Latitude NVMS 3.5
Installation Manual
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Preface

Congratulations on your purchase of Latitude NVMS 3.5. This manual will guide you through the installation and configuration of the system’s various components.

Who Should Read This Manual?

This Manual is intended for system integrators and advanced end users who are setting up a security solution incorporating Latitude software and DVTel hardware (encoders/decoders, IP cameras, etc.). A familiarity with basic network concepts and the Windows operating system is required.

The material presented in this manual is also covered in DVTel certification training courses.

About This Manual

The Latitude Installation Manual is broken up into six main sections:
1. Preface. The section you are now reading.
2. System Overview. Contains general information about Latitude NVMS including sample network diagrams and hardware and software requirements.
3. Basic Installation. This section offers a brief overview of DVTel hardware installation as well as instructions for installing Latitude.
4. Basic Configuration. Provides instructions for configuring viewing and recording qualities, sites, cameras, users, schedules, PTZ devices, camera sequence and layouts.
5. Advanced Topics. Covers additional installation and configuration topics including failover archiving, backup and restore, alarm management, motion detection and maps.
6. Appendix.

Additional Resources and Support

The Manuals folder of the Latitude NVMS 3.5 CD contains technical documentation for many of DVTel’s products, including encoders/decoders and IP cameras and domes. Additional information can also be found in the Support section of the DVTel website: http://www.dvtel.com.

DVTel Technical Support can be reached by phone at (888) DVTEL 77, Monday through Friday, 8 AM – 6 PM. Questions may also be sent to support@dvtel.com.
System Overview

This section contains general information about Latitude NVMS 3.5, including an overview of its main applications and its hardware and software requirements.

About Latitude NVMS 3.5

Latitude is a network-based video monitoring and recording system. It provides the features of a Matrix Switch, a Multiplexer, and a Digital Video Recorder (DVR) in one easily scalable and highly customizable surveillance solution. Further customization can be realized using macros and the Latitude Software Development Kit (SDK).

Latitude applications can be categorized into two basic groups: server applications and client applications.

Server Applications

The majority of Latitude’s server applications take the form of Windows Services, which are run by a dedicated Latitude Windows User created when the programs are first installed. Latitude’s server applications include the Directory, which maintains system settings; one or more Media Archivers, which are charged with communication with encoders/decoders as well as with the recording of video; and the Virtual Matrix, which implements features such as Sequences, Macros and PTZ Keyboard support.

The only server application with which users directly interact is the Resource Administration Tool (RAT), which is used to import licenses and configure certain system-level parameters such as storage disks and Fail-Over Media Archivers.

Client Applications

Latitude has three main client applications: ControlCenter, MediaCenter and AdminCenter. Additionally, several client tools, such as the Macro Editor and Report Viewer, are also available.

ControlCenter is the application used to view live video, control PTZ cameras, run camera sequences and display and respond to alarms. PTZs can be controlled in three different ways with ControlCenter: via on-screen controls, using PC keyboards, or with PTZ keyboards connected to Latitude either through encoders/decoders or client stations. Other features of the application include Instant Replay, Digital Zoom and PTZ Control.

MediaCenter is used for playback of archived video and features a variety of search mechanism, including search by date and time, site, camera, motion, bookmarks, and alarms.

AdminCenter is used to configure nearly all Latitude NVMS physical and system settings, including those of connected hardware units.
Sample System Diagram

A large variety of network topologies can be used with Latitude. The choice of a particular design is often based on a variety of considerations, including the number of cameras connected to the system, the physical geography of the areas under surveillance, the available cable infrastructure, and whether or not the system is integrated into a larger IT network.

The diagram below illustrates a typical multiple-server system setup:

![Sample System Diagram](image)

**Figure 1-1 - A Multiple-Server Latitude System**

Hardware Requirements

This section details the requirements for hardware used with Latitude. DVTel recommends that you review these specifications prior to beginning the installation of Latitude.

Supported Encoders, Decoders and IP Cameras

All DVTel encoders, decoders and IP cameras, including 7500, 7600, 7700, 8500, 9500 and 9600 Series units, can be used with Latitude NVMS 3.5 software. In addition, VCS VIP 1000 and AXIS 205, 206M, 210, 211, 213, 241S and 241Q units are also supported.

Please make sure any unit you connect to Latitude uses a supported firmware version. If you are unsure whether your unit’s firmware is supported, contact DVTel Technical Support.
Server and Client Requirements

The following table details the minimum hardware requirements for client and server computers. For systems of no more than 16 cameras, a single machine may be used as both the client and server. In that case, use the client specification, except for Hard Drive Space.

<table>
<thead>
<tr>
<th></th>
<th>Latitude Server Requirements</th>
<th>Latitude Client Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Intel® Pentium® 4 Processor, 2.8 GHz, 1 MB/800 MHz FSB.</td>
<td>Intel® Pentium® 4 Processor, 3.2 GHz, 1 MB/800 MHz FSB.</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>1GB, DDR333 SDRAM.</td>
<td>1GB, DDR400 SDRAM.</td>
</tr>
<tr>
<td><strong>Hard Drive Space</strong></td>
<td>40 GB (7200 RPM) dedicated drive for the Operating System and Latitude Applications; Internal or external storage for archived video. All drives should be formatted to NTFS.</td>
<td>40 GB (7200 RPM) for Operating System and Latitude Applications. All drives should be formatted to NTFS.</td>
</tr>
<tr>
<td><strong>Network Interface Card (NIC)</strong></td>
<td>10/100/1000 Mb.</td>
<td>10/100/1000 Mb.</td>
</tr>
<tr>
<td><strong>Video Card</strong></td>
<td>Standard video display adapter.</td>
<td>Dual Head 128 MB video card (nVidia or ATI)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>CD-ROM; Floppy drive.</td>
<td>48X/32X/48X CD-RW; Floppy drive.</td>
</tr>
</tbody>
</table>

Software Requirements

This section details the requirements for software used with Latitude. DVTel recommends that you review these specifications prior to beginning the installation of Latitude.

Supported Operating Systems

Latitude applications require Microsoft Windows XP Professional (SP1 or SP2); Windows 2000 (SP4); Windows 2000 Server (SP4); or Windows 2003 Server (SE or SP1). Always check with DVTel Technical Support prior to installing new Windows service packs.

Windows Service Packs and other critical updates can be downloaded from Microsoft’s website by choosing Windows Update in the Tools menu of Internet Explorer. Once you have been directed to the appropriate page, follow the on-screen instructions.

Additionally, the latest version of DirectX (currently 9.0b) is required for some of the client applications. To find out which version of DirectX is installed on your computer, choose
Run... from the Start menu and run the command **dxdiag**. This will launch the DirectX Diagnostic Tool. The software version is listed under the System tab.


**Client Requirements for Web Access**

The web version of Latitude’s client applications requires Windows XP/2000 (or later) and Internet Explorer 6 with its most recent service pack (which can be downloaded in the same way as the Windows service packs).

Additionally, the web applications require that the latest version of Java be installed on the computer accessing Latitude. Java can be downloaded from [http://www.java.com](http://www.java.com).

Since the web applications use ActiveX, you may need to change certain Internet Explorer security settings. To do so, launch Explorer and go to Internet Options… in the Tools menu. Under the Security tab, click the button labeled Custom Level… and make sure all ActiveX related options are set to Enable or Prompt, depending on your security preferences.

**Network Planning**

Latitude’s nature as a network-based system means that network infrastructure is a crucial factor in determining its performance. Some of the network parameters to which special attention should be paid are:

- **Size and Scope.** Does Latitude reside on a Local or Wide Area Network? What is the connection type between the different sites (if any)? Is access via the Internet required?
- **Type of Network Equipment.** Are switches and routers managed or unmanaged? Do they support Multicasting? What is the total bandwidth allowed (100 Mbps, 1 Gbps, etc.)?
- **Other Network Users.** Does Latitude reside on a dedicated or corporate network? What is the percentage of the network’s bandwidth “earmarked” for use by the surveillance system? Are there special security requirements associated with any of the other network users (if any)?
- **Wireless Considerations.** Is any part of the network wireless? If so, does the wireless router support multicasting?
- **E-mail Requirements.** Do the system’s users wish to use the e-mail notification capabilities of Latitude? (If this is the case, the system must have access to an SMTP server).

For most systems, many of these issues are not applicable. Nevertheless, it is important to consult with a Network Administrator in determining system architecture.
Installation

This section contains instructions for installing the Latitude NVMS 3.5 software. If you are upgrading from an earlier version of the system, please refer to the Latitude NVMS 3.5 Upgrade Guide instead.

Server Installation

If you would like to be able to access your system through the Latitude WebCenter, it is highly recommended that you install Windows Internet Information Services (IIS) prior to installing the Directory Server. This will allow the system to create the necessary virtual directories during the installation process.

1. Insert the Latitude NVMS 3.5 CD into your CD drive (if the InstallShield does not launch automatically, explore the CD and double-click the setup file). Click the Install Latitude Server button.
2. Follow the on-screen prompts to accept the license agreement as well as the default destination folder for the server applications.
3. Choose your Setup Type and click Next. The type of setup you require depends on your system architecture purchased features. Installing features not covered by your license may result in numerous run-time error messages.

![Figure 2-1 -- Choosing a Server Setup Type](image)

Figure 2-1 -- Choosing a Server Setup Type

When installing a multiple-server system, always install your Directory server first. It is advisable to perform a Custom installation in these cases in order to make sure no components are missed.

If you are installing a Fail-Over Directory, the InstallShield will force you to install the Directory and IV’S components as well. Conversely, a Fail-Over Directory must be installed on the Primary Directory server must
4. Select **Install a new database server** to install a new MSDE database for your Media Archiver. If you would like to link the system to an existing MSSQL database instead, choose the **Use an existing database server** option and enter the database’s location.

![Database Type Selection](image)

**Figure 2-2 – Choosing a Database Type**

5. When installing a Fail-Over Directory, make sure to accurately specify, when prompted to do so, whether the server should act as the primary or backup directory.

6. When the Resource Administration Tool (RAT) is launched, follow the instructions provided with your CD for downloading and importing your license.

7. Once you have imported your license, click **Archiver** in the Resources tree and then the **Archiving** tab. Checkmark the drives you would like to use to archive video and specify the minimum amount of free space to be left on each one. It is recommended that you allow for at least 2000 MB of free space on each drive. **Do NOT archive video to the “C” drive.**

![Archiving Drives](image)

**Figure 2-3 – Specifying the Video Archiving Drives**

8. Exit the RAT and restart your computer when prompted to do so.
Client Installation

1. Insert the *Latitude NVMS 3.5 CD* into your CD drive (if the InstallShield does not launch automatically, explore the CD and double-click the setup file). Click the *Install Latitude Client* button.
2. Follow the on-screen prompts to accept the license agreement as well as the default destination folder for the client applications.
3. Choose your *Setup Type* and click *Next*. *Typical installation* is appropriate for most users, but if you will be using the Macro Editor or Report Viewer, choose *Custom* install instead and checkmark the applications you would like to install. *Note that if you install the Report Viewer, you will need to specify the location of your Directory server.*

![Figure 2-4 – Choosing a Server Setup Type](image)

4. Click Finish once the installation is completed.

Synchronizing Time Across Latitude

DVTel strongly recommends that you synchronize time across all computers running Latitude applications. Please refer to Appendix A for detailed instructions on how to do so. Note that in certain networks, particularly ones that have domain controllers, time synchronization may be done automatically. In that case, no settings changes are required.

Launching a Latitude Client Application for the First Time

1. Go to *Start > Programs > DVTel Latitude 3.5* and choose an application to launch.
2. Type *Admin* in the *Username* field and leave the *Password* field blank.
3. Click the arrow shaped button in the bottom left corner of the *Connect* dialogue box.
4. Enter the computer name or IP address of the server in which you installed the Latitude *Directory*. Note that you must use an IP address if the client connects to the Directory server over the Internet (rather than a LAN).
5. Click *OK*.
Basic Configuration

This section contains instructions for configuring the most commonly used non-unit-specific Latitude entities, including users, user groups, coverages, schedules, sequences and layouts. With the exception of latter of these, all are is performed using the AdminCenter. The image below shows the various parts of the application’s workspace.

The View Selection Pane is used to navigate the various Latitude entities and choose which ones to review or configure. Entities are organized in the form of a directory tree (much like files in Windows Explorer) with the root, symbolized by a globe icon, representing the Latitude Directory.

The tabs at the top of the View Selection Pane allow users to switch between three views of the Latitude system: the Logical view presents entities based on their physical location (i.e. their sites); the Physical view presents entities based on their network location; and the System Settings view presents entities grouped by type, rather than location.

The Configuration Pane is used to view entities’ settings and alter them. The tabs on the top of the pane vary based on the type of entity selected from the View Selection Pane.

For instructions on configuring IP cameras, analog cameras connected via encoders, and analog monitors connected via decoders, refer to each unit type’s specific Setup Guide. These guides are available for VSIP, RCP+ and AXIS units.
Coverages and Archiving Schedules

A Coverage in Latitude defines a span of time that is used to configure other types of entities, such as cameras and archiving schedules, which define the archiving mode for cameras (and sites) for different periods of time. Latitude NVMS comes with a default coverage, Always, and a default schedule that uses Always, Default schedule. Unlike schedules in earlier version of the software, schedules in version 3.5 are no longer used to define recording qualities, which are now configured through the Camera Configuration Pane.

Creating a Coverage

1. Right click anywhere in the View Selection Pane and choose Create>Coverage.

![Figure 3-2 – The Coverage Configuration Pane](image)

2. Enter a name for the coverage in the Name field and add a Description if you wish.
3. Click the radio button corresponding to the type of coverage you would like to create: One-shot, Weekly, or Daily.
4. Enter a time range using the timeline or the Start and Stop fields. For weekly schedules, checkmark the days of the week you would like the coverage to apply.
Creating an Archiving Schedule

1. Right click anywhere in the View Selection Pane and choose *Create>Schedule>* Archiving Schedule.*

   ![Figure 3-3 – The Archiving Schedule Configuration Pane](image)

2. Enter a name for the schedule in the *Name* field and add a *Description* if you wish.
3. From the *Coverage* drop-down menu, choose a coverage to associate with the schedule. Additionally, choose an *Archiving mode* for the schedule to employ.
4. Checkmark the sites and/or cameras for which you would like the schedule to apply.
Camera Sequences

Camera sequences use Latitude’s *Virtual Matrix* to sequentially display video from multiple cameras on a single viewing tile or analog monitor.

Creating a Sequences

1. Right click anywhere in the View Selection Pane and choose *Create>Camera Sequence*.

![Figure 3-4 – The Camera Sequence Configuration Pane](image)

2. Enter a name for the sequence in the **Name** field and add a **Description** if you wish.
3. To add a camera to the sequence, click the + button, choose a camera from the **Encoder** drop-down menu and enter a dwell time in seconds (if PTZ presets or patterns have been configured, you can add them as well). Click **OK**
4. Repeat the previous step as necessary to add additional cameras to the sequence. Click **Apply changes** when done.

Once you have finished creating your sequences, drag and drop them into sites in the View Selection Pane.
ControlCenter Layouts

Tile layouts are the only type of entity configured in ControlCenter instead of AdminCenter. The image below shows the application’s workspace.

![ControlCenter Workspace](image.png)

**Figure 3-5 – The ControlCenter Workspace**

**Creating a Layout**

1. Launch ControlCenter. The application can be launched from AdminCenter by clicking the eye button in the Toolbar.
2. Click the pencil button in the bottom right of the Viewing Pane to enter the editing mode.
3. To change the tile pattern (i.e. the number, size and positions of tiles), click the **Change pattern** button on the bottom left corner of the Viewing Pane and choose a pattern.
4. From the Camera Tree in the Controls Pane, drag and drop cameras and/or sequences into tiles. To display a map or html page associated with a site, drag and drop the site itself.
5. To arm tiles for alarms, click the number buttons in the bottom left corner of the tiles.
6. To rename the layout, click the **ABC** button in the bottom of the Viewing Pane, enter a new name, and click **OK**.
7. Click the “disk” button to save the layout. Note that layouts must be saved within sites (rather than in the root directory).

You can create additional layouts by clicking the **+** button in the bottom of the Viewing Pane and repeating the steps outlined above.
Users and User Groups

Users in Latitude NVMS can belong to multiple user groups, and groups may also be nested. Permissions, which are associated with sites, and privileges, which regulate access to system features, are inherited by users from user groups.

Creating a User

1. Right click anywhere in the View Selection Pane and choose Create>User.

2. Enter a name for the User in the Name field and add a Description if you wish.

3. Click the pencil button in the Information section of Properties. Enter a password for the user, retype it in the Confirm password field and click OK. If you wish, enter an e-mail address for the user as well.

4. In the User logon section use the + and arrow buttons to allow or block the user from logging on to the system during certain coverage periods.

5. To change the user’s PTZ priority, uncheck Inherit PTZ priority from parent and enter the priority you would like to assign the user. To change the user’s viewing priority (if camera blocking is enabled), uncheck Inherit Viewing priority from parent and enter the priority you would like to assign the user. Click Apply changes.

6. Under the Permissions tab, checkmark the sites to which the user should have access.

7. Under the Privileges tab, click Allow or Deny for each privilege applicable to your system. Leave the non-applicable privileges undefined.

8. Click the ControlCenter tab, and, if applicable, choose an Alarm display mode from the drop-down menu and enter the maximum number of alarms to display.

9. Click the + button below the List of user layouts or List of hot macros to place a layout or macro in an easily accessible area of ControlCenter. Repeat this step as needed.
If you have not already done so, please use this opportunity to create a password for the default Admin user.

Creating a User Group

1. Right click anywhere in the View Selection Pane and choose Create>User Group.

![Figure 3-7 – The User Group Configuration Pane](image)

2. Enter a name for the Group in the Name field and add a Description if you wish.
3. Click the + button below the Members window, highlight the users and user groups you would like to include in the group, and click OK.
4. To change the group’s PTZ priority, uncheck Inherit PTZ priority from parent and enter the priority you would like to assign it. To change its viewing priority, uncheck Inherit viewing priority from parent and enter the appropriate priority. Click Apply changes.
5. Under the Permissions tab, checkmark the sites to which the user group should have access. Note that any permissions assigned to the group will automatically be inherited by all of its members.
6. Under the Privileges tab, click the Allow or Deny radio button for each privilege applicable to your system. Note that inheritance of privileges is “negative” — a member may not have privileges that are denied to its user group. Click Apply changes.
PTZ Presets and Patterns

Before creating presets and patterns, you must first configure the serial port and create a PTZ motor as detailed in the unit-specific Setup Guide for your VSIP, RCP+ or AXIS encoder/IP camera.

Both presets and patterns are configured under the Test tab of the PTZ Configuration Pane.

Creating a Preset

1. Click the Live video button.
2. Choose the preset you would like to create from the Preset pull-down menu.
3. Use the on-screen controls to find the camera position/state you would like to associate with the preset.
4. Click any of the Iris/Focus buttons if you would like to override your camera’s default setting when using the preset.
5. Click the pencil button to save the preset and the ABC button to name it.

Creating a Pattern

1. Click the Live video button.
2. Choose the pattern you would like to create from the Pattern pull-down menu.
3. Click the pencil button to begin recording your pattern.
4. Use the green on-screen controls and the Iris/Focus buttons to create a pattern.
5. Click the pencil button again to stop recording the pattern. You can review it by clicking the eye button.
6. Use the ABC button to assign your pattern a name.
To access your PTZ camera’s on-screen menu, use the menu button to the far left of the *Auxiliary* drop-down menu. You can then navigate the camera’s menu using the green PTZ controls.
Logical (CCTV) IDs

To integrate Latitude NVMS with analog CCTV devices such as PTZ keyboards some of its entities have unique ID numbers. IDs are assigned automatically by the system when entities are first created, but they can be modified by users as described below:

1. Click the globe icon in the View Selection Pane and switch to the *Logical numbers* tab of the Directory Configuration Pane.

![Figure 3-9 – The Directory Configuration Pane](image)

2. Use the drop-down menu to choose which type of entities to list (note that cameras and ControlCenter (viewer) layouts share the same number-space).
3. Click cells in the *ID* column to change the associated entities’ ID numbers.
Advanced Configuration

This section covers some advanced Latitude NVMS 3.5 configuration topics.

Fail-Over and Redundancy

Latitude features two types of Fail-Over capabilities:

- **Directory Fail-Over** creates a backup Directory that constantly polls the primary Directory and becomes active if the latter fails.
- **Archiver Fail-Over** allows cameras (and analog monitors) to be associated with a secondary Media Archiver which takes over for the primary Archiver if it fails.

**Redundant archiving** is achieved by extending Media Archivers’ Fail-Over capabilities to allow for archiving on the secondary Archiver even when the primary Archiver is working properly.

Configuring Directory Fail-Over

**Warning**: Fail-Over Directory will not function correctly unless time is synchronized throughout the Latitude system. If you do not have a domain controller, make sure to configure a time-server and link your servers and clients to it before proceeding with the procedure below. See Appendix A for instructions on setting up a Windows Time Server.

1. Make sure that all Latitude servers are connected to the primary directory by checking that they appear in the Physical view of the View Selection Pane (in AdminCenter).
2. In the **Tools** menu, choose **Configure Directory Fail-Over**.

![Figure 4-1 – The FOD Configuration Dialogue Box](image-url)
3. Click the + button to add an additional Directory. In the **System** dialogue box, enter a **System name** for your FOD (e.g. Remote-Site FOD) as well as its **IP address**. If your **Connection type** is **Local Area Network**, you may use the computer’s name instead. Otherwise, click the **Internet** radio button (leave the **IVS Port** at 5001). Click **OK**.

4. Repeat the previous step for each of your Directories, including the primary one.

5. Use the Up and Down arrows to specify the order of Directories that the system should use in case of Fail-Over. The primary Directory should be first in the list. If it is not, the Directory that is will become the primary Directory as soon as the configuration process is completed.

6. Click **OK**. Within about 20-30 seconds, the Fail-Over Directories should appear in the Physical view of the View Selection Pane.

### Configuring Units for Fail-Over or Redundant Archiving

*Before configuring a unit’s Fail-Over and Redundant Archiving properties, make sure it is associated with all necessary Media Archivers. In the case of VSIP and RCP+ units, this link is made based on the extensions configured through the Resource Administration Tool (RAT). AXIS units, on the other hand, must be manually added to each Media Archiver to which they should be able to fail-over.*

To add a unit to an Archiver, right click anywhere in the View Selection Pane, choose **Add video unit**, and enter the information required by the dialogue box. To check which Media Archivers a unit is associated with, go to the unit’s Configuration Pane and switch to the **Fail-over archiver** tab.

1. Launch AdminCenter and browse for the unit you would like to configure in the View Selection Pane’s Physical View. It should be listed under one of the Media Archivers.

![Figure 4-2 – The View Selection Pane, Physical View](image)
2. Click the **Fail-over archivers** tab in the Configuration Pane and use the up and down buttons to change the order of control by the Media Archivers.

![Figure 4-3 – The Unit Configuration Pane, Fail-Over Tab](image)

3. To **redundantly** archive cameras connected to the unit, go to the **Recording** tab of their respective Configuration Panes and checkmark the **Redundant archiving** boxes.

![Figure 4-4 – Configuring a Camera to Record Redundantly](image)
**Events, Actions and Alarm Management**

**Events** in Latitude are system occurrences, such as the detection of motion or loss of signal, while **actions** are user-assigned responses to events, such as starting to record video, sending an e-mail or sounding an audio alert. **Alarms**, on the other hand, feature highly customizable behaviors and are designed to interact with users in a prioritized, selective and robust way.

**Creating a User-Defined Events or Action**

User-defined events and actions provide a way to alias specific occurrences and give them a symbolic value. This is mainly useful when writing macros or SDK-based applications, or to make monitoring system activities and usage easier.

1. Right click anywhere in the View Selection Pane and choose *Create>User-defined Event* or *Create>User-defined Action*.

![Figure 4-5 – Adding a User-Defined Event](image1)

![Figure 4-6 – Adding a User-Defined Event](image2)

2. Enter a **Description** and a numerical **Value** and click **OK**.

**Assigning an Action to an Event**

Many Latitude entities, such as cameras, serial ports, and alarms, generate system events to which automatic actions can be assigned. Actions can be configured for an entity only as a response to events which are relevant to it. For example, a camera can trigger an action based on a **Motion on** event, but it cannot trigger one due to **User logon**.

To associate an action with an event, follow these steps:

1. Go to the *Actions* tab of the entity’s Configuration Pane.
2. Right click the desired event from the *Events/Actions* window and choose *Create a new action* and one of the actions from the menu.
3. Choose the **Coverage** during which the event/action relationship should be in effect and checkmark the entities that should perform the action.
4. Enter additional parameter if applicable and click **Apply changes**.

**Creating a Camera or Monitor Group**

Camera and monitor groups are Latitude NVMS entities used for defining alarms. A camera group is a set of cameras (e.g. all cameras showing fire exits) while a monitor group is a set of analog monitors associated with an alarm display mode (Salvo or Block). Adding a monitor to a monitor group is the equivalent of arming a tile in a ControlCenter layout. For this reason, alarms cannot be displayed on monitors if at least one monitor group has yet to be set up.

To create a camera or monitor group, follow these steps:

1. Right click anywhere in the View Selection Pane and choose **Create>Camera Group** or **Create>Monitor Group** (in the case of a monitor group, highlight the virtual matrix in the **Select the virtual matrix** dialogue box and click **OK**).
2. Enter a name for the camera/monitor group in the Name field and add a Description if you wish.
3. In the case of a monitor group, choose an Alarm display mode and enter a number of Maximum displayed alarms.
4. Use the + button at the bottom of the screen to add a camera or monitor to the group. Repeat this step as necessary.
Creating an Alarm

1. Right click anywhere in the View Selection Pane and choose Create > Alarm. Checkmark your desired alarm recipients and click OK.

![Figure 4-10 – Selecting Alarm Recipients](image)

2. Enter a name for the alarm in the Name field and add a Description if you wish.
3. If required, change the alarm’s Broadcast option from All at once to Sequential and enter an appropriate Time out parameter. You should then change at least some of the recipients’ priorities by double clicking their entries in the list and entering numerical parameters. Click Apply changes when done and switch to the Properties tab.

![Figure 4-11 – Alarm Recipient Configuration](image)
4. Enter values for the following parameters:
   o **Coverage**: determines the periods during which the alarm can be activated. If all existing coverages are inappropriate, create a new one.
   o **Priority**: determines, along with the recipient’s display mode, how often, and in which tiles or monitors, the alarm is displayed when multiple alarms are pending.
   o **Dwell time/Camera**: determines how long each camera associated with the alarm is displayed, depending on the recipient’s display mode and the number of armed tiles or monitors in the monitor group.
   o **Rearm threshold**: determines the number of seconds after an alarm is activated before it can be reactivated.
   o **Procedure (URL)**: this field can be used to add a link to an html procedure document.

5. If you would like Latitude to automatically acknowledge the alarm if users fail to do so, checkmark the **Automatic acknowledgement** box and enter the number of seconds the system should wait before acknowledging. You may also configure the system here to delete alarms a specified number of days after they are acknowledged. Click **Apply changes** and switch to the **Encoders** tab.

6. Click the + button at the bottom of the screen.
7. Choose a camera, camera group or sequence from the Encoder field and specify your desired Display option. (Playback, Live video or Still frame). You may need to enter a Pre-trigger time as well.
8. Repeat the previous step for each additional camera, camera group or sequence you would like to associate with the alarm and click Apply changes.
Database Reporting

Latitude NVMS allows users with the required license to access the system’s database and obtain Crystal-format reports from it. The feature comes with several built-in reports that can be modified by the users. Many modifications, however, as well as the ability to create new reports from scratch, require the Crystal Reports software, which does not come with Latitude, but can be easily purchased in most computer stores.

Configuring Database Reporting

1. Launch the Resource Administration Tool (RAT) on the Latitude Directory server.
2. Click Directory in the Resources tree and switch to the Logging tab.
3. Checkmark Enable database logging.
4. Choose (local)\Omnicast as your Data server. Click the + button by the Database field to set ReportingSQL as the Database and enter the number of days the log should be kept.
5. Click Filter and checkmark the activities the database should track.

Figure 4-14 – Configuring Directory Logging in the RAT
6. Click *Apply* and allow the system to restart the Directory Service.
Appendix A – Time Synchronization

For Latitude NVMS to run as smoothly as possible, it is highly recommended that the clocks on all of its clients and servers be synchronized. This is especially crucial on systems running Fail-Over features. When a system is part of a domain, synchronization is generally done by the domain controller. If a system is not part of a domain, however, its components can be synchronized using the Windows Time Service.

⚠️ The procedure described below requires that you modify the Windows Registry. DVTel recommends that you back up your registry before making any changes to it.

Configuring a Windows Time Server

1. Go to Start>Run, type in the command regedit, and click OK.
2. Browse for the entry HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\w32time\Config.
3. In the right pane, right click the AnnounceFlags key and choose Modify. Change Value Data to 5 and click OK.

![Figure A-1 - Modifying the AnnounceFlags Key](image)

4. Browse for the entry HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\w32time\TimeProviders\NtpServer.
5. In the right pane, right click the Enabled key and choose Modify. Change Value Data to 1 and click OK.

![Figure A-2 - Modifying the Enabled Key](image)
6. Exit the registry editor and open up the command prompt by going to **Start>Run** and typing in the command **cmd**.
7. In the command line, type in the command `net stop w32time` and press enter. Then type in the command `net start w32time` to restart the time service with its new settings.

### Configuring a Windows Time Client

1. Launch the registry editor and browse for the key `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\w32time\TimeProviders\NtpClient`.
2. In the right pane, right click the **SpecialPollInterval** key and choose **Modify**. Change **Value Data** to your desired polling interval, in seconds, and click **OK** (e.g., if **Value Data** is set to 900, *in decimal*, the client will poll the time server every fifteen minutes).

![Figure A-3 – Modifying the SpecialPollInterval Key](image)

3. Exit the registry editor and open up the command prompt by going to **Start>Run** and typing in the command **cmd**.
4. In the command line, type in the command `net stop w32time` and press enter. Then type in the command `net start w32time` to restart the time service with its new settings.
5. Double click the clock on your taskbar and switch to the Internet Time tab.
6. Checkmark the box labeled **Automatically synchronize with an Internet time server** and enter the computer name or IP address of your time server in the **Server** field. Click **Update Now** and then **OK**.
Appendix B – IIS Installation

In order to be able to access Latitude NVMS over the web, you will need to install Internet Information Services (IIS) on your main Directory server.

Installing IIS

1. Go to Start > Settings > Control Panel and double click Add/Remove Programs.
2. Click Add/Remove Windows Components.
3. Checkmark Internet Information Services (IIS) (If there is already a check by IIS, it means the component is already installed). Click the Details button.
4. Checkmark the Common Files, Internet Information Services Snap-In and World Wide Web Server components. Click OK.
5. Back in the Windows Components Wizard dialogue box, click Next.
6. When prompted, insert your operating system CD (the necessary files can also be downloaded from Microsoft’s Support website). A dialogue box will open up. You will need to copy files from the I386 directory. If this location is not already listed under Copy files from, click the Browse button and find it manually. Then click OK.
7. Click Finish and restart your computer.