ProSphere NMS Version 4.4.0

for the Managed Video Scheduler (MVS)

Installation Guide and Release Notes

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Documentation

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Issue	Date	Release Description
1	August 2007	Initial release of Software Version 4.4.0

Related Publications

Description	Part Number
Xedge 6000 Switch Application Guide	032R300-V620
Xedge 6000 Switch Technical Reference	032R310-V620
Xedge 6000 Switch Software Configuration Guide (for Ver 6.2 Slot Controllers/LIMs) Xedge 6000 Switch Software Ver 6.2 Release Notes	032R400-V620 032R901-V62X
Xedge 6000 Switch Software Ver 7.X Configuration Guide (for ISG2, PCx, OC-N LIM only) Xedge 6000 Switch Software Ver 7.X Release Notes	032R401-V7XX 032R901-V7XX
Xedge 6000 Switch Chassis Installation Guide (all models)	032R410-000
Xedge 6000 Switch Hardware Installation Manual	032R440-V620
Xedge 6000 Switch Diagnostics Guide	032R500-V620
ProSphere Ver. 3.X Routing Manager Installation and Operation Manual (for RTM, INM, ADM only)	032R600-V300 032R605-V300 032R606-V300
ProSphere NMS Ver. 4.4.0 Installation and Release Notes (for VM/S application only)	032R906-V44X
ProSphere NMS Ver. 5.X User Manual (for AEM, GFM, SPM, VM/S applications) ProSphere NMS Version 5.X Installation and Release Notes	032R610-V5XX 032R906-V5XX

–REV is the hardware revision (**–000, –001**, etc.)
–VREV is the most current software version (**–V510, V620, V710,** etc**.**)
In addition to the publications listed above, always read Release Notes supplied with your products.

TABLE OF CONTENTS

Chapter 1 - Operating Platform

1.0   Overview

This version of the ProSphere Network Management System supports the Managed Video Scheduler (MVS or "Scheduler") at Motorola/Tut Astria CODECS nodes.

This document is intended for qualified engineers who are familiar with the Xedge Multiservice Switches, Xedge network architecture and management, and related terminology. A thorough understanding of hardware/software requirements and a proficiency in the relevant operating environments are assumed.

This section provides instructions for preparing your Windows platform. Later sections describe how to install the ProSphere Version 4.4.0 software. For more information and for the latest updates, contact your GDC representative or go to **http://www.gdc.com**.

1.1   Software Reference

This version of ProSphere NMS has been tested and is supported on the following platforms: Windows XP, Windows Server 2003. The following table describes the software modules relevant to this version of ProSphere NMS. Throughout this manual, short forms of the software product names will be used.

Table 1: Software Reference

Software Components	Part Number	Version
ProSphere NMS Software Product	--	Version 4.4.0
ProSphere Informix Database Software for Windows	--	Version 7.25

1.2   ProSphere NMS Version 4.4.0 Software Modules

ProSphere NMS Version 4.4.0 is comprised of the following software modules:

- ProSphere CORE performs Auto-Discovery of the Xedge network, maintains network topology, and displays a map of nodes, cards, links and connections.

- ATM Element Manager (AEM) provides configuration tools.

- Global Fault Manager (GFM) provides an Alarm System.

- Managed Video Scheduler (MVS) is used with supported CODEC devices to schedule video conferences for distance learning applications.

Note: *At this time, ProSphere Ver 4.4.0 supports only Motorola/Tut System CODECS, e.g., Astria devices.*

1.3   Changes and Improvements

This version of ProSphere NMS software differs from the previous releases as follows:

- The Managed Video Scheduler allows Multicast IP addressing to a port of each supported video CODEC (Motorola/Tut System devices) via the Object Editor.

- Supports installation on a Windows Server 2003 platform.

1.4   Corrected Issues

ProSphere Version 4.4.0 resolves the following issues from the previous versions:

- In a session containing three codecs, if one codec goes down prior to session start, the streams not associated with the down codec are started. Overall, the session remains in red. If the down codec comes up during session, any remaining streams associated with that codec are started.

- Network awareness is now fully operational.

- When a session is modified, all the exceptions that were previously set are no longer cleared.

- It is possible to add a new node by discovery and then create a session.

- When the server shut down, the clients will also shut down.

2.0   Minimum Requirements - Hardware

The following are minimum requirements for Windows PC platforms. Higher processor speed and more memory can significantly increase application performance. When managing more than 30 nodes, a higher processor or more memory may be required.

- Intel Pentium Processor
- 1GHz; 512 RAM
- 20 GB disk space; CDROM Drive

Note: *Consult your authorized ProSphere/Xedge representative for advice on specific hardware/software requirements other than the ones mentioned above.*

3.0   Minimum Requirements - Software

PC Platforms:

1. Windows XP/Service Pack 1, or Windows Server 2003
2. Informix SE 7.2.5 TC3X3 for Windows
3. ProSphere NMS

Note: *Informix is a licensed database system that is required on all platforms for Object Persistence. Informix must be purchased with ProSphere NMS.*

4.0   User Management

The default usernames and passwords for ProSphere client applications are listed below.

User Types and Privileges	Default Username	Default Password
Super User has all network management privileges, including user management.	ProAdmin	manager
Administrator has all network management privileges, but cannot create/delete users.	nmsadmin	nmsadmin
Operator has all alarm and circuit privileges. Cannot change configuration or topology.	nmsoper	nmsoper
Monitor has read-only access to modules.	prospher	prospher

5.0   Windows Installation and Setup

The following installation instructions are for Informix SE for Windows Operating Systems. You must perform the following procedure in the order given.

Before you begin:

- Refer to the hardware specifications accompanying your PC to ensure that processor speed and memory capacity meet ProSphere requirements.

- Contact your System Administrator for loading Windows OS and the associated Service Packs.

- The Informix Database Server must be installed before ProSphere software, as described below. This database is required by ProSphere for Object Persistence. Your IBM Informix product materials, including the Informix serial key card and CD-ROM are required for installation.

- ProSphere installation requires a serial number supplied in a file on your ProSphere software installation CD.

5.1   Installing Informix

1. Insert the Informix CDROM in the CD Drive.

2. From Windows Explorer, navigate to the CD-ROM drive and double-click on the **setup.exe** application to launch the Informix installer.

3. At the Welcome prompt, click **Next**. The Key Input Dialog screen appears.

4. Enter the serial number and the key value supplied with your Informix product. Click **Next** when finished.

5. At the Choose Destination Location window, select the default installation directory:

   c:\Program Files\Informix\IBM Informix SE

6. Click **Next**. At the Set up Type window, click **Next** to accept the Typical install.

7. In the Select Program Folder window, click **Next** to accept the existing folder name. Informix SE will now install on your PC. When complete, click **Finish**.

8. Proceed to the next section to set up the Informix environment, server and host.

5.2   Set up Informix Environment/Server

9. From Windows Explorer, go to the Informix bin directory (below) by traversing the tree:

    c:\Program Files\Informix\IBM Informix SE\bin

10. Double-click on the **setnet32.exe** application. The Informix Setnet32 opening screen appears.
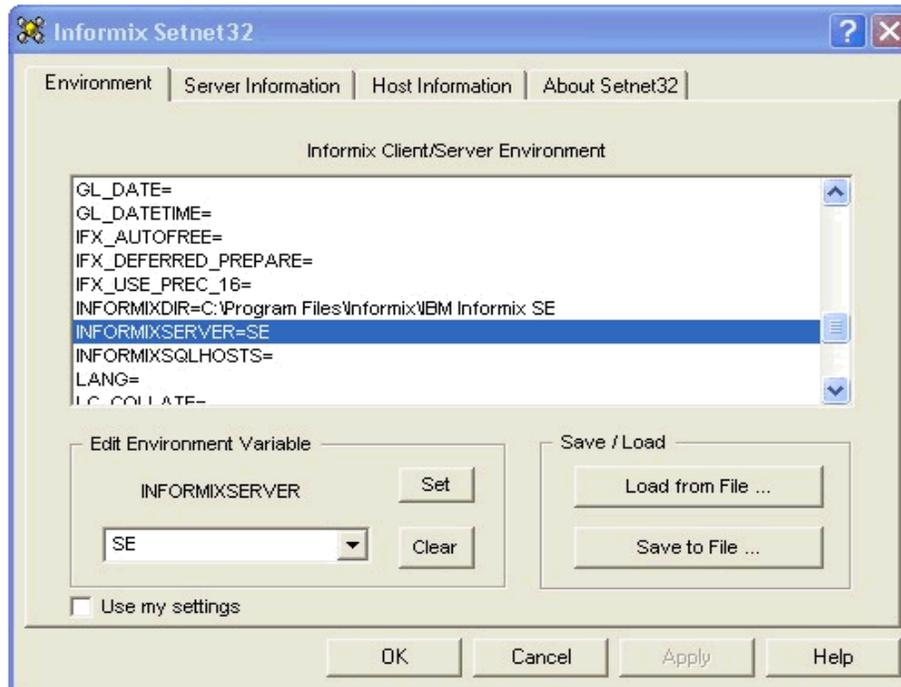
11. At the Environment tab, shown above, set up the following:

    A. Scroll down the list of Informix Client /Server Environments and select:

        INFORMIXSERVER

    B. In the Edit Environment Variable field, type **SE** as shown in the example, then click **Set** to set the variable.

    C. Click the checkbox to select th**e Use my settings**, then click **Apply**.

12. Now click the Server Information tab. Enter server information as described below:

    A. In the Informix Server field, type **SE.**

    B. In the Hostname field, type the hostname of your computer.

    C. In the Protocol Name field, select **sesoctcp**

    D. In the Service Name field, type **sqlexec**

    E. Leave the Options field blank.

    F. Click the Apply button.

    G. When prompted to "Define New Informix Server?", click **OK**.

    H. Click the Make Default Server button.

13. Now click the Host Information tab. Enter host information as described below:

   A. In the Current Host field, type or select your hostname.

   B. In the User Name field, type your PC Administrator name.
      The default user name is **nmsadmin**.

   C. For the Password Option, select **Password**.

   D. In the Password field, type the PC Login Administrator's password.
      The default password is **nmsadmin**.

   E. Click the Apply button.

   F. When prompted to "Define New Host ?", click **OK**.

14. For a Windows Server 2003 platform only, you must manually add four variables as described below. From the Start Menu, go to:

   Control Panel/System/Advanced tab/Environment variables

   A. Add the **DBPATH** variables and define as shown:

      C:\Program Files\ProSphere4.4\data\database

   B. Add the **INFORMIXDIR** variables and define as shown:

      C:\Program Files\Informix\IBM Informix SE\bin\..

   C. Add the **INFORMIXSERVER** variable and define as shown:

      SE

   D. Append the **Path** variable and define as shown:

      ;C:\Program Files\Informix\IBM Informix SE\bin

15. Informix installation on your Windows platform is complete.
    Proceed to *Chapter 2 - ProSphere Installation.*

Chapter 2 - ProSphere Installation

1.0   Overview

The installation process is the same for all of the ProSphere modules, listed below:

- ProSphere CORE Engine
- ATM Element Manager (AEM)
- Global Fault Manager (GFM)
- Managed Video Scheduler (MVS)

Note: *IMPORTANT! You must have a valid ProSphere serial number to install the software. Depending on the serial number, the appropriate ProSphere modules will be installed.*

Note: *IMPORTANT! ProSphere uses the Informix Database for object persistence and it must be installed on a PC/Windows platform prior to ProSphere installation. Return to Chapter 1 for the appropriate Informix installation and setup procedures for your platform.*

2.0   Installing ProSphere 4.X Software

ProSphere software modules are installed using **InstallAnywhere**. The instructions given below are for reference only, please follow on-screen instructions.

1. Insert the ProSphere CDROM in the CD drive.
   - If the installer does not start automatically from the CD, double-click installation file (**PS44.exe**) in D: then follow instructions below.
2. When InstallAnywhere starts up, read the Welcome screen, then click **Next**.
3. Select one of the following Bundles:
   - **ProSphere Severs/Clients**
   - **ProSphere Clients only**

Note: *If you are installing the Clients Only bundle, you must have installed the Servers on another PC, and you must have the IP Address of that machine available now. You should also be able to ping that IP Address from your machine.*

For each Client and Server machine, the hosts file must have an entry that refers to the IP address and hostname of the opposite machine. For example:
In the Server hosts file, add the following entry: **[**client ipaddress**] [**client hostname**]**
In the Client hosts file, add the following entry: **[**server ipaddress**] [**server hostname**]**

Windows hosts file is found on **c:\windows\system32\drivers\etc\hosts**

4. Enter the serial number provided with your ProSphere software, then click **Next**.
5. Select **Choose Install Set** to automatically select the Install set associated with the Serial Number you entered. Click **Next**.
   - If you selected ProSphere Clients Only, enter Your ProSphere Server Host Name (not the IP Address).
   - If you selected ProSphere Servers/Clients, continue to next step.

6. Select the Installation folder location (Default Recommended), then click **Next**.

7. Choose a Shortcut Folder (Default recommended), then click **Next**.

8. Click to select the Windows Informix Configuration option to configure Informix for ProSphere.

9. Review the Pre-Installation Summary, then click **Install**. The installation and post-installation scripts are executed.

10. When the ProSphere installation is completed, click **Done**.

11. Reboot the PC.

12. For a ProSphere Server/Client installation only, you must now create the ProSphere database as follows:

    A. From Windows Explorer, navigate to the ProSphere Database directory (by default it is **C:\Program Files\ProSphere4.4\data\database**

    B. Double-click on the **createdb.bat** batch file. A message window displays the progress as the database is being created.

    C. When complete, close the message window.

13. ProSphere installation is now complete. You can now start up and operate the ProSphere Server/Client applications. For information about the Managed Video Scheduler, refer to

3.0   Uninstalling ProSphere 4.X

The Uninstall program will intentionally leave certain files (log files, databases, etc.) on the workstation and will show a list of the files not deleted. If desired, back up these files, then delete them manually.

To uninstall ProSphere from a PC:

1. Select **Add/Remove Programs** from the control panel.

2. Select the ProSphere application, then click **Remove**. This starts the Uninstall program.

3. When the uninstall process is complete, click **Done**. Reboot the PC.

Chapter 3 - MVS Application Guidelines

1.0   Overview

This section describes only the Multicast Addressing feature in the Managed Video Scheduler (MVS or "Scheduler") application of Prosphere NMS Version 4.4.0.

For information on other ProSphere modules such as Core, AES, GFM, refer to the ProSphere NMS Version 5.X User Guide (GDC Doc. No. 032R610-V5.X).

1.1   Starting ProSphere 4.X

1.   From Start>Programs, click on **StartServers**.

2.   When all server initializations are done, click on the Explorer Icon found on the ProSphere Process Service window. The Logon Screen will be displayed.

3.   Log on using a default User ID and Password. The Explorer window is displayed.

1.2   Multicast Address Guidelines

As shown in the figure below, the ProSphere NMS Ver 4.4.0 controller attached to the LAN uses the Video Scheduler application to manage three Tut codecs connected to each other on same LAN.
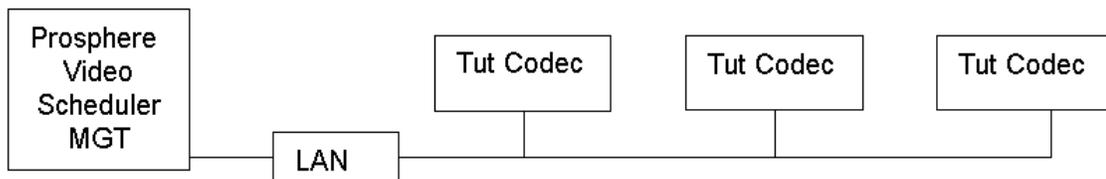
ProSphere's Managed Video Scheduler application allows the user to configure a public multicast IP address to each Motorola/Tut codec encoder via a GUI display. The codec encoder multicast IP addresses will be stored in the database on a per codec basis, not on a per conference basis.

1.3   Multicast Address Procedure

1.   At the ProSphere main window, select the Topology tree icon to display the
      ProSphere Explorer window, shown below.
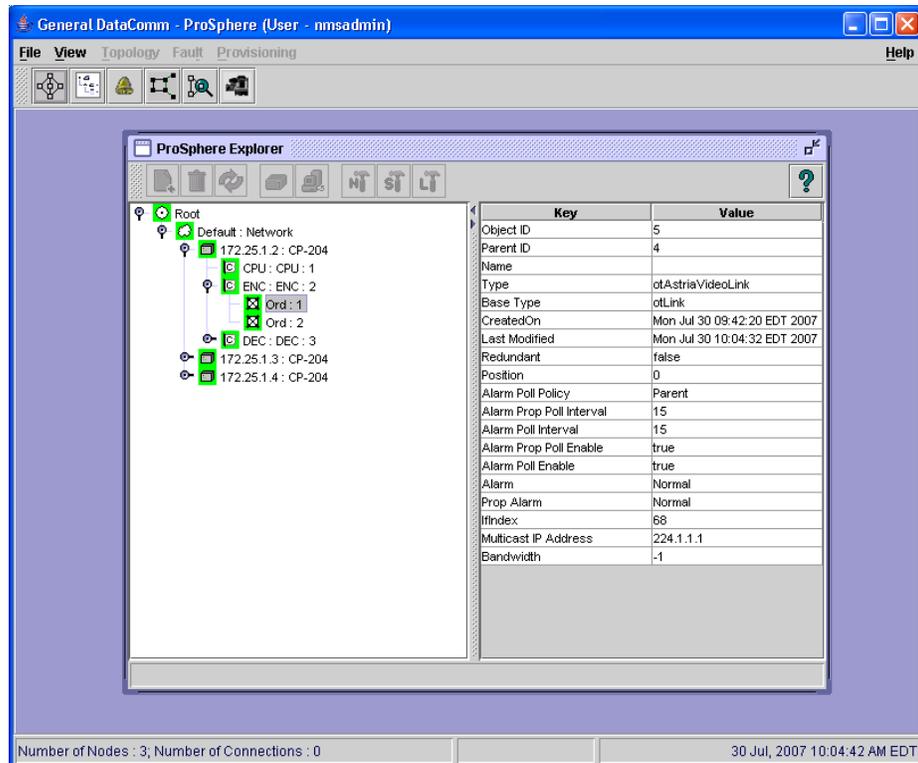
2.   Right-click on an encoder port, then select the Object Editor. The Object Details
      screen appears, as shown below.
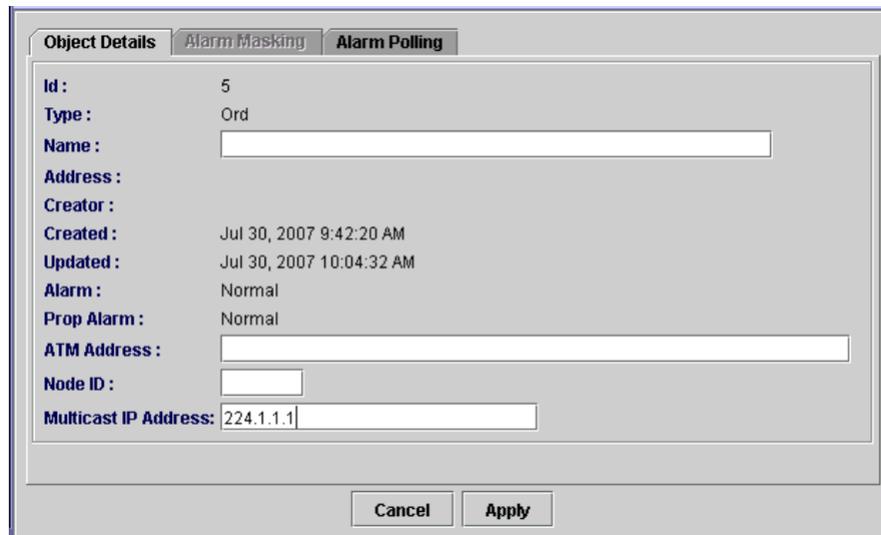
3.   Enter the Multicast IP Address into the last field at the bottom of the screen.
      The multicast address range is 224.0.0.0 through 239.255.255.255, excluding
      224.0.0.0 through 224.0.0.255 which are reserved for routing/discovery protocols.

4.   Click the Apply button to save the Multicast IP address into the database.

5.   To view a multicast IP address via the Prosphere Explorer screen, select the codec and then select each encoder port.

Note: *If no multicast IP address is configured for a node's encoder, the current multicast IP address will be, by default,* **239.x.y.z** *(port 1) and* **229.x.y.z** *(port 0), based on the Motorola/Tut codec port number and GigE IP address of* **a.x.y.z**.

2.0   Operating Guidelines

•   ProSphere Video Scheduler provides an Admin screen that allows you to define values for video parameters (bitrate, latency mode, service type, etc.) that may be applied to each conference's encoders. Be aware that ProSphere will not validate the values entered at this screen. Before applying encoder presets to a conference, consult your codec documentation to determine the supported parameters and range of values.

•   Backward compatibility is supported for two encoder ports with the predefined values of **229.xx.xx.xx** and **239.xx.xx.xx**. There will be no pre-defined values for additional encoder ports; therefore those additional ports must be explicitly set using the Object Editor before running the session.

•   When the encoder Multicast address is changed, the new address will be reflected on all existing and new sessions which include that node.

•   It may be necessary to maximize the ProSphere window to view all fields.

3.0   Known Issues

•   After starting Discovery, the process may stop and wait for an event (for example, discovery of an IP address stays at **YES** for some minutes). To correct this, stop and restart Discovery via the menu command.

•   The Close Window (**X**) button on ProSphere windows is not supported.

•   If a session is manually stopped, either directly or by manually starting another session using the same codecs, the next start time is not updated. The recommended workaround is to modify the session without changing anything.

•   Initial exception - Schedule a repeating session - exempting the initial day does not work.

•   A session in progress cannot be modified.

•   When a session is scheduled to repeat in minutes, every time it is modified, it resets back to 2 minutes.

•   When a reserved session is scheduled to repeat in minutes, it does not work properly and should not be configured.

•   A session that is displayed in bold indicates that it is either scheduled for today, or scheduled for today in 'Reserve Only' start mode.

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