonymous FTP:/opt/ftp:/nosuchshell
   ```

Note: The 30000 will be some number created by the useradd command and already in the file. Don't change it to 30000. Use the number already there, but change the text that follows the 30000.

3. The ftp entry in /etc/shadow should look like:

   ```
   ftp:NP:6445::::::
   ```

9.4.2 Create the FTP Directory Tree

Now create the ftp directory tree, configure the ls command, copy shared libraries, and set file permissions.

1. Create the following subdirectories under the ftp root:

   ```
   /opt/ftp
   /opt/ftp/bin
   /opt/ftp/pub
   /opt/ftp/usr
   /opt/ftp/lbin
   /opt/ftp/lib
   /opt/ftp/usr/bin
   ```

```
/opt/ftp/usr/lib
```

2. Set up the “ls” command for the anonymous user:

```
ln s /usr/bin/ls /opt/ftp/bin/ls
cp /usr/bin/ls /opt/ftp/usr/bin
```

3. Copy the following shared libraries to usr/lib (it's possible some of these libraries don't exist on certain versions of Solaris, but their functionality is still available in the other libraries that do exist):

```
/usr/lib/ld.so.1*
/usr/lib/libc.so.1*
/usr/lib/libdl.so.1*
/usr/lib/libmp.so.1*
/usr/lib/libnsl.so.1*
/usr/lib/libsocket.so.1*
/usr/lib/nss_compat.so.1*
/usr/lib/nss_dns.so.1*
/usr/lib/nss_files.so.1*
/usr/lib/nss_nis.so.1*
/usr/lib/nss_nisplus.so.1*
/usr/lib/nss_xfn.so.1*
/usr/lib/straddr.so*
/usr/lib/straddr.so.2*
```

4. Set file permissions to allow read-execute to all directories, read-only to the ls command, and read-write-execute to pub:

```
chmod 555 /opt/ftp/bin
chmod 777 /opt/ftp/pub
chmod 555 /opt/ftp/usr
chmod 555 /opt/ftp/usr/bin
chmod 111 /opt/ftp/usr/bin/ls
chmod 555 /opt/ftp/usr/lib
```

9.4.3 Configure Upload Permission on Solaris 10

1. For Solaris 10, give clients upload permission by adding the following 4 lines to the end of /etc/ftpd/ftpaccess:

```
uploadclass=anonusers   * /pub yes ftp 30000 0660 dirs
deleteyesanonymous
overwriteyesanonymous
renameyesanonymous
```

9.4.4 Test Anonymous FTP Service

Test the configuration by attempting to connect to the ftp service from a remote client, making a directory, uploading a file, list files, retrieving the file, deleting the file, and finally removing the created directory. Acceptable user names are ftp and anonymous. Almost anything will be an acceptable password.

9.4.5 Configure AlliedView NMS (if necessary)

AlliedView NMS will assume the ftp root directory is `/opt/ftp`. To specify a different ftp root, edit the `FTP_ROOT` entry in the AlliedView NMS config file `conf/AT_server.properties`.

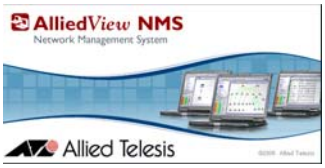
9.4.6 Shell Commands

The following shell commands will configure anonymous FTP service suitable for AlliedView NMS on most Solaris installations. Due to variations in system administration from one system to another, this procedure cannot be guaranteed to work on all Solaris systems.

You are advised to create and configure the ftp account interactively in case errors occur.

```
#
# You must be logged-in as root to configure anonymous FTP
#
useradd ftp
cd /etc
#The following is ONE line
sed -e 's/^\(ftp:x\):\([0-9]\{1,\}\).*$/\1:\2:\2:Anonymous FTP:\/opt\/
ftp:nosuchshell/' passwd > passwd~
#
sed -e 's/^ftp.*$/ftp:NP:6445::::::/' shadow > shadow~
#
# Verify the settings before making them permanent.
#
more passwd~
more shadow~
#
# Make the verified settings permanent
#
# CAUTION: ANY ERRORS HERE MAY BE IMPOSSIBLE TO FIX.
#
chmod 660 /etc/passwd /etc/shadow
mv passwd~ passwd
mv shadow~ shadow
mv passwd~ passwd
chmod 440 /etc/passwd /etc/shadow
```

The rest of the shell commands, which also must be executed while logged-in as root, are listed in the `file bin/AT_configure_ftp.sh`. Any system-specific errors from these commands are typically harmless. In fact, on certain installations, some of the shared libraries are obsolete, so “file not found” errors will be expected. The last four commands in the file are to be used with Solaris 9 and 10, so skip them to use on Solaris 8.



10. Appendix B - Activating NMS Software License

10.1 Overview

To activate the NMS software license includes the following:

- The license key is not associated with the server, but associated with the customer who has registered the license.
- Allied Telesis will work with the customer to gather relevant information and determine what features the customer wants and the software package that is therefore needed.
- Licensing can include the following features:
  - whether the license is temporary (time limit)
  - a single or distributed server
  - the maximum number of nodes allowed (the default for the evaluation copy is 100 nodes)
  - allowing access to the Northbound Interface.
- The details of the license key are encrypted and kept in xml format as AT_License.conf in the Conf subdirectory. (The file is put there when the License Key Installer is run.)

Caution: This file must not be edited manually; otherwise the keys in the file will be invalid, and the AlliedView NMS could stop running.

The process of obtaining a license includes the following:

1. The customer works with Allied Telesis, which gathers the customer information.
2. Allied Telesis encodes the customer information and license privileges in a customer unique file, such as customername_I1932_A_NMS_N1000_NB_C5_KEY_UPD.
3. The customer receives the file and places it on the NMS server.
4. The customer uses the License Manger GUI to find this file and apply the license.
5. The status of the current (installed) license keys can be viewed using the key installer (top panel) or the Status Monitoring application.

Note: All NMS customers prior to 10.0 will get a new 10.0 license key, and must use the above process. Otherwise, there is a time limit on how long the 10.0 features will function.

10.2 Installing a License (Using the License Key Manager)

The License Key Manager is included with the NMS release so that it can be used to apply the license key. The GUI is an improvement to the previous similar to existing license key tool, but the License Manager has more features and presents more information when installing the key.

As in previous license keys, the new key can be installed while the server is running without affecting other services. Some sections of the key will take effect immediately (e.g. node limit), and others will take effect after the next server restart.

When a new key is installed, it will overwrite a previous key. Also, the installed key will not be removable (i.e. there will be no tools to uninstall a key) but a new key can be created to reset the unwanted key to original or any other values.

Refer to the following figure, which shows the License Manager Tool.

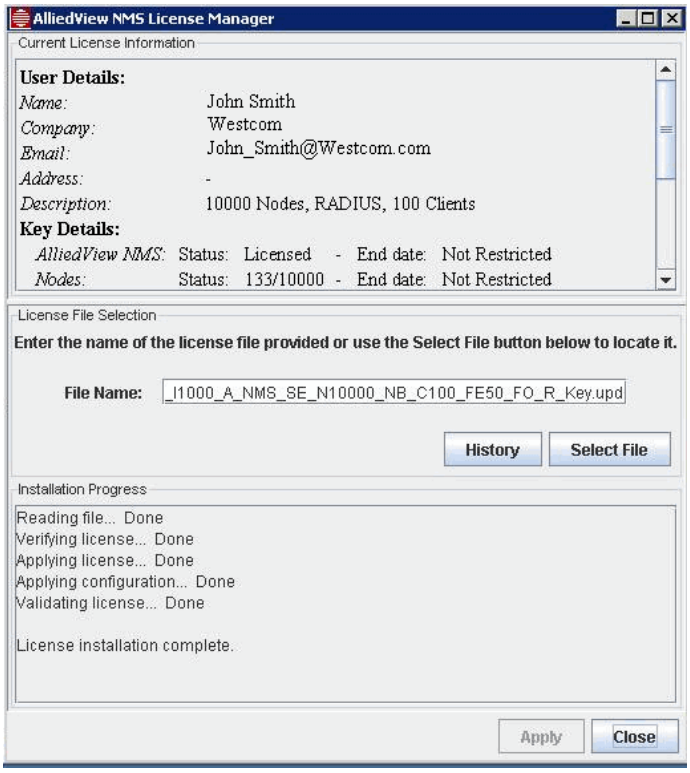


FIGURE 10-1 License Manager Tool - Release 12.0

The license key installation user interface has three main sections:

- Current License Information (Top): This section has information on the key that is already installed. It displays the license status including user information, product and all components being licensed.
- License File Selection (Middle): This section allows the user to select the license file to be applied. The license key file is expected to be on the server and contain the correct extension and the file chooser can be used to select a file from the file system mounted in the server.

Note: By default, the Select File will go to the <NMS-Home> directory, and filter the display to show the License Update File types, as shown below.

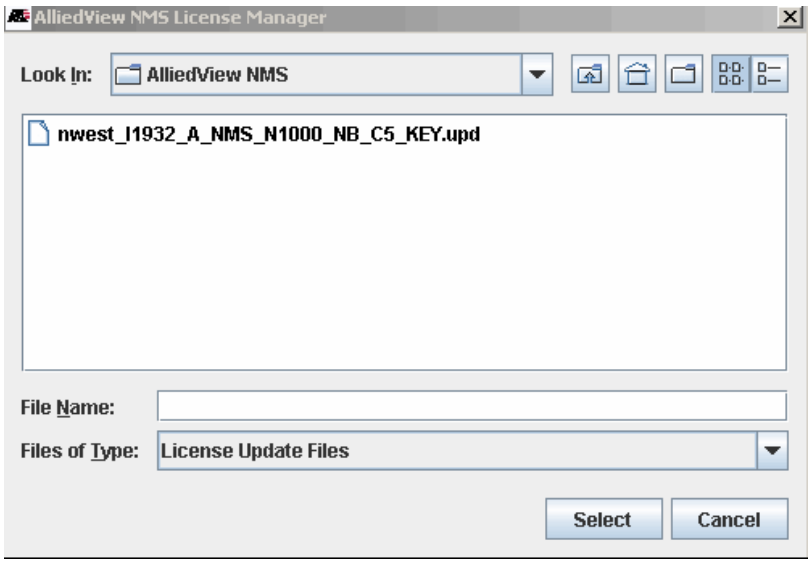


FIGURE 10-2 Example .upd file to Select

- Installation Progress (Bottom): This section will display status of the current license installation and the information printed here will be very useful if the installation fails.

When the user clicks on the Select button (to place the file as the License Selection), and then the **Apply** button on the License Manager, the file is read and checked, then installed, and then verified. If there is an error during these steps, the installation will stop. If there are no errors, the file is stored at another location if needed later for recovery.

There is also a License Key History (Separate panel): This is launched by selecting the **History** button to display the history of all licenses that have been installed on the system in the past. Refer to the following figure. To Be Supplied

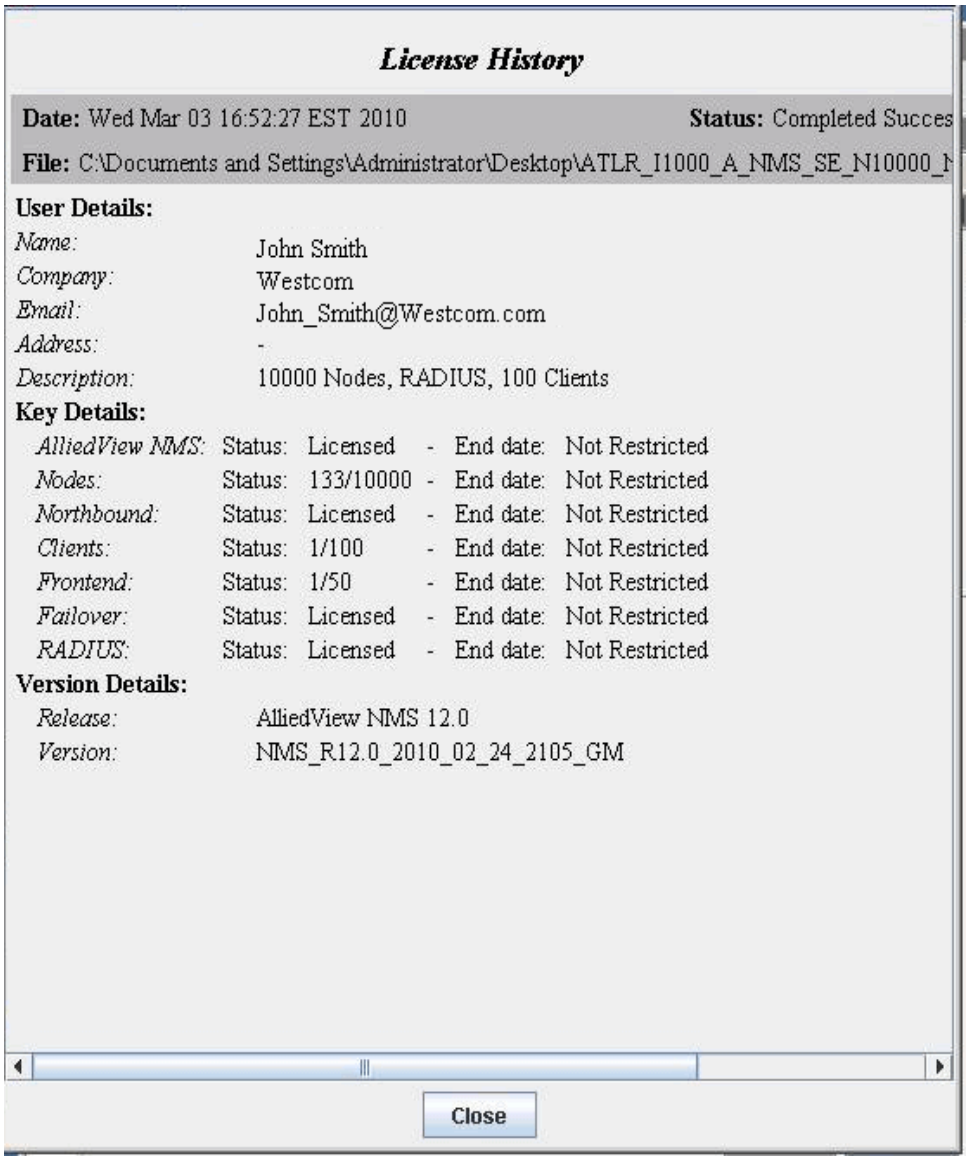


FIGURE 10-3 License History

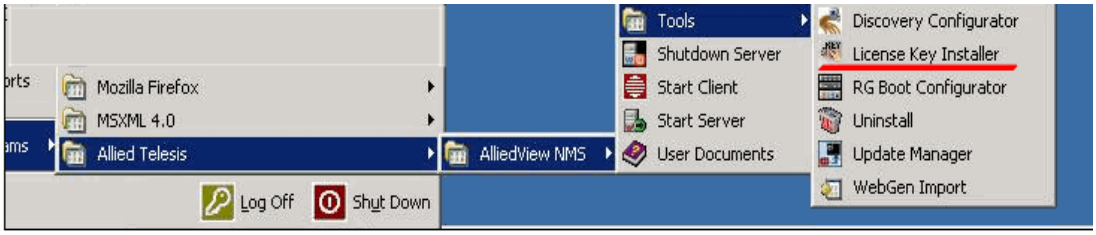
10.2.1 Applying the License -Steps

Once the license is delivered to you it must be copied to the NMS server. This key may be applied to a running NMS server. Some parts will take effect immediately, and others will take effect after a system restart.

Note: This procedure must be run on the NMS Server with Administrator (W2003 or W2008) or root (Solaris) privileges.

10.2.1.1 Windows

1. Copy the license activator key (`<filename>.upd`) on to the NMS server directory
2. Bring up the **File Update Tool** Form.



10.2.1.2 Solaris

1. Copy the license activator key (`<filename>.upd`) on to the NMS server directory.
2. Change to the `<NMS-home>/bin` directory.
3. Run ./`AT_LicenseKeyInstaller.sh`

10.2.1.3 Apply the License

For either system, the License Manager appears, as shown in the following figure.

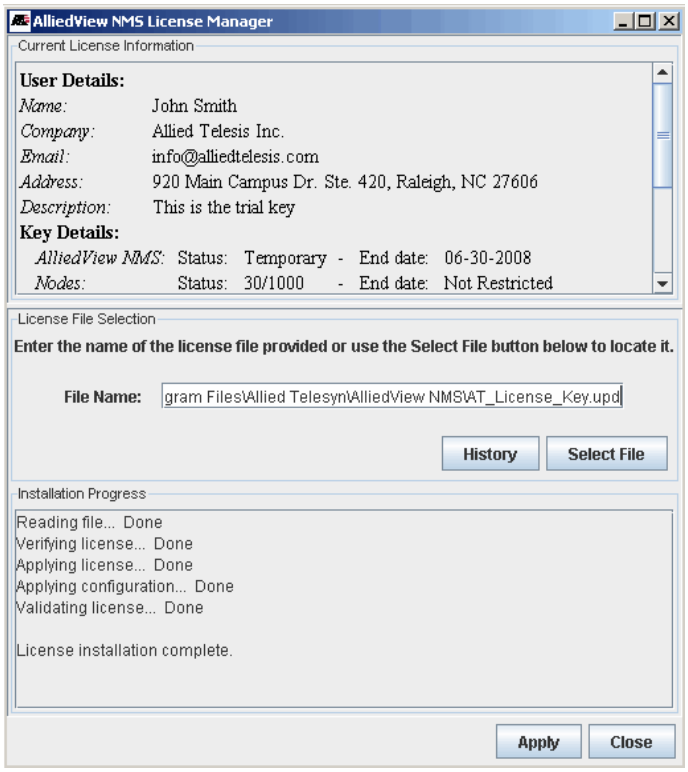


FIGURE 10-4 File Update Tool Form

1. Use the **Select File** to locate the License.upd file
2. Select **Apply** to install the license.
3. When the success message is received, select **Close** to close the window.

11. Appendix C - Client Limitations on Dual NIC Server on Isolated Networks

11.1 Overview of Configuration and Limitation

The NMS server cannot provide client-side access to the secondary IP interface on a dual-NIC server when the interfaces reside on isolated networks. (The underlying Java RMI objects contain call-back references to the primary IP only, not the secondary.). Therefore, clients establishing connectivity on the secondary IP interface will receive RMI callback address references to the primary side, which is unreachable from that client in the secondary network. Refer to the following figure.

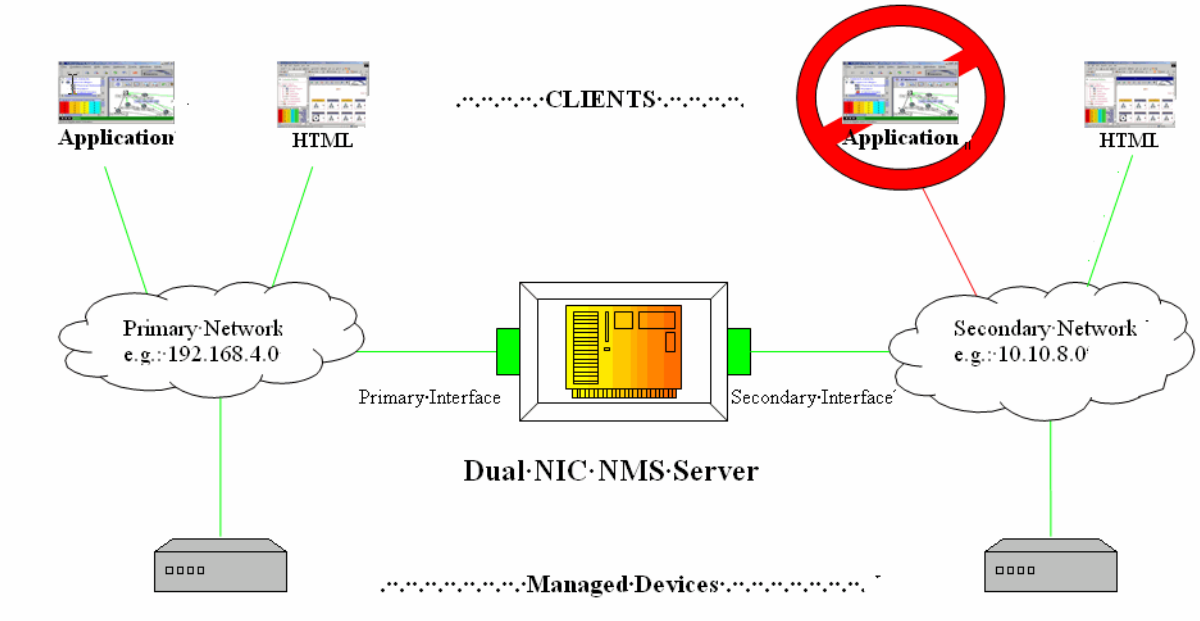


FIGURE 11-1 Application Client on Secondary Network Cannot Access Server

11.2 Solutions

11.2.1 A - Single IP Bridge to Primary Interface

Note: This solution will work where 100% isolation is not required by the customer.

The solution requires the creation of a pass-through from the secondary network to the primary IP address of the NMS server. Only the primary IP of the NMS server should be allowed to route from the secondary, minimizing a breach in network security.

An advantage of this solution is that it is a one-time network reconfiguration and does not require any on-going modifications to the NMS server or new client machines.

The disadvantage is that it provides a potential network security breach from the secondary network to the NMS server.

Refer to the following figure.

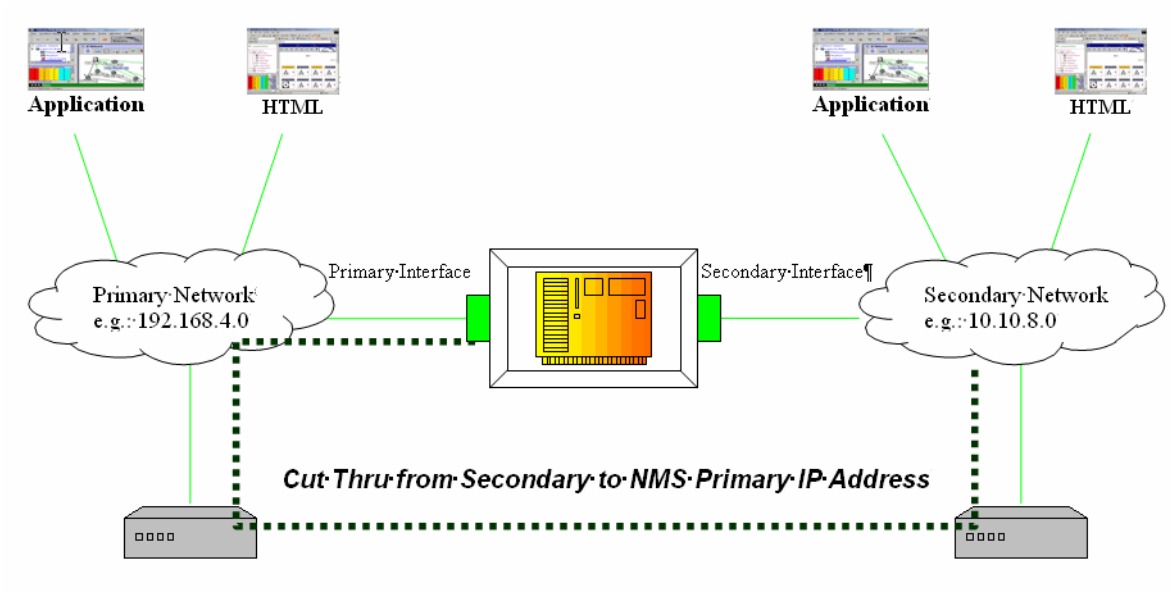


FIGURE 11-2 Solution A - IP Bridge to Primary Interface

11.2.2 B - NMS Server and Client Routing Configuration

This solution requires modifications to the NMS server and client machines and (optionally) separate DNS servers on each of the isolated networks. The modifications on the NMS server force the RMI object to be created with hostname as opposed to IP address callbacks. The client must reconcile this hostname to the proper NMS server IP interface either by a DNS look up or its own internal routing table.

An advantage of this solution is that it maintains the isolated network configuration.

The disadvantage is that it requires the routing tables of the client machines to be modified in order to reconcile the network-dependent hostname, or it requires the separate DNS servers that reconcile the hostname to reconcile to different IP addresses depending on the network in which they reside.

Refer to the following figure.

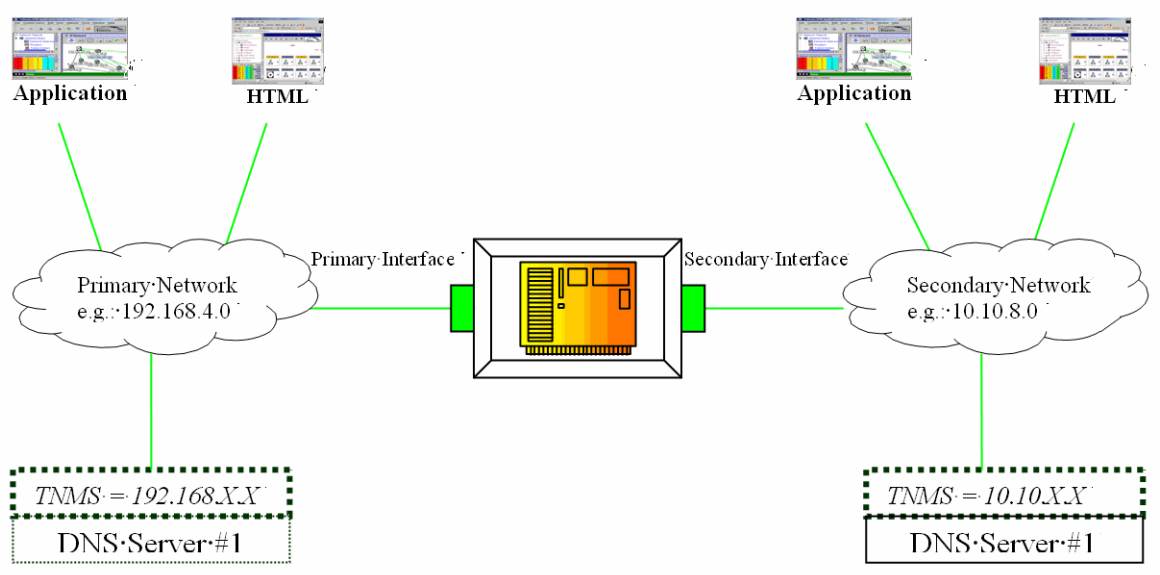


FIGURE 11-3 Solution B - NMS Server and Client Configuration