





# MobileView 3000 Navigator User Manual

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For the latest product information, visit us online at [www.interlogix.com/mobileview](http://www.interlogix.com/mobileview).



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# Chapter 1 Overview

MobileView Navigator is video management software that enables security-related personnel to easily and remotely gather video evidence, monitor live situations, and configure and maintain a mobile video surveillance system that consists of UTC digital video recorders (DVRs) and analog video cameras. MobileView Navigator provides a more intuitive way to find and provide relevant video content. Figure 1 shows the MobileView Navigator main screen with a typical configuration.

**Figure 1:** MobileView Navigator Main Screen



**Figure 2:** MobileView Navigator Main Screen overview**Table 1: MobileView Main Screen Overview**

Item	Name	Description
1	File Menu	Contains the following drop-down menus: File, Tools, and Help
2	Toolbar	Contains shortcuts to Common Operations
3	Vehicle Selector Panel	All the folders and respective devices in folders are loaded into the Vehicle Selector tree. The state of devices loaded is represented on the tree. (Reachable/Not reachable)  If any Caddies are discovered they are added under Docking Stations node.
4	Search Parameters Panel	Tabs for Simple and Advanced Searching
5	Search Results Panel	Displays the Search results
6	Disk Analysis	When a video tile is selected the disk analysis for that camera is displayed under the timeline bar.
7	Help icon	Launches User Manual
8	Video Layout Manager	Contains commands related to the Video layout: Stream Modes, Display Modes, Overlay, Maximize/Restore, and Close
9	Video Display	Displays Live or Playback Video
10	Timeline Bar	While playing video all cameras play in time synch. The video time will be displayed on the viewer and the time line pointer will move as the video proceeds.

MobileView Navigator consists of 6 panels and several major dialogs as listed above. Panels are resizable by dragging the vertical left or right splitter bars. Arrow icons next to panel names signify the ability to hide/unhide the panel. This provides custom application layout styles depending on the activities that you want to perform.

The **Vehicle Selector** panel is the central administration area in the software and allows you to quickly search and access any device or camera in your system.

The Vehicle Selector panel features double-click or drag n' drop capability to view cameras or devices as a whole. By right-clicking on any object in the Vehicle Selector panel, you will be exposed to a number of operations that can be performed on the object. These include health diagnostics, device configuration, disk analysis, properties, search, firmware uploads, and more.

This panel is permission-based, so if you do not have rights to perform certain actions, you will not see the options.

The **Video Display** panel allows you to view both live and recorded video from any video source in the system to verify and act on the content. It contains live or previous recorded videos that can be launched from the Search, Vehicle Selector, or Disk Analysis panels.

Users have several tile layouts to choose from when arranging the video sources. Standard tile layouts include 1x1, 2x2, 3x3, 4x4, and 5x5. We also support a Custom Tile Layout with 1 large tile and 7 smaller surrounding tiles for additional flexibility. Double-clicking in any single tile will bring that video to full screen. Double-clicking the video again will restore the video to the previous tile layout.

The **Timeline** toolbar allows you to manage video once it is loaded in the Video Display panel. The Timeline toolbar features a toolbar, a timeline, playback controls, and stream switching capabilities.

The Timeline toolbar allows you to select all video tiles in the viewer, zoom in and out on the timeline, center the timeline, perform a Go To search, and put video in live or playback. The Snapshot button allows you to take a snapshot of the current play time of a selected video tile and send it to the Hard Drive for export. The Video button allows you to send a desired video segment (of the time range you specified with the green and red indicators) to the Collector for export.

The **Disk Analysis** panel allows users to seek for video at specific points in time. Double-clicking anywhere on the timeline will automatically playback the selected video at that specific date and time. Use the current live/playback cursor (appears as a blue seek triangle icon) to seek and play the video anywhere along the timeline. Use the green and red triangle icons to mark the beginning and end of a desired video segment. Use the playback controls beneath the timeline to further manipulate playback video.

The **Search Parameters** panel allows users to perform both simple and advanced searches using various parameters. Filter parameters include Alarm, Start Time, End Time, and Cameras. Searches can also run from the Search History and Search Device commands.

Search results are displayed in the **Search Results** panel. User can double click on the Start time column link from search results to view the video in video panel starting from that time. If playback video is currently playing, all the cameras will seek to the new time. If video is not playing, application will open streams for all cameras at the alarm time.

User can also export the video from search results by performing right clicking on any of the search results and select export video.

## Client Software Requirements

MobileView Navigator supports all of the following Operating Systems and other software components.

**Table 2: Client software requirements**

Component	Version
Operating System	Microsoft Windows 7 32-bit
	Microsoft Windows 7 64-bit
	Microsoft Windows XP SP3 32-bit
Other	Microsoft .NET Framework 4.0

# Chapter 2

## Installation

### Installation

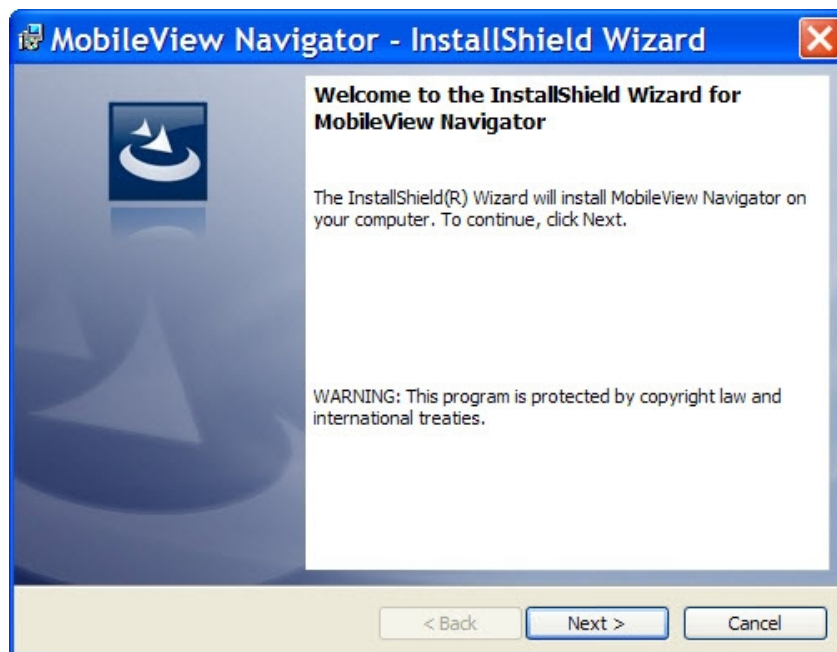
To install a new standalone instance of MobileView Navigator on your computer do the following:

Download the MobileView Navigator setup.exe program to the desktop of the PC.

Double-click the MobileView Navigator setup.exe to begin the installation.

The *Welcome* window displays.

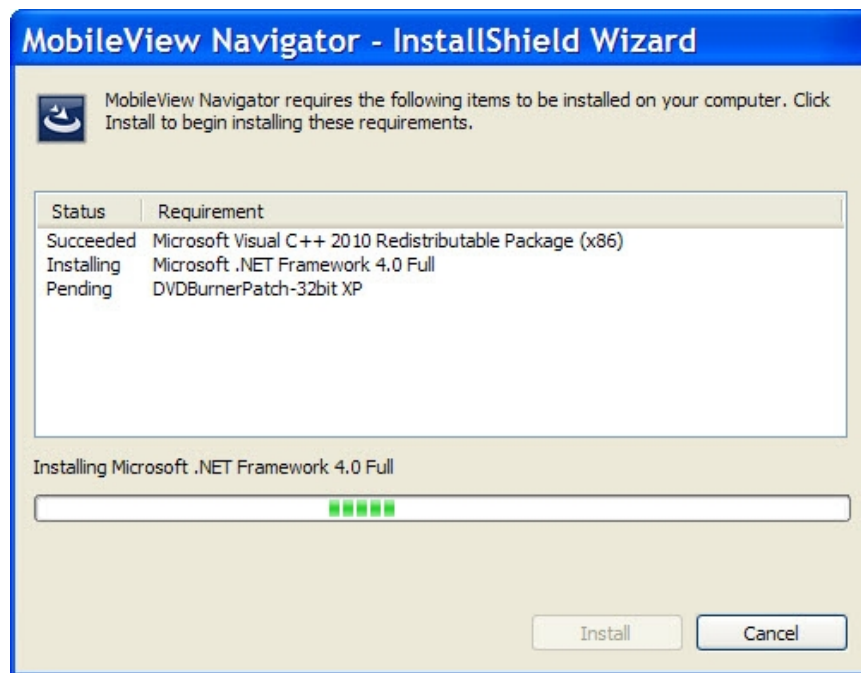
**Figure 3: InstallShield Wizard window**



Click **Next**.

The *Setup Type* window displays.

**Figure 4: Setup Type window**



Select *New UTC Installation* and click **Next**.

The *Installation Complete* screen displays.

**Figure 5: The Installation Complete window**



**Figure 6: InstallShield Wizard window**



Click **Next**.

Select the **Yes**, I want to restart my computer now option and click the **Finish** button.

A MobileView Navigator icon will be placed on your desktop and in your Start Menu to access the application.

Installation is complete.

## Upgrade to MobileView Navigator 1.1

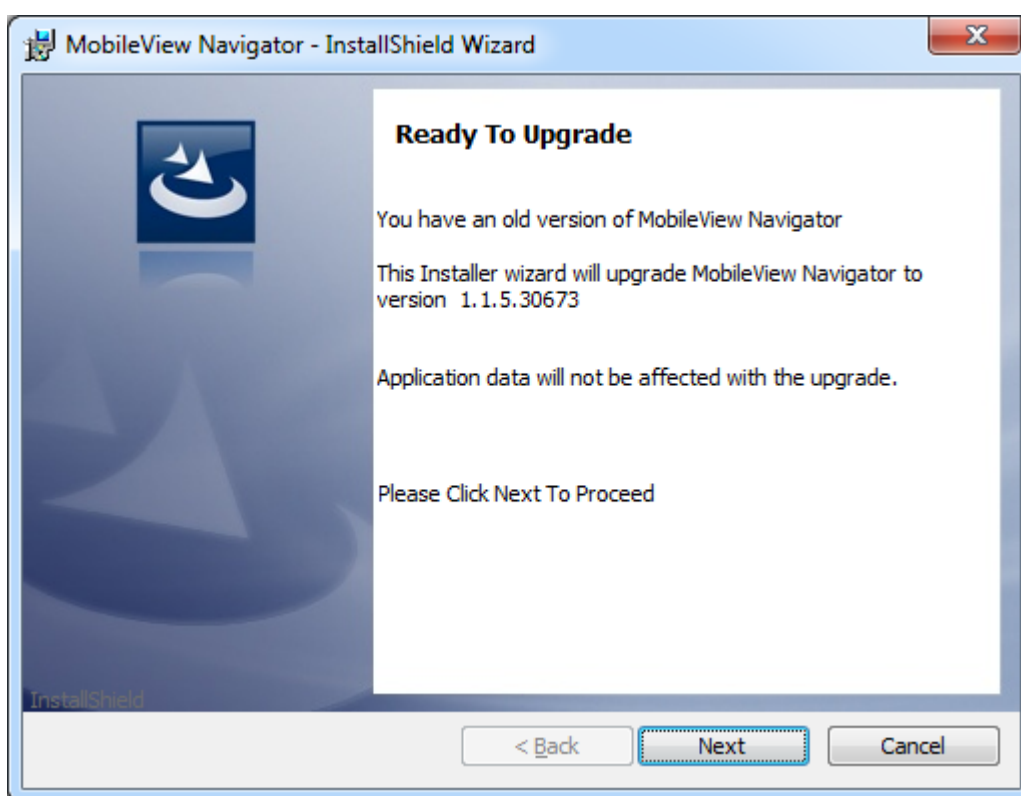
To install a MobileView Navigator service pack on a standalone instance of MobileView Navigator on your computer, please do the following steps:

Place the MobileView Navigator service pack setup.exe on the desktop of the PC.

Double-click the MobileView Navigator setup.exe to begin the installation.

The *Upgrade* window displays.

**Figure 7: Install Shield Wizard window**

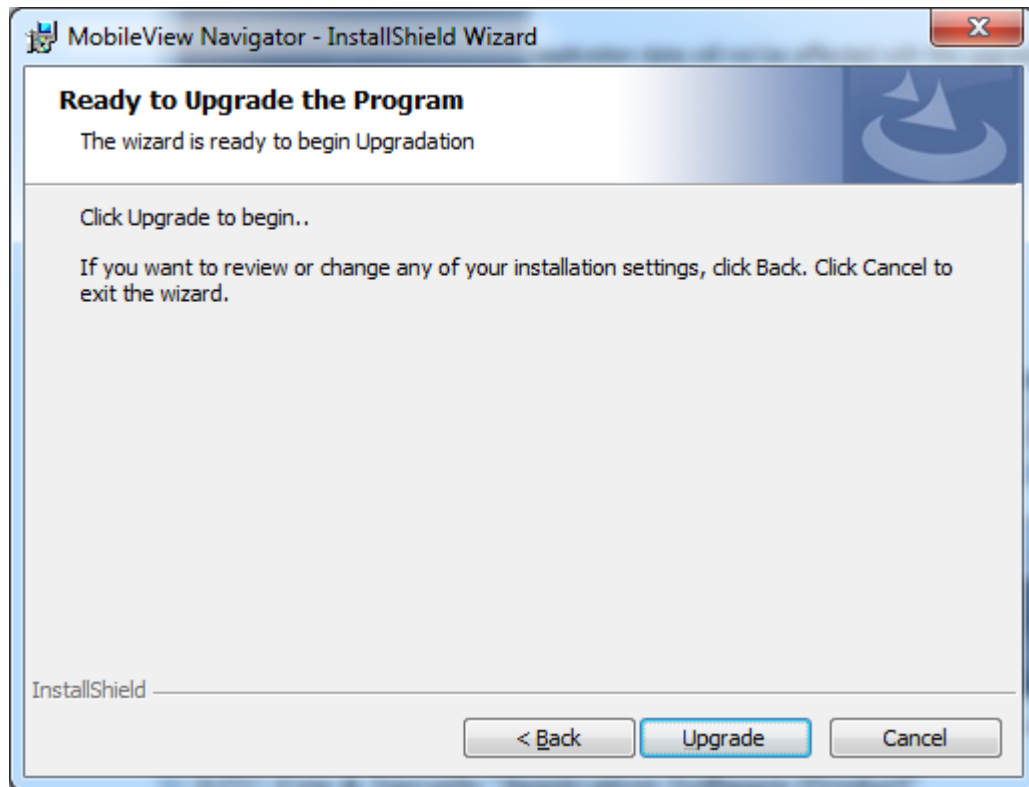


Click **Next**.

The Upgrade *Setup* window displays.



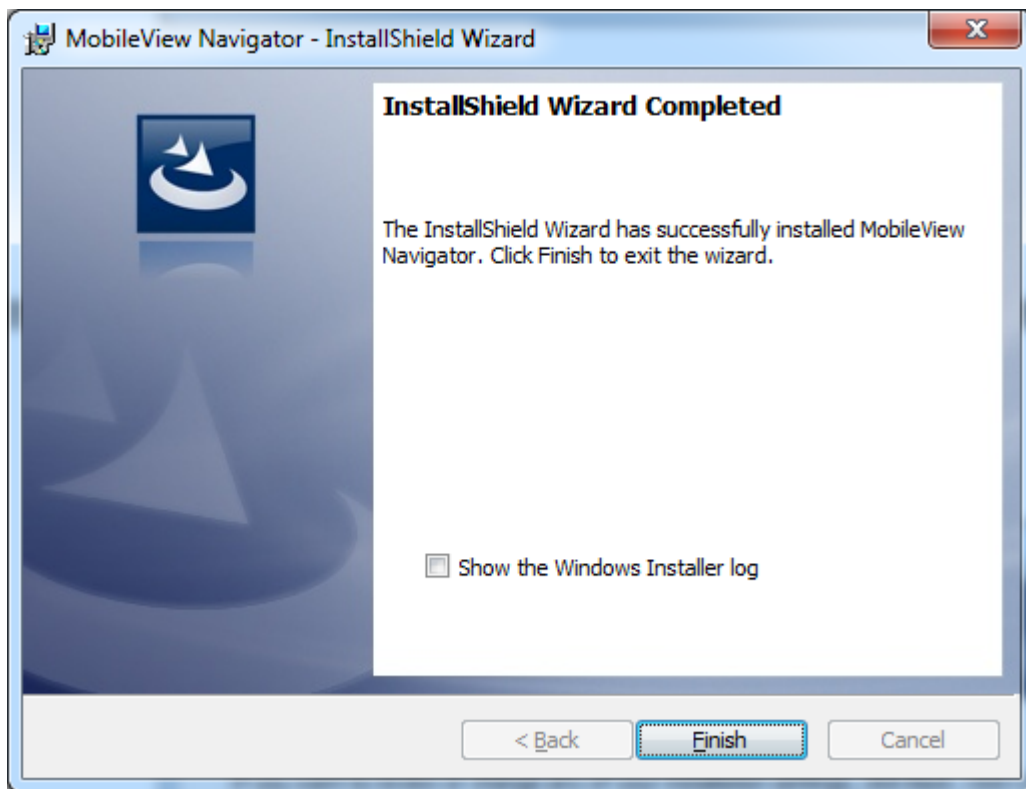
**Figure 8: Upgrade Setup window**



Select *Upgrade* and click **next**.

The *Installation Complete* screen displays.

**Figure 9: The Installation Complete window**



Click the **Finish** button.

A MobileView Navigator icon will be placed on your desktop and in your Start Menu to access the application.

Installation is complete.

## Initial Login

After a successful installation, launch MobileView Navigator using one of the following methods:

- Double-clicking on the MobileView Navigator icon on your desktop.
- Access the Start menu, All Programs, MobileView Navigator.

When MobileView Navigator launches, a login window displays. Log in as the default Administrator using the following default credentials:

**Username** - admin

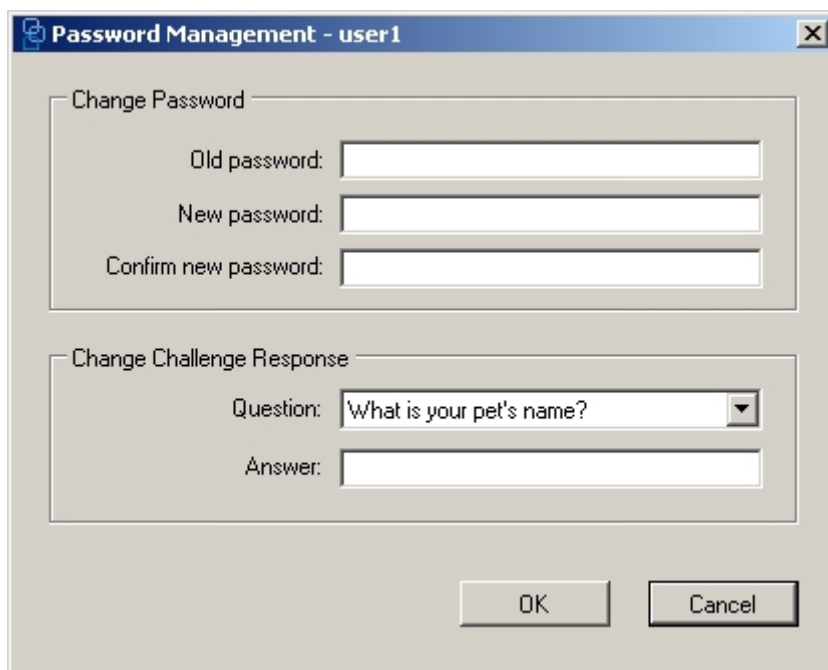
**Password** - admin

**Figure 10: Login window**



If as a user (non-admin) you login for the first time you are forced to change your default password.

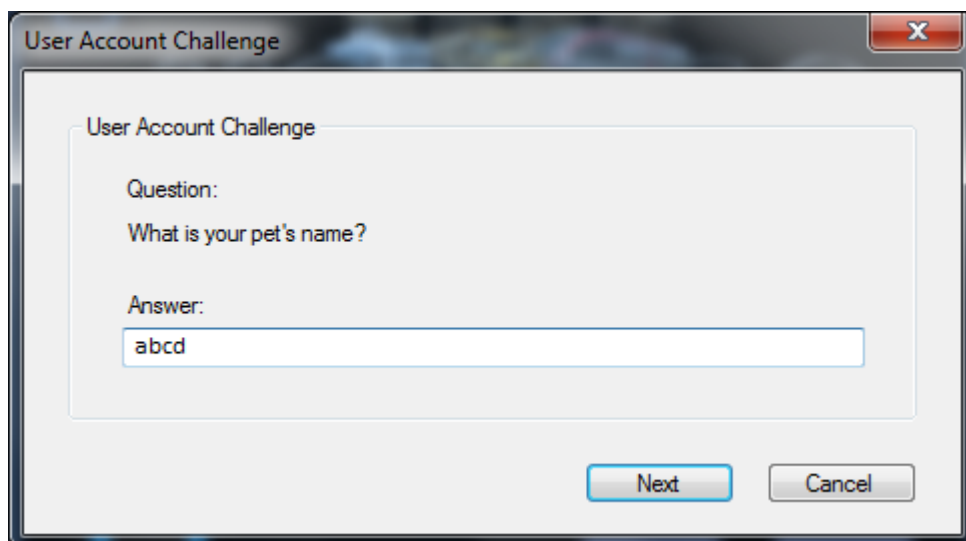
**Figure 11: Change Password**



The dialog box titled "Password Management - user1" contains two sections. The "Change Password" section has three text input fields labeled "Old password:", "New password:", and "Confirm new password:". The "Change Challenge Response" section has a dropdown menu for "Question:" with the selected value "What is your pet's name?" and a text input field for "Answer:". At the bottom are "OK" and "Cancel" buttons.

If you ever forget your password, simply click on the **Forgot ?** button on the Login dialog. This will allow you to answer your challenge question, and if successful, change your password and re-enter the application without calling for any assistance.

**Figure 12: User Account Challenge Dialog**



The dialog box titled "User Account Challenge" contains a "User Account Challenge" section. It has a "Question:" label followed by the text "What is your pet's name?". Below this is an "Answer:" label followed by a text input field containing the text "abcd". At the bottom are "Next" and "Cancel" buttons.

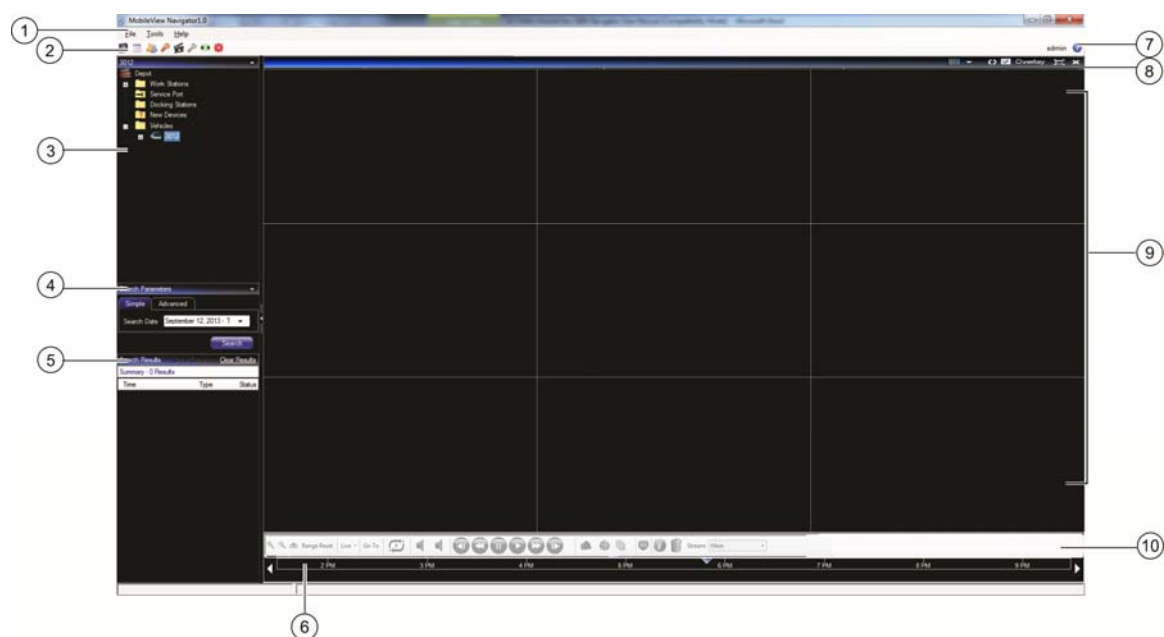
# Chapter 3

## Operation

### Getting to know MobileView Navigator 1.1

The next several figures explain the layout and controls in MobileView Navigator.

**Figure 13: The Main Screen Overview**



**Table 2: MobileView Main Screen Overview**

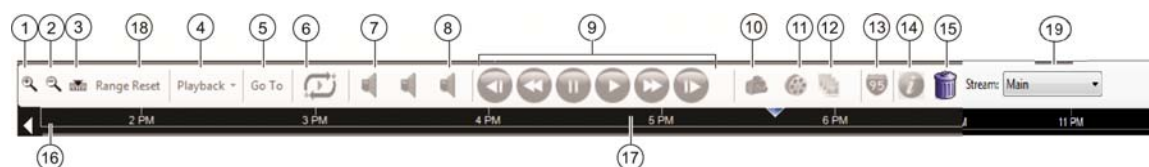
Item	Name	Description
1	File Menu	Contains the following drop-down menus: File, Tools, and Help
2	Toolbar	Contains shortcuts to Common Operations

Item	Name	Description
3	Vehicle Selector Panel	All the folders and respective devices in folders are loaded into the Vehicle Selector tree. The state of devices loaded is represented on the tree. (Reachable/Not reachable)  If any Caddies are discovered they are added under Docking Stations node.
4	Search Parameters Panel	Tabs for Simple and Advanced Searching
5	Search Results Panel	Displays the Search results
6	Disk Analysis	When a video tile is selected the disk analysis for that camera is displayed under the timeline bar.
7	Help icon	Launches the user manual
8	Video Layout Manager	Contains commands related to the Video layout: Stream Modes, Display Modes, Overlay, Maximize/Restore, and Close
9	Video Display	Displays Live or Playback Video
10	Timeline Bar	While playing video all cameras play in time synch. The video time will be displayed on the viewer and the time line pointer will move as the video proceeds.

## Timeline Bar

Timeline and video controls are enabled only while viewing video.

**Figure 14: The Timeline bar**



**Table 3: Timeline Bar Overview**

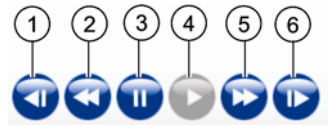
Item	Name	Description
1	Zoom In	Click to Zoom into the timeline bar to expand the disk analysis more clearly one step at a time.
2	Zoom Out	Click to Zoom out on the timeline bar to view the disk analysis at a higher level one step at a time
3	Center Timeline	Click the Center Timeline icon on the timeline bar will center the timeline pointer of currently playing video to the center of the timeline.

Item	Name	Description
4	Playback/Live Toggle	The Playback/Live button is a toggle button that changes from Play Live to Play Playback and Vice Versa. When Live video is playing the button will display Live.
5	Go To	The Go To option will open dialog to choose a specific Date and Time. Video will be fetched from the selected Date and Time from the Device.
6	Loop Video	Plays video between the selected range of time in a loop.
7	Audio Channel Selector	User selects an audio channel to enable audio for the channel available.
8	Camera Audio Selector	For MV3012 device a camera audio icon gets loaded which can be used to select audio channel on each individual camera.
9	Video Playback Controls	Contains commands related to the Video control. See the Video Playback Controls section.
10	Snapshot	User can take snapshot of currently playing video stream. This operation can be achieved by clicking on Snapshot icon on toolbar. A dialog box opens which will contain the list of all the cameras. User can select cameras of his choice and click on OK button.
11	Export Video Clip	When user clicks on Export video toolbar button, a dialog will open that will allow the user to select Cameras. Video for all the selected cameras is exported into a single file (multiplexed video).
12	Image Log	Clicking on Image Log icon on the timeline toolbar will open a dialog window. User has to select an exported video file from MobileView 3000 Device/Docking Station.
13	Show Map	User is playing Live or Playback video and clicks on map control for tracking the Vehicle on the Map. The map control dialog opens with map displayed at zoom level 8 on the given route. User has the option of 16 zoom levels.
14	Local File Information	User can click on the Local File Information icon on timeline toolbar to view the local file information at any time while video is playing.
15	Delete	Deletes the currently selected video range from the device.
16	Visual Timeline	When cameras start streaming video, the time of video is tracked on the timeline with a current play position indicator.
17	Timeline Pointer	When play back video is streaming the timeline pointer (track bar) will indicate the current date time point where the video is playing.
18	Range Reset	This will allow users to reset the selected video range on timeline bar.
19	Stream	This will allow users to set Primary Stream or Alternate Stream for videos

## Playback Controls

The Playback Controls buttons are used to control how the video is displayed.

**Figure 15: Playback Controls**



**Table 4: Playback Controls Overview**

Item	Name	Description
1	Step Reverse	Allows user to view next frame in reverse direction
2	Play Reverse	Allows user to play current video in reverse mode at normal speed. On clicking the icon again the speed is increased by x speed amount. The speed management is device dependent
3	Pause	When user presses the Pause control, video is paused
4	Play	Plays the selected video at normal speed
5	Fast Forward	Allows user to play current video x times faster in forward direction. On clicking the icon again the speed is increased by x amount. The speed management is device dependent
6	Step Forward	Allows user to view next frame in forward direction



## Application Toolbars

The available options on the Application Toolbars vary by Account Type.

**Figure 16: Application Toolbar for Normal User**



**Table 5: Normal Application Toolbar Controls Overview**

Item	Name	Description
1	Manage Vehicle List	Opens the Vehicle Management Dialog Window. Double click on a device row to open the Device Properties Dialog Window. User can modify the details of the device.
2	Password Management	Click to launch Password Management Windows
3	Local File Playback	Select a video file from local disk or network share. On selecting the File, application plays the video file.
4	Burn Video File to Media	Click to launch the CD/DVD burner or USB dialog window with options to select files for burning to a CD / DVD or to write to USB.
5	Services	Shows details about the current Mobile Services

**Figure 17: Application Toolbar for Administrator**



**Table 6: Administrator Application Toolbar Controls Overview**

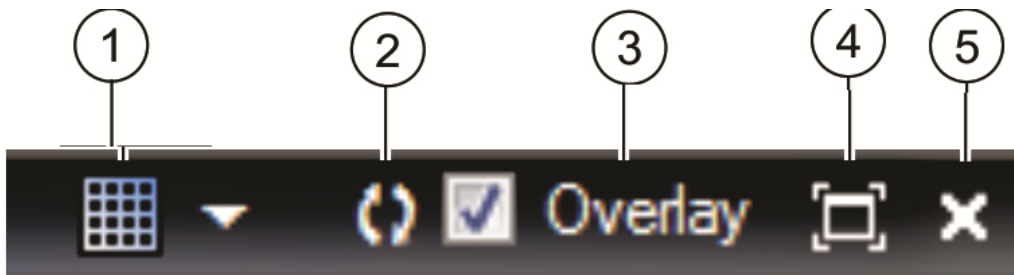
Item	Name	Description
1	Manage Vehicle List	Opens the Vehicle Management Dialog Window. Double click on a device row to open the Device Properties Dialog Window. User can modify the details of the device.
2	Task Scheduling	Scheduler dialog provides snapshot of current tasks and provides facility to modify pending tasks to download video from device.
3	Manage Users	Click to launch the Manage Users Dialog Window
4	Password Management	Click to launch Password Management Windows
5	Local File Playback	Select a video file from local disk or network share. On selecting the File, application plays the video file.

Item	Name	Description
6	Settings	Click to launch the Settings Dialog Window
7	Burn Video File to Media	Click to launch the CD/DVD burner or USB dialog window with options to select files for burning to a CD / DVD or to write to USB.
8	Services	Shows details about the current Mobile Services

## Video Layout Manager

The Video Layout Manager controls how the videos are displayed within the program.

**Figure 18: Video Layout Manager**



**Table 7: Video Layout Manager Controls Overview**

Item	Name	Description
1	Layout Selector	Change the video tile layout from the layout selector. The Layout selector will show all available layouts. Application will allow user to select any layout and display only those number of cameras
2	Camera Display Order	Changes the Camera Display Order.
3	Overlay	By selecting the overlay option user can view the video player header and footer on the video tiles which have video streaming in the viewer. On video tile header the details of camera title, date and time will be displayed. On the video tile footer the details of device name, type of video streaming (live/playback) will be displayed.
4	Maximize Restore layout	Maximize the current layout by clicking the Maximize/restore Viewer beside the layout selector. The current layout is maximized to full screen mode
5	Close	Closes all the videos streaming in the current layout tiles

# Chapter 4

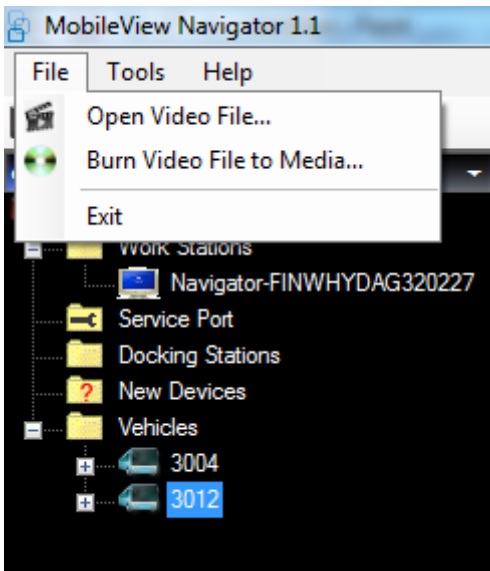
## Basic Operations

### Basic Operations

#### Opening a Video File

Click on the **File** menu and select **Open Video File**. The Open Video File menu allows user to select a video file from local disk or network share. On selecting the File, MvNav plays the video file.

**Figure 19: The Open Video File Dialog Window**

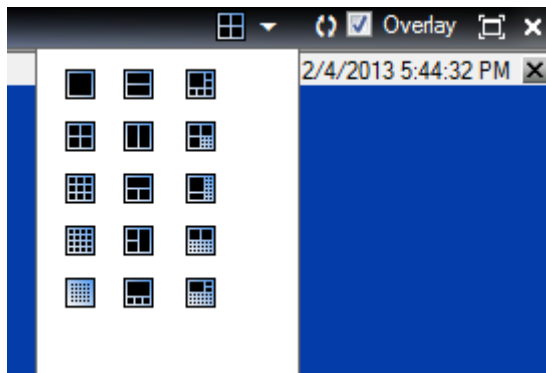


#### Select the Display Mode with the Video Layout Manager

1. Click on the **Layout Selector** icon to display all the display mode options.

2. Click to select a desired display mode.

**Figure 20: The Layout Selector Menu**



## Streaming Mode

In-order to distinguish device video streaming is happening in 'Main' or 'Sub' (Alternate) stream. This can be observed in the figure below

**Figure 21: Streaming Mode**



## Live/Playback Mode

At the top of the Viewer caption bar user can check whether the video is a Live or Playback video.

**Figure 22: Live/Playback Indicator**



## Device Time Zone

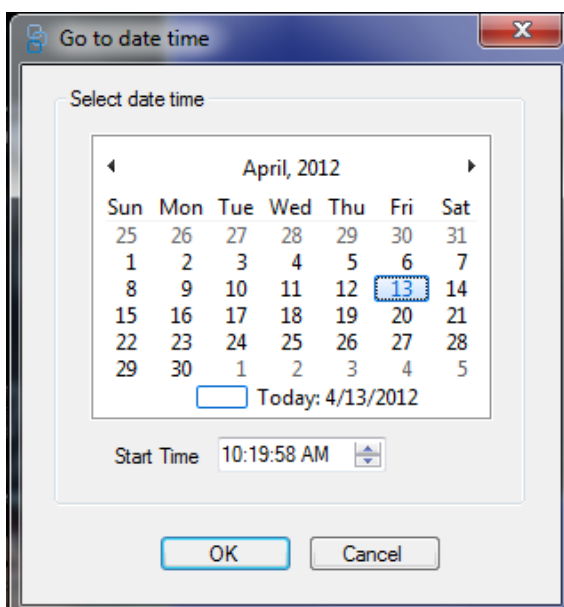
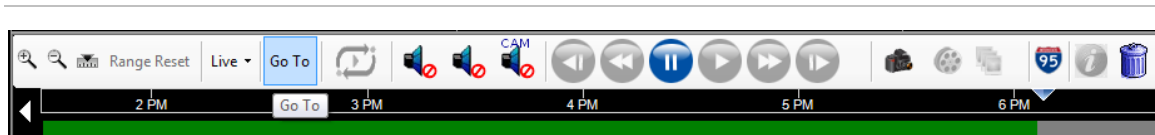
In the Main screen, at the top of the Viewer caption bar, device time zone information is displayed.

**Figure 23: Time Zone**

## Search Video

### Search by Date/Time

Click on the **Go To** button to launch the **Go to Date Time** Dialog Window. Select the desired Date/Time. Click on the **OK** button to start the search.

**Figure 24: The GoTo Date Time command and Dialog Window**

### Search by Timeline Bar

Hover the mouse over the **Timeline Bar** where the cursor is located. When the Range Selection indicators appear you can move (slide) the Selection Start Time indicator and the Selection End Time indicator to select the time range.

**Figure 25: Range Selection Indicators**

Click the **Zoom In** icon to magnify the time frame. Click the **Zoom Out** icon to reduce the time frame. Event types are represented by different colors. Please refer to the following chart for the meaning of events.

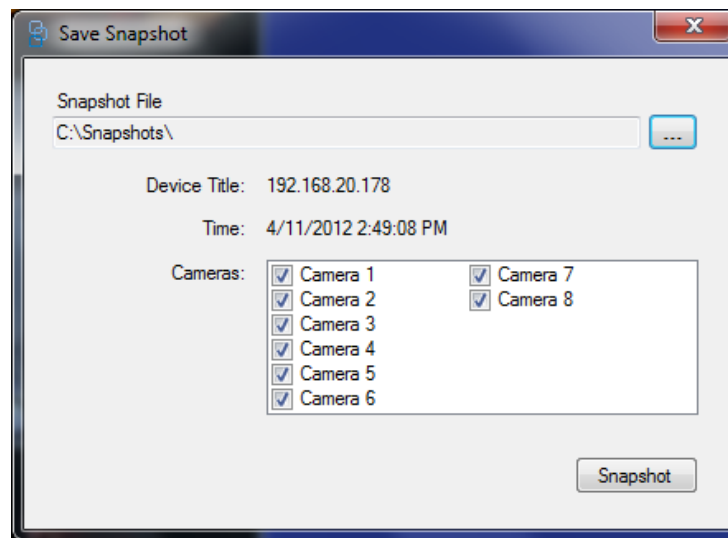
**Table 8: Event type color code**

Color	Event Type
Gray	Untagged
Blue	Video Loss
Red	Alarm
Green	Normal Video
Yellow	Other event

## Snapshot and Archive

### Export Snapshot

You can take snapshot of the playing video stream. This operation can be achieved by clicking on the **Snapshot** icon on the toolbar. A dialog box opens which will contain a list of all the cameras. Select the cameras and click on the **OK** button. The destination folder for the Snapshot files is written to the System Settings snapshot folder. You can select a location for the files by clicking on the ... (Browse) button.

**Figure 26: The Save Snapshot Dialog Window**

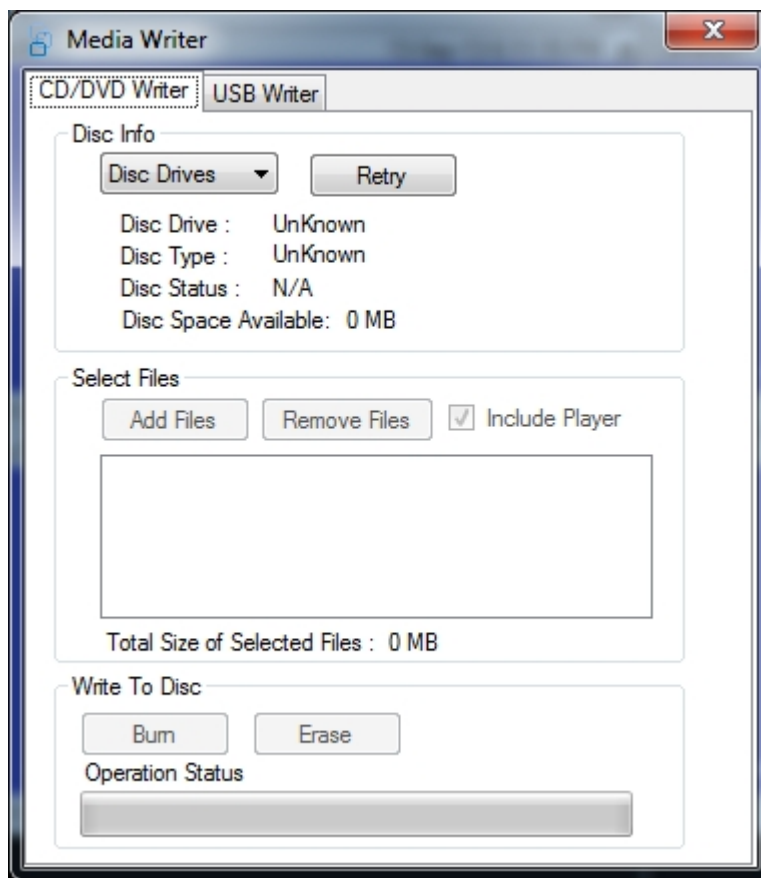
While the snapshots are generated in the background if there is any delay in generating the snapshots, the snapshot icon will be disabled until it completes generating the snapshots and then gets enabled. Mean while use can perform other operations. The result of generating the snapshot is displayed on the status bar as message.

### **Save Video to Media**

Click on the **Burn Video File to Media** button to display a file dialog to select a file or files to be written to the CD/DVD or USB.

Select CD/DVD Writer tab to burn files to CD/DVD.

Select USB Writer tab to write files to USB.



Select the CD/DVD or USB drive from Disc Drives/USB Drives dropdown

All the files selected are added to a listbox. You can choose to include the player by checking the **Include Player** checkbox.

User can select to add files from a list box or click on the **Remove** button to remove selected files.

Click the **Burn** button (in CD/DVD Writer tab) to write all selected files to the CD/DVD or **Write** button (in USB Writer tab) to write files to USB. Do not cancel the burn (process) operation. If you try to close the Disc Burner dialog in the middle of writing process, a message box is displayed stating “Busy with disc operation. Please wait...”

You can format the CD/DVD and erase the data on a rewritable CD/DVD by clicking on the **Erase** button. All data on the CD/DVD will be lost.

Progress will be shown for the operation on the Progress bar.



## View Video Information

Displays the header and footer data for the selected video tile. Click the **Overlay** check box on the **Video Layout Manager Toolbar** to enable.

**Figure 27: The Overlay check box**



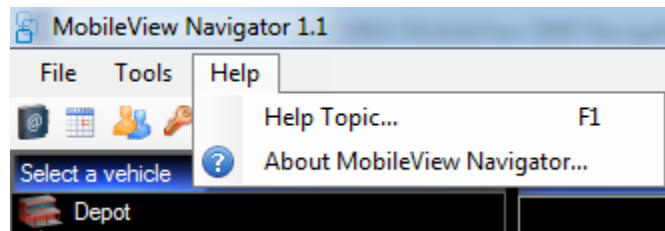
The following information is displayed on the header and footer of the video tile:


- Camera title
- Video play time
- Device name
- Video stream state
- Close video tile

## Help

If you need to get any assistance, select the **Help Menu** and select **Help Topic** to get help information.

**Figure 28: The Help Menu**

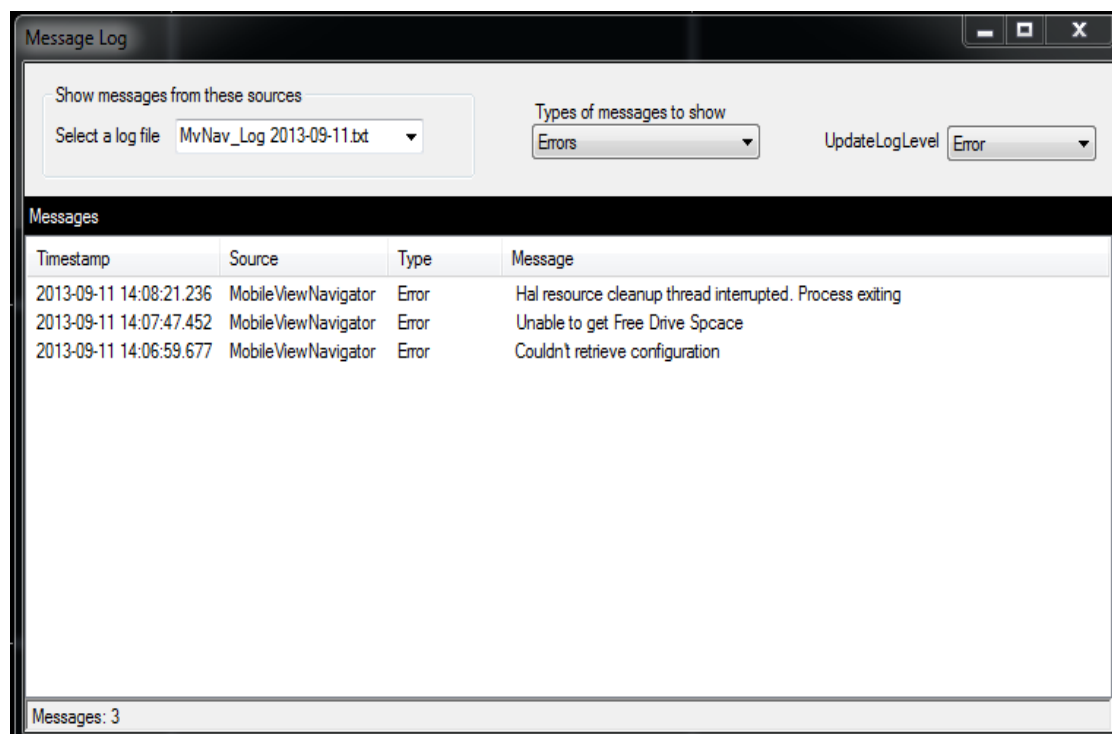


Selecting the  icon opens the screen displaying the MobileView Navigator version.

**Figure 29: The About Window**

Selecting the "Application Log" link opens the Message Log window, where user can view different types of log messages; user can filter the types of messages by selecting the appropriate type in "Types of messages to show" drop down.

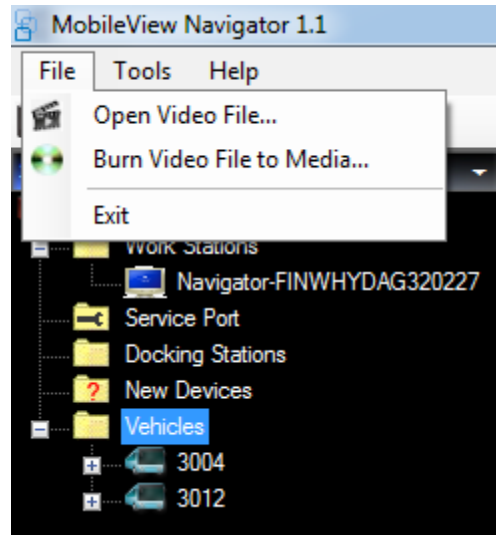
User can also update the Log Level as desired by select the appropriate log type in "UpdateLogLevel" dropdown.



## Exit

To exit from MobileView Navigator 1.1, select the **File Menu** and select **Exit**.

Figure 30: The File Menu





# Chapter 5

## Detailed Operations

### Initial UI Startup

Application will launch the main UI based on user permissions. The Vehicle selector tree will be populated with folders and devices from the database. Each device in the tree will be highlighted according to the reachability status. Devices that cannot be reached will be in italic font and devices that can be reached will be in normal font.

Main UI toolbar will have following items enabled based on user permissions –

Admin user: Address Book, Task Scheduling, Manage Users, Password Management, local file Playback, Settings, CD Burning, Service Information, Image Log, Erase Video data on Hdd.

Non Admin user: Address Book, Password Management, local file Playback, CD Burning, Service Information, Image Log.

*Note - If service is running on the machine the service information icon will be in green otherwise it will be red in color.*



- Service Active



- Service Inactive

Main UI will have the following items disabled on launch – Alarm Search, Main Timeline and associate controls, Video Controls and Disk Analysis on timeline.

## Vehicle Selector

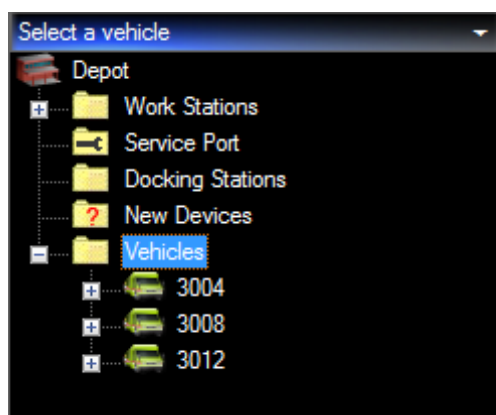
On user login, Main UI is displayed to the user. Application will check the Folder/Device list available in its database. All the folders and respective devices in folders are loaded into the Vehicle Selector tree.

The state of devices loaded is represented on the tree. (Reachable/Not reachable)

Devices that cannot be reached will be in italic font and devices that can be reached will be in normal font

If any Caddies are discovered they are added under Docking Stations. If any new devices are discovered they are added under New Vehicles node.

**Figure 31: Vehicle Selector Tree**



## Import More than One Vehicle

In order to import more than one vehicle that are present in 'New Devices' folder to 'Vehicles' folder, press 'Ctrl' button from the keyboard and with the help of the mouse select the devices present under the 'New Devices' folder, release the 'Ctrl' button from the keyboard and with the help of the mouse drag them from 'New Devices' folder to 'Vehicles' folder.

## Context Menu

When user performs right click on a Tree node in Vehicle selector following options will be provided to the user based on the type of the Node.

Below list represents complete right click options.

### Depot Node

- Show Search Bar
- Refresh Tree

### Work Stations – No OptionsWork Station discovered

- Open File

### Service Port

- MVIII
- MV 3004
- MV 3008
- MV 3012

### Service Port(Device Added)

- Device - Reachable
  - Run Health Diagnostics
  - Disk Analysis
  - Open Live
  - Open Playback
    - Last 15Minutes
    - Last 30Minutes
    - Last 1 Hour
    - Last 24 Hours
    - From Beginning of Disk
    - Start Playback at Time
  - Close
- Upload Configuration File
- Download Configuration File
- Upload Firmware
- Configure Device
- Get HDD Log
- Get Log File
- Reboot Device
- Properties

## Docking Stations – No Options

### Mv3008 Caddy-1 (Caddy discovered)

- Disk Analysis
- Open Playback Video
  - Last 15Minutes
  - Last 30Minutes
  - Last 1 Hour
  - Last 24 Hours
  - From Beginning of Disk
  - Start Playback at Time
- Close Videos
- System Log
- Properties
- Get HDD log
- 

## New Devices Node – No Options

### Vehicles Node

- Add Device
- Add Folder
- Import Address Book
- Export Address Book



### Folder

- Add Device
- Add Folder
- Delete Folder

### Device - Reachable

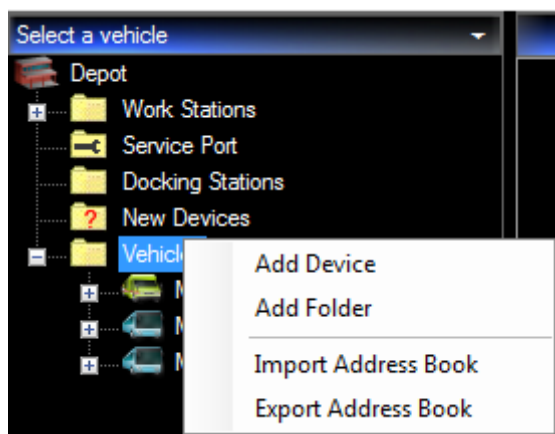
- Run Health Diagnostics
- Disk Analysis
- Open Live
- Open Playback
  - Last 15Minutes
  - Last 30Minutes
  - Last 1 Hour
  - Last 24 Hours
  - From Beginning of Disk
  - Start Playback at Time
- Close
- Upload Configuration File
- Download Configuration File
- Upload Firmware
- Configure Device
- Get HDD Log
- Get Log File
- Reboot Device
- Retire Device
- Properties

### Device - Not Reachable

- Delete
- Properties

## Import/Export Address Book

User selects Import Address Book option from context menu. This will open a file dialog to choose .csv or WaveReader file for import. On selection of Address Book by the user, application will load the Address Book file, parse the contents and populate the Vehicle Selector tree under folder named with current datetime. All imported devices/folder are added to the application database.

**Figure 32: Import Address Book menu**

If Export Address Book is selected from the context menu of the Vehicles node, a file save dialog will be opened to choose where the exported file has to be saved. All the Devices in the Vehicles Selector tree will be exported. HDD Caddy information from the tree will not be exported.

The exported file will be in .csv format. The name of the file will include the mobile s/w version from which the file has been exported. The exported file includes the device information along with Camera information with all the headers.

**Note:** The address book will not contain any hard drive caddy information as the hard drives are not configured in the vehicle selector and are automatically populated when a caddy with HDD is plugged to USB port of the PC.

## Add Folder to Vehicle Selector

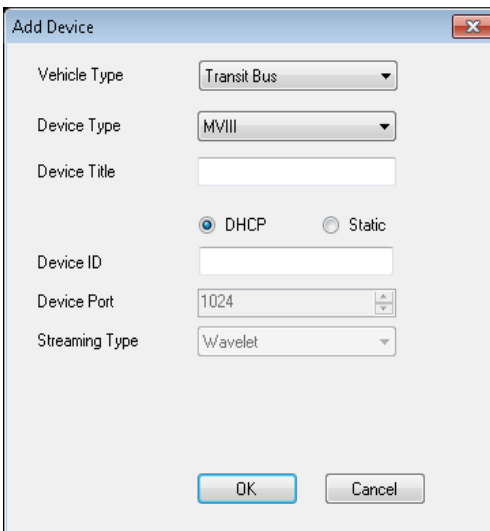
User chooses Add Folder from Vehicles context menu. This will add new folder s "New Folder 1" (by default) under Vehicles folder. The title of the folder will be in edit state and user can enter his/her preferred name.

**Note:** Feature is similar to the New Folder addition in windows explorer.

## Add Device to Vehicle Selector

User chooses Add Device from Vehicles context menu. This will open Add Device dialog. The Dialog will accept several parameters related to the Device such as Device Title, Device Type, Device ID, Device Port, and Streaming Type.

**Figure 33: Add Device Dialog window**

The image shows a Windows-style dialog box titled "Add Device". It contains several input fields and controls. At the top, there's a "Vehicle Type" dropdown menu with "Transit Bus" selected. Below it is a "Device Type" dropdown menu with "MVIII" selected. Next is a "Device Title" text input field. Then, there are two radio buttons: "DHCP" (which is selected) and "Static". Below the radio buttons is a "Device ID" text input field. Then, there's a "Device Port" spinner box showing the value "1024". Finally, there's a "Streaming Type" dropdown menu with "Wavelet" selected. At the bottom of the dialog are two buttons: "OK" and "Cancel".

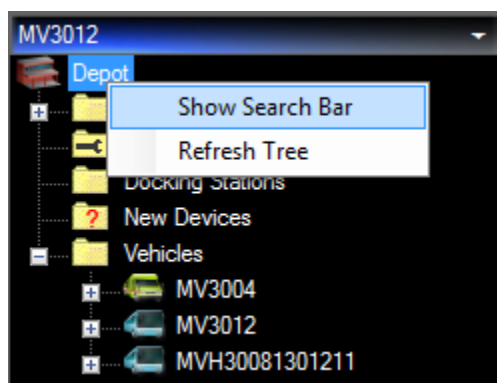
After providing the required information and click OK, Device is added to the Vehicle Selector under selected folder.

Initially Device is added in a not reachable state. Once the device is discovered, the reachability of the device is updated in the tree.

If Device is reachable at the time of adding the device, the reachability status will be updated.

## Search for Device in Vehicle Selector

User selects the search option from the root node context menu. This will open a search text box above the root node with a search icon. It is a toggle control with a text box and a search icon. User enters the name of the Device /Folder and clicks on search icon.

**Figure 34: Show Search Bar command**

The selected device or folder gets highlighted with background color. Scroll bar automatically scrolls to the item selected when the Vehicle list is large. The next device/folder that meets search criteria can be reached by clicking on the search icon again. If the selection reaches the end of vehicle selector then all search results will be highlighted and cursor will reach the first item.

## Device Discovery

Application will automatically look for devices that are reachable and will update their status in vehicle selector.

When new device is discovered, application places the device in “New Vehicles” folder. Thereafter user can

- Either Ignore the device or
- Drag & drop the device in “Vehicles” Folder indicating that, he wants to monitor and exercise all the options available in MvNav on that device.

Typical states of Devices in Vehicle Selector apply to both “Vehicles” and “New Devices” folder:

- Device not reachable (Grayed Out and Italicized)
- Connected/Reachable (Normal Font)

While dragging the device from “New Devices” folder to “Vehicles” folder, If the Device is reachable, Cameras will be auto populated. After the cameras are populated, user can start accessing the video Live/Playback from the Device.

## Work Station

User can view local files to play by selecting the file from Open file dialog. It Contains history of all the local files played in the navigator.

To clear a file, user can select release option from file's context menu.

## Caddy Discovery

Application will automatically look for hard drives that are added to the computer/Network and will update vehicle selector by adding newly found caddies under Docking Stations node. If a caddy is removed from the Computer after it is discovered that caddy will disappear from the Docking Stations node.

Once a caddy is added to the tree user can perform the following video operations:

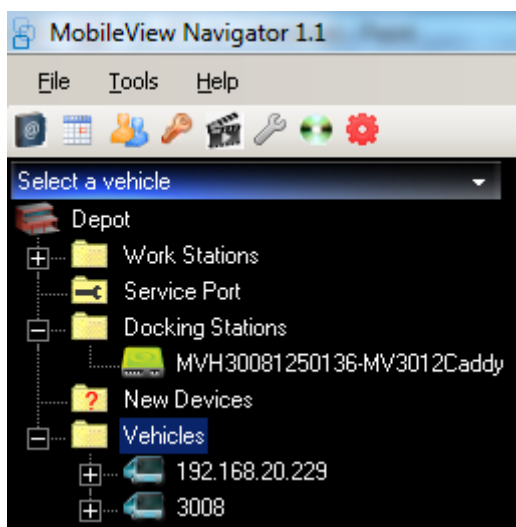
- Play video from disk beginning.
- GoTo option on timeline bar can be used to view video from any date and time.
- Use timeline controls to perform video operations like Fast Forward, Fast Reverse, Frame Next and Previous Frame.
- User can click on Map icon to view the vehicle moving on the map.

The disk analysis for the first camera is displayed by default on timeline bar. The disk analysis for selected camera is displayed on timeline bar.

.

User can access log files on caddy by clicking on “Get HDD Log” operation from the Caddy context menu. User is allowed to select timelines within the range of video recorded i.e. within

“From” and “To” times of the recorded video.

**Figure 35: Caddy added to Vehicle Selector Tree**

## Device Connection

Application allows only one Device to be connected and accessed at a time. User can choose any Device in the tree. The application context switches to the currently selected Device.

The selected device Title is displayed in the Vehicle Selector caption bar.

Vehicles in the “New vehicles” folder will not be accessible until they are dragged into the “Vehicles” folder.

When user selects a Device, if the connection is successful, following updates are made to the Main UI:

- Once connected device will have all the available cameras populated and expanded
- Timeline and video controls will be in disabled state. They are enabled only while viewing video.
- Application will allow only one device or caddy to be connected at a time. When user connects to a new device, the currently streamed videos will be closed.
- User can access any feature available on the Device through context menu.
- Current selected Device Title is displayed in the Vehicle Selector caption panel.

## Connected Device goes out of Network

When device goes out of network while user is performing some operations, user will be provided with a status message indicating the Device has gone out of network.

The Vehicle selector Icon will be updated to indicate Device not reachable status.

Further, if Live or Playback video is playing for the Device, all the Tiles will be closed and Layout will be brought to the initial state.

All objects related to the Device state will be cleared.

## Video Tile Layout Manager

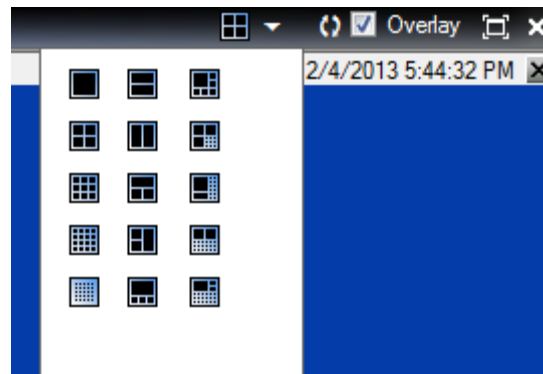
User can change the video tile layout from layout selector. Layout selector will show all available layouts. Application will allow user to select any layout and display only those number of cameras. Rest of the cameras will be closed

Opening and closing of an individual camera stream is supported in the application.

When user selects a new layout, all the existing video streams and controls will be moved to the new layout.

Layout is supported for Live, playback and Local File Playback.

**Figure 36: Changing Layout**



# Alarm Search

## Simple Search

Default simple search is selected. The default selection is 1 day before the current date. Simple search consists of Months calendar, in which default current date is selected.

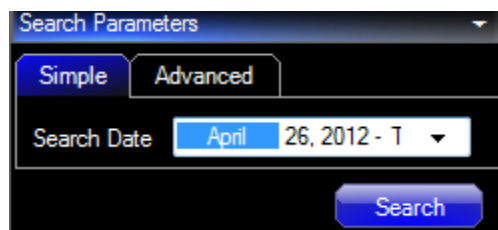
When user selects Device on the vehicle selector, click on Search button. User can click on Clear button only after the search result message displayed in status and clears the search result panel.

Search filters supported by simple search are for single day selection.

The results will be displayed in a grid display below the search parameters area and separately in Search result Form clickable at right corner of search Results panel as Show Details.

The clear button will clear the results found from search.

**Figure 37: Simple Search tab**



## Advanced Search

User selects Advance search by selecting the advanced tab.

Based on the device selected, Device cameras are populated in the checkbox list. Types of Alarms with check boxes are dynamically displayed by capabilities of currently selected device.



**Figure 38: Advanced Search tab**

The following filters for alarm search will be supported.

- Alarm Event
- Start time
- End time
- Cameras

User can select to perform search from Search History or Search Device.

After selecting the filters, user clicks on Search button. Search button will be disabled. User can click on Clear button only after the search result message displayed in status and clears the search result panel.

The results will be displayed in a grid display below the search parameters area and separately in Search result Form clickable at right corner of search Results panel as Show Details.

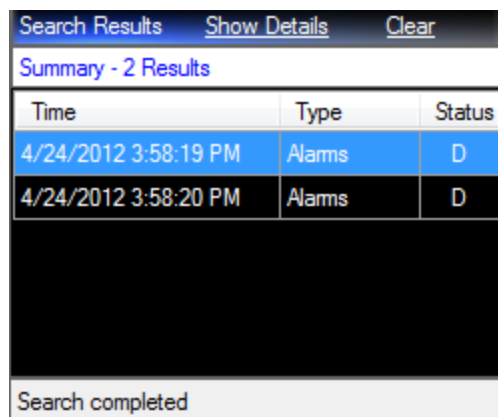
The clear button will clear the results found from search.

## Search Results

User can double click on the Time column link from search results to view the video in video panel starting from that time. If playback video is currently playing,

all the cameras will seek to the new time. If video is not playing, application will open streams for all cameras at the alarm time.

**Figure 39: Search Results screen**



The screenshot shows a mobile application interface for search results. At the top, there are three buttons: 'Search Results', 'Show Details', and 'Clear'. Below them is a header 'Summary - 2 Results'. A table with three columns: 'Time', 'Type', and 'Status' contains two rows of data. The first row shows '4/24/2012 3:58:19 PM', 'Alarms', and 'D'. The second row shows '4/24/2012 3:58:20 PM', 'Alarms', and 'D'. Below the table is a large black rectangular area. At the bottom, a status bar says 'Search completed'.

Time	Type	Status
4/24/2012 3:58:19 PM	Alarms	D
4/24/2012 3:58:20 PM	Alarms	D

Search completed

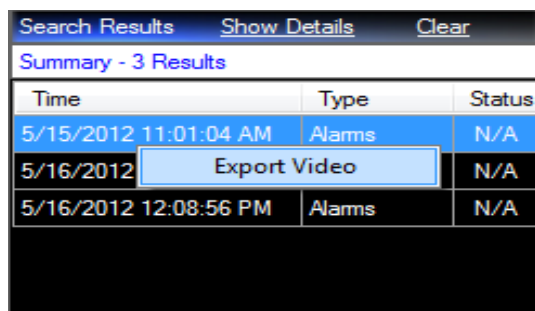
User can double click on the Start time column link from search results to view the video in video panel starting from that time. If playback video is currently playing, all the cameras will seek to the new time. If video is not playing, application will open streams for all cameras at the alarm time.

User can also export the video from search results by performing right click on any of the search results and select export video.

If auto download is enable for the device and status is changed to “C”, if user double clicks on the Start time column link from search results, downloaded clip is played as local file playback.

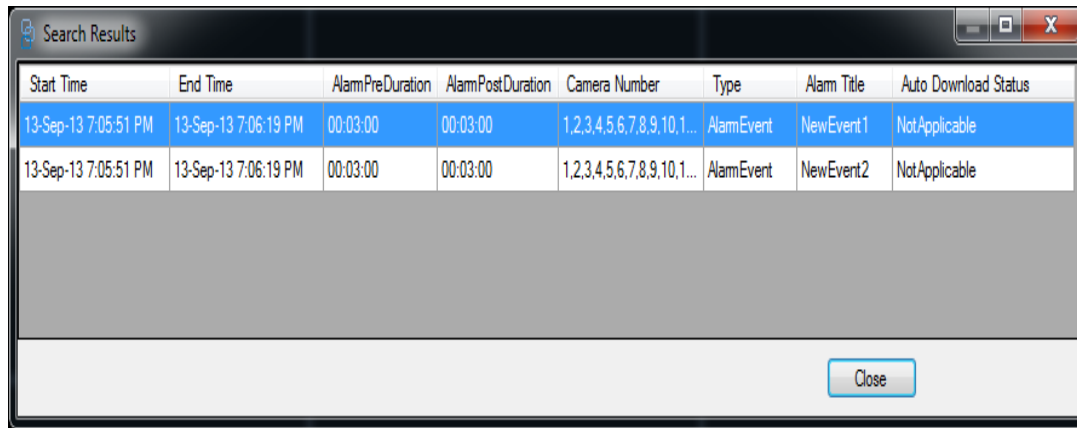
Clicking on Show Details will open separate window showing complete details.

**Figure 40: Search results**



The screenshot shows a mobile application interface for search results. At the top, there are three buttons: 'Search Results', 'Show Details', and 'Clear'. Below them is a header 'Summary - 3 Results'. A table with three columns: 'Time', 'Type', and 'Status' contains three rows of data. The first row shows '5/15/2012 11:01:04 AM', 'Alarms', and 'N/A'. The second row shows '5/16/2012', 'Export Video', and 'N/A'. The third row shows '5/16/2012 12:08:56 PM', 'Alarms', and 'N/A'. Below the table is a large black rectangular area.

Time	Type	Status
5/15/2012 11:01:04 AM	Alarms	N/A
5/16/2012	Export Video	N/A
5/16/2012 12:08:56 PM	Alarms	N/A



Start Time	End Time	AlarmPreDuration	AlarmPostDuration	Camera Number	Type	Alarm Title	Auto Download Status
13-Sep-13 7:05:51 PM	13-Sep-13 7:06:19 PM	00:03:00	00:03:00	1,2,3,4,5,6,7,8,9,10,1...	AlarmEvent	NewEvent1	NotApplicable
13-Sep-13 7:05:51 PM	13-Sep-13 7:06:19 PM	00:03:00	00:03:00	1,2,3,4,5,6,7,8,9,10,1...	AlarmEvent	NewEvent2	NotApplicable

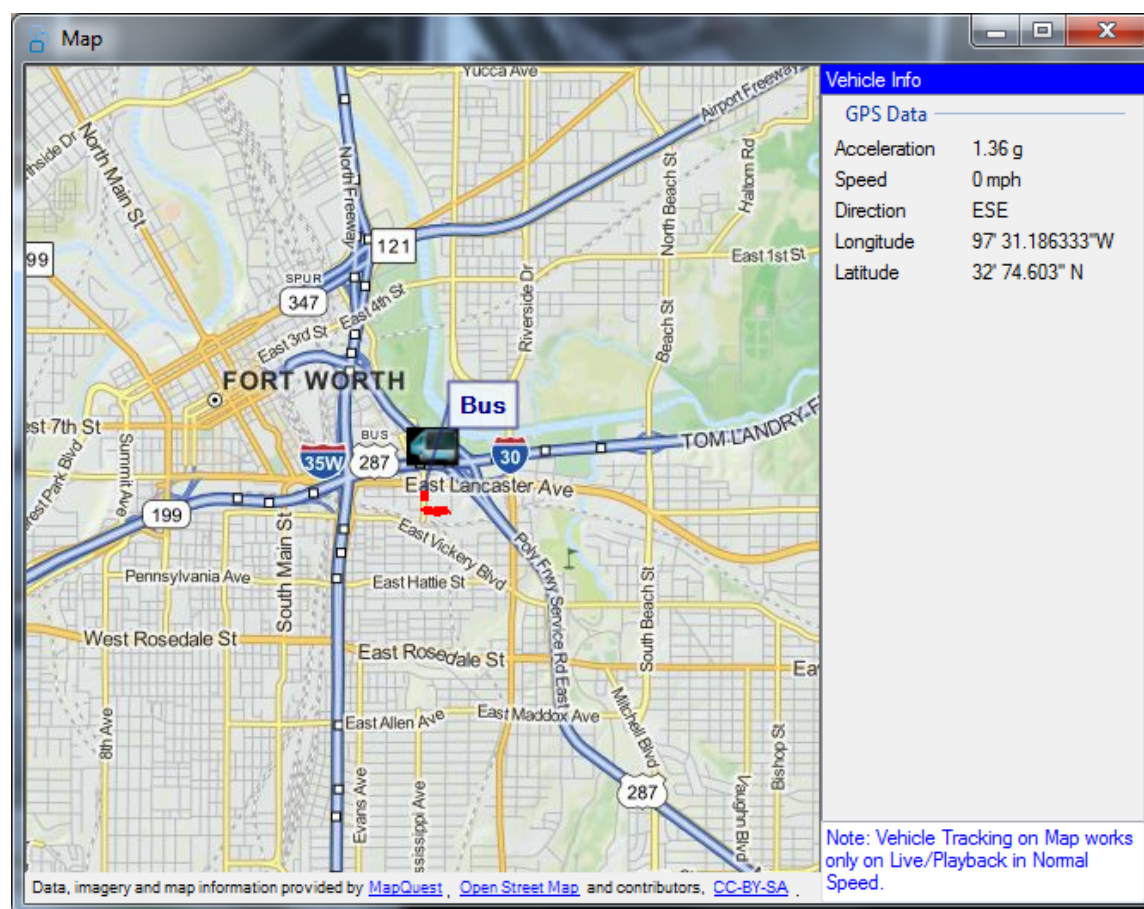
## Track Vehicle on Map

User is playing Live or Playback video and clicks on map control for tracking the Vehicle on the Map. The map control dialog opens with map displayed at zoom level 8 on the given route. User has option of 16 zoom levels.

The Vehicle will be tracked as the video is played through a bus Icon on the map. The Icon moves along the route with a track being drawn along the path that the Vehicle has traveled.

User can perform Pan on the map in all directions in the selected zoom level.

Figure 41: Map Screen



## Video Download Manager

Scheduler dialog provides snapshot of current tasks and provides facility to modify pending tasks to download video from device.

User can schedule to download video from a device. The Download Manager will take care to download video in sequential order if device is currently connected.

There are six types of task status filters that displays the tasks in the scheduler accordingly

### Completed

- Displays all the completed tasks

### Pending

- Displays all the pending tasks

### In-Progress

- Displays all the In-Progress tasks

### Cancel Requested

- Displays all the Cancel Requested tasks

### Canceled

- Displays all the Canceled tasks

### Failed

- Displays all the failed tasks

There are three types of task

### User Created Video Download Tasks

- These tasks are created by user

### Automatic Video Download of Alarm Video

- Tasks created by application basing on alarms in device

### Automatic Search tasks

- Task created to search the device for alarms for the duration it was offline

Device Filter: Filters the tasks as per the device selected.

Task Name Filter: Filters the tasks as per the task name.

Scheduler dialog will display the following information to the user:

- Title - Name of the Task
- Type - Indicates whether task is Search Task, Video Download Task or System Download Task
- Priority- Indicates Priority
- Scheduled Time - Indicated time at which the task is scheduled
- Status - Can be any of the following:

Pending	Video Download Task Yet to Start
InProgress	Video Download Task is in progress
Completed	Downloaded video has been saved to desired location by user
Failed	Video Download has failed
CancelRequested	User has decided to cancel the task
Canceled	Task has been canceled

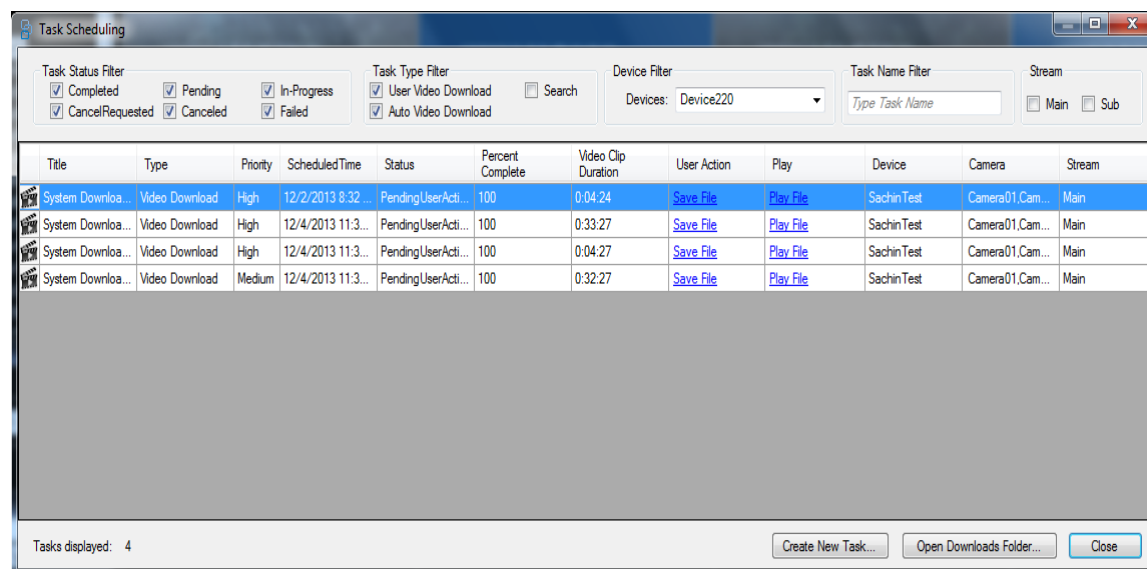
- **Percent Complete**                      Percent of Video Download completed
- **Video Clip Duration**                Duration of the clip
- **User Action**                            User Actions
- **Device**                                  Device used for download
- **Camera**                                Cameras from which the videos were downloaded
- **Open Downloads Folder**    Button which shows location where videos were originally  
Downloaded (Always points to Video Download Location in System Setting)

If there is an alarm notification from a device the application will automatically schedule video download for the alarm.

On completion of download, video is saved to application created task specific folder that user can view by click on Open Downloads Folder button.

Priority of Video download in Task Scheduling is same as the Event priority set in the device event configuration menu for that device.

**Figure 42: Task Scheduling Window**



## Download "Alternate Video Stream"

- Video streaming can be downloaded in two streams, Primary and Alternate.
- Video download facility is available only in playback mode or when playing local file, but selection of Primary or Alternate is not available while playing local file, only in device playback mode (Last 15 Mins/30 Mins ...) we have the facility to choose either Primary or Alternate.
- Video download facility is disabled when in Live streaming
- In order to download video, playback video in Last 15 mins/30 mins/1 hr ... then select duration of video to export, video export button will be enabled.
- Click on the video export button once enabled which open a popup screen to save the video

**Figure 43: Video Export**



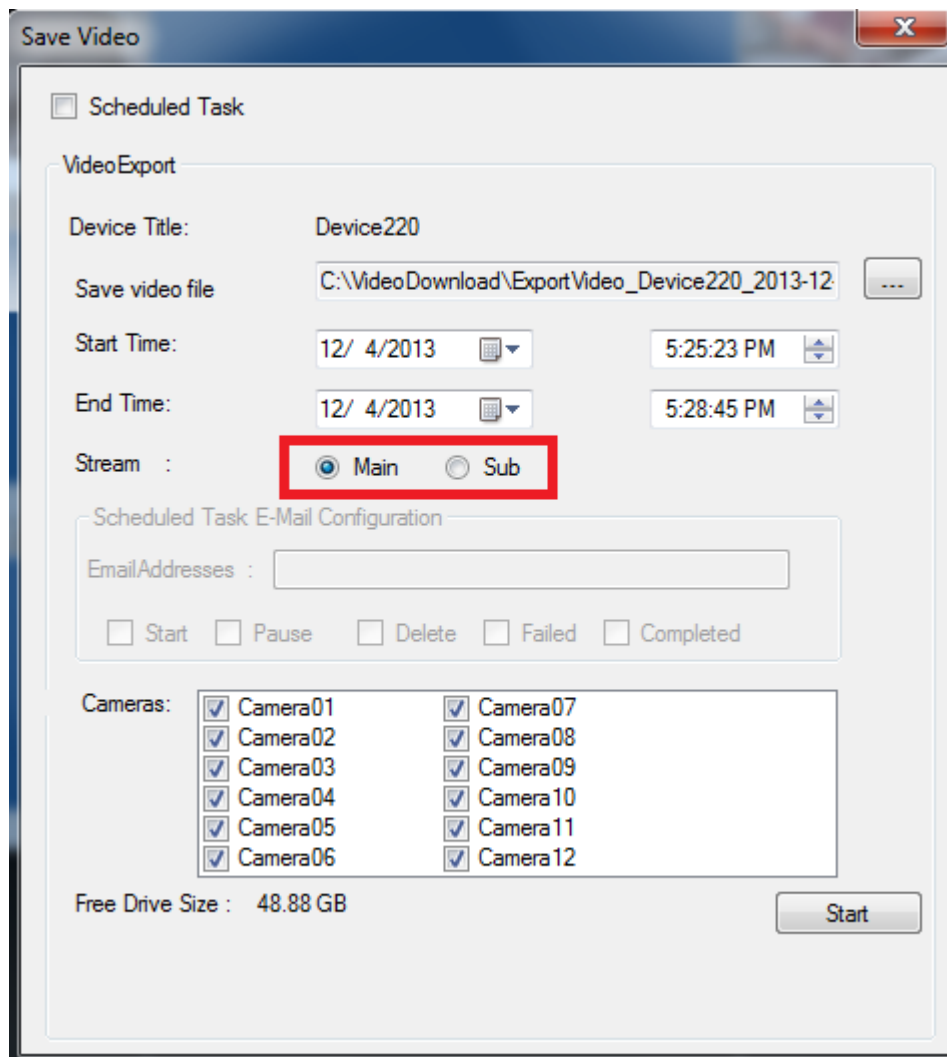
- By default Primary stream is enabled, if you want to download Alternate Stream chose the appropriate option and say start

A notification is provided for user to check free space.

User can schedule task to scheduler service

If space is not available in the video repository, then user will be provided with warning message

**Figure 44: Save Video**





The 'Save Video' dialog box is shown with the following fields and options:

- ☐ Scheduled Task
- VideoExport**
  - Device Title: Device220
  - Save video file: C:\VideoDownload\ExportVideo\_Device220\_2013-12
  - Start Time: 12/ 4/2013 5:25:23 PM
  - End Time: 12/ 4/2013 5:28:45 PM
  - Stream : ☒ Main ☐ Sub
- Scheduled Task E-Mail Configuration**
  - EmailAddresses :
  - ☐ Start ☐ Pause ☐ Delete ☐ Failed ☐ Completed
- Cameras:**

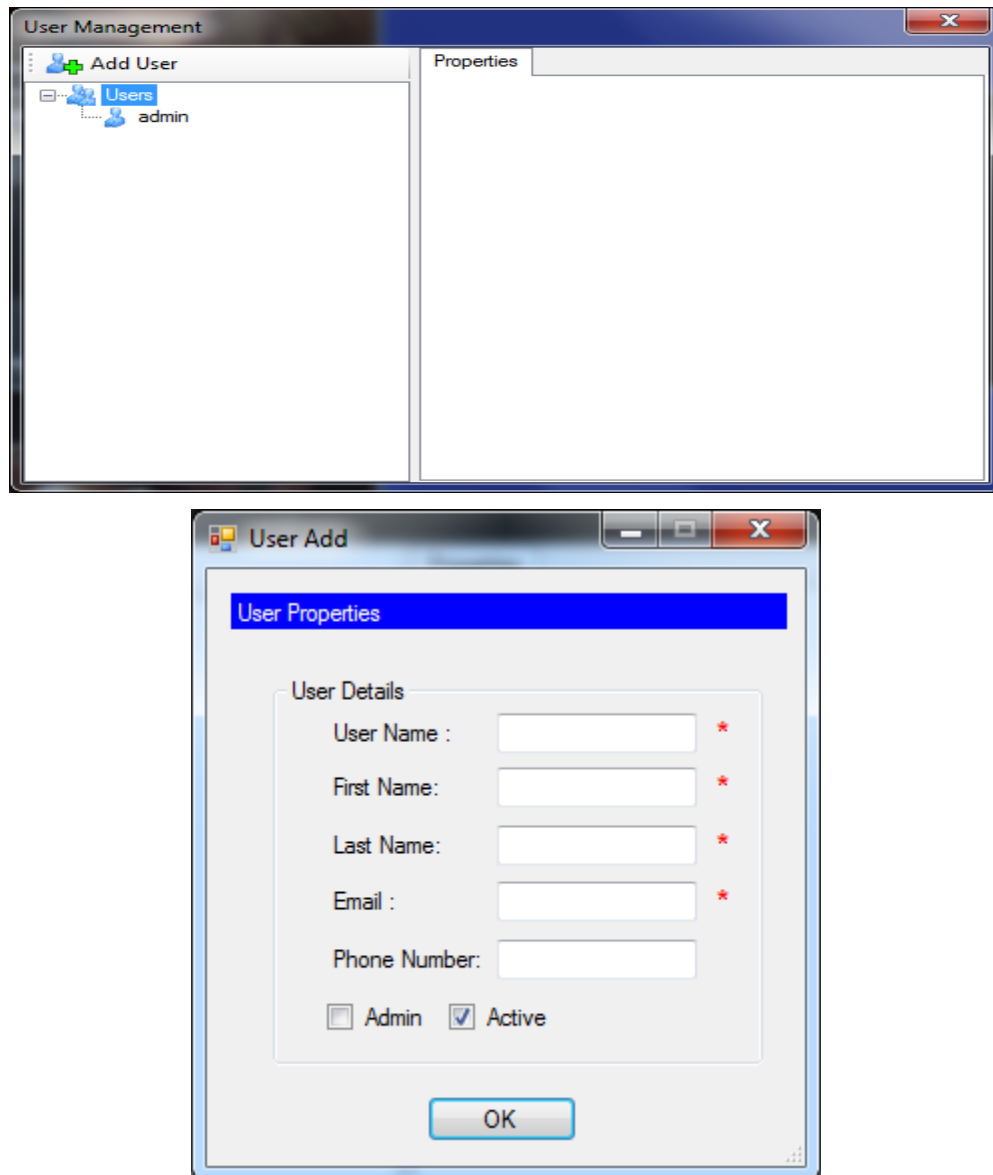
<input checked="" type="checkbox"/> Camera01	<input checked="" type="checkbox"/> Camera07
<input checked="" type="checkbox"/> Camera02	<input checked="" type="checkbox"/> Camera08
<input checked="" type="checkbox"/> Camera03	<input checked="" type="checkbox"/> Camera09
<input checked="" type="checkbox"/> Camera04	<input checked="" type="checkbox"/> Camera10
<input checked="" type="checkbox"/> Camera05	<input checked="" type="checkbox"/> Camera11
<input checked="" type="checkbox"/> Camera06	<input checked="" type="checkbox"/> Camera12
- Free Drive Size : 48.88 GB
- Start



## Manage Users

Admin user can access “User Management”  toolbar button to Add or Modify user. Clicking on “Add User”  opens the User Add window where admin can provide the necessary information to create a new user.

**Figure 45: User Management Screen**



After successfully added, a dialog box is displayed saying user is added successfully. A system generated password is mailed to the email-id provided. When the newly created user logs in for the first time he/she is forced to modify the default password.

## Update User Information

Admin user can also update the user information like first name, last name, email, phone number, set user as admin by checking the checkbox against Admin, set user status as Active by checking the checkbox against Active for user (By default user is active and checkbox against Active is checked). After updating the information Logged in user has to click on Update Account button to save the new information.

Admin user can also reset the user password by clicking on reset button, which will send a default password to the email-id provided.

**Figure 46: User Properties**

The screenshot shows a 'User Management' window with a tree view on the left containing 'Users' and 'test'. The 'Properties' tab is active, showing 'User Properties' for the selected user. The 'User Details' section contains the following fields and values:

Field	Value	Required
User Name :	test	*
First Name:	test	*
Last Name:	user	*
Email :	a@y.com	*
Phone Number:	123456789	

Below the fields are two checkboxes: ☐ Admin and ☒ Active. At the bottom are three buttons: Update, Delete, and Reset.

## User Permissions

A normal user can perform all the operations available in the application except Managing users, Task Scheduling and managing system settings.

Application Permissions:

Admin User

- Manage Vehicle List
- Task Scheduling
- Manage Users

- Password Management
- Local File Playback
- Settings
- Burn Video File to Media
- Services
- Erase Disk

#### Normal User

- Manage Vehicle List
- Password Management
- Local File Playback
- Burn Video File to Media
- Services

## Vehicle Management

User opens the vehicle management dialog and double clicks on a row. The selected device properties are opened in a device properties dialog. User can modify the details of the device.

User clicks on the Add vehicle toolbar button on the manage vehicle list Form. Add device dialog opens add new device dialog. The new device added is updated on vehicle selector.

User selects a device row on manage vehicle list and clicks on the Remove Vehicle button on toolbar. The selected device in the grid gets deleted from the list. The device list gets updated on vehicle selector.

User can Export the vehicle list into .csv format file by clicking on the Export List toolbar button.

User can import vehicles from address book (exported) files. User clicks on Import List toolbar button. An open file dialog opens for user to choose a .csv file (Mobile/Wave Reader) file. On selecting a valid file the vehicles list is imported and displayed in the vehicle management grid and the same is updated in vehicle selector.

# Settings

When user selects settings menu from the toolbar, a dialog will open that will allow configuration of following parameters:

Potential configuration parameters:

## Settings

SMTP Server (SMTP Server details)

Server

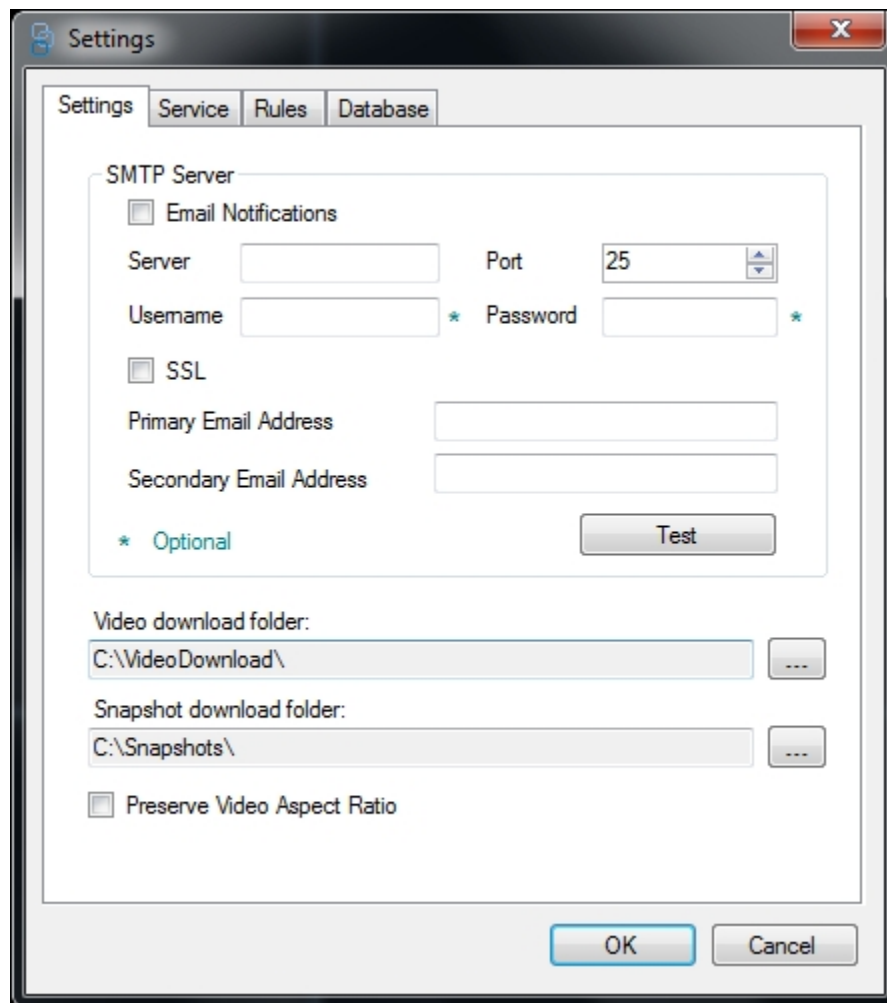
- Port
- Username
- Password
- SSL
- Email Notifications
- Primary Email Address
- Secondary Email Address
- Test Button (To test the connection)

Video Download folder (Default path where service will download the video from the device)

Snapshot Download Folder (Default path where application downloads the snapshots from the device)

Preserve Video Aspect Ratio.

**Figure 47: Settings Dialog Window**



## **Service (Shows details about Mobile Service)**

Installed

Status (user can start/stop the service)

Running Since

Tasks

- Task Scheduling
- Maximum Concurrent Tasks
- Last Activity (Date when service performed last Task Scheduling)

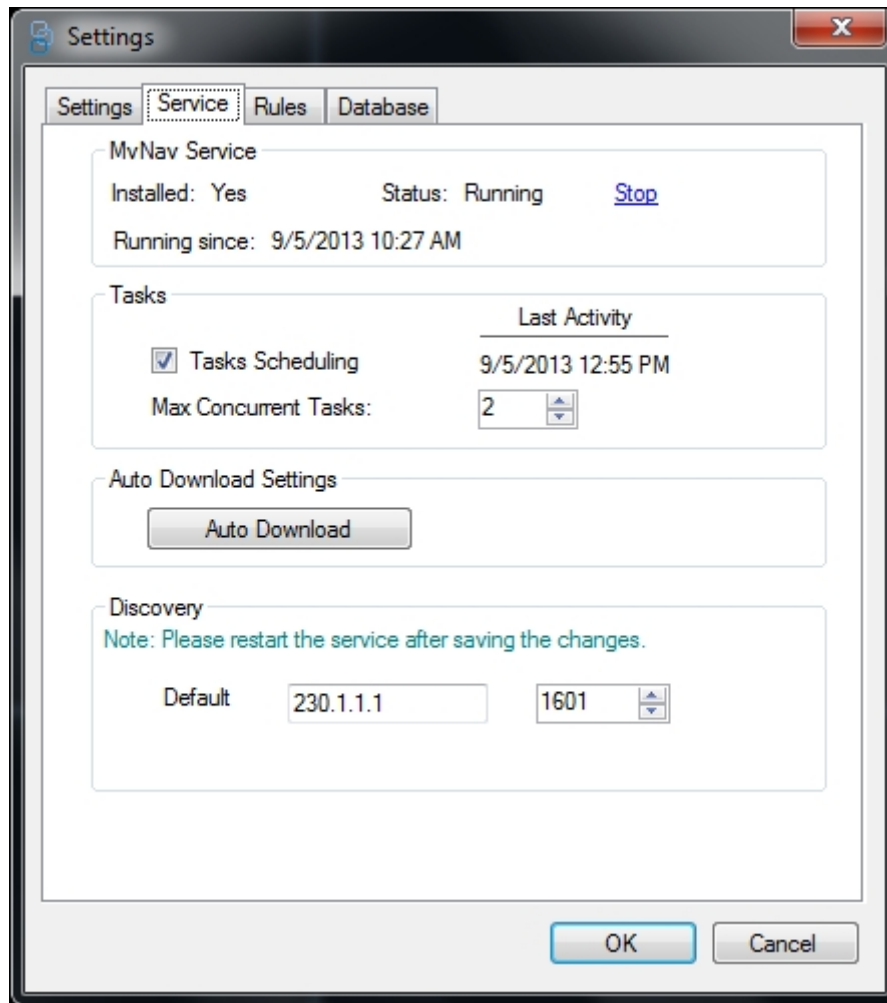
Auto Download Settings (User can select the devices that are required to perform auto download)

- Auto Download

Device Discovery (Shows the IP address of the computer that devices alert when they join the network)

- Default

Figure 48: Settings Service Tab



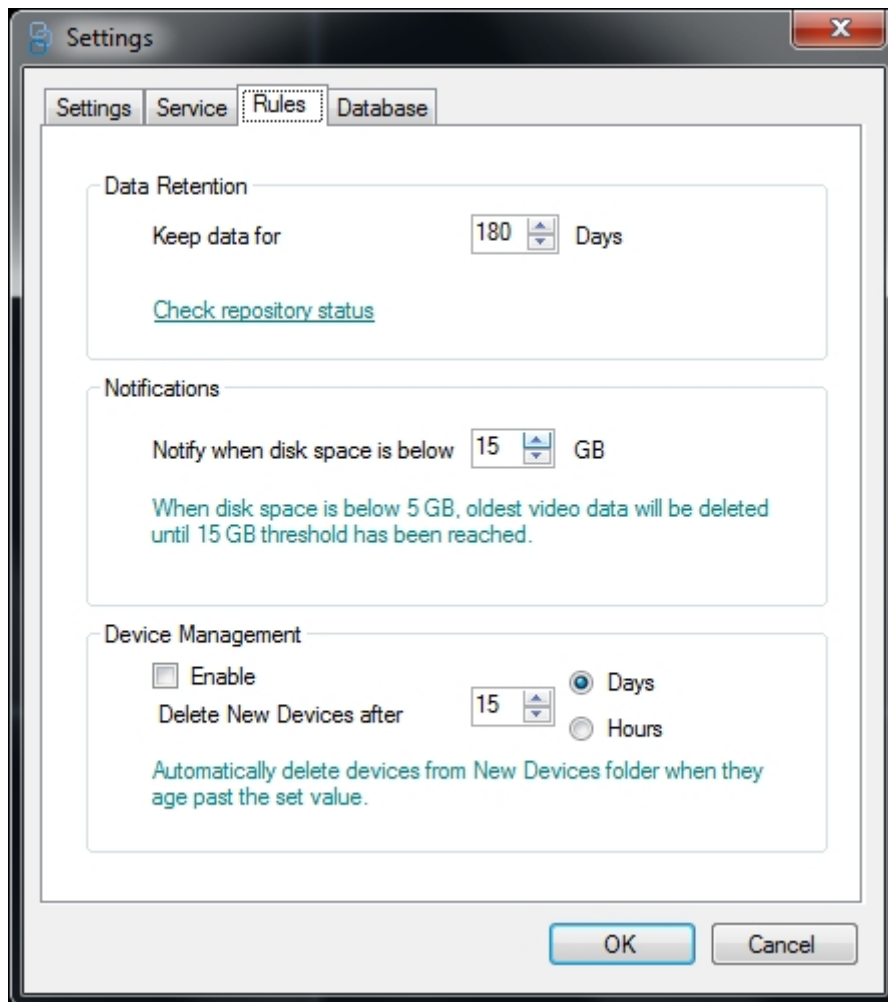
## Rules

- Data Retention Policy (Specifies the time period task and downloaded data will be maintained in application)
  - Keep Search results for
  - Keep task status for
  - Keep Downloaded video for

Check repository status (displays all the files that would be deleted in 10days).

- Notifications (Allow user to set the capacity to notify the user when disk space is below that capacity).
- Device management if enabled allows user to delete new devices after certain period of configured time.

Figure 49: Settings Rules Tab



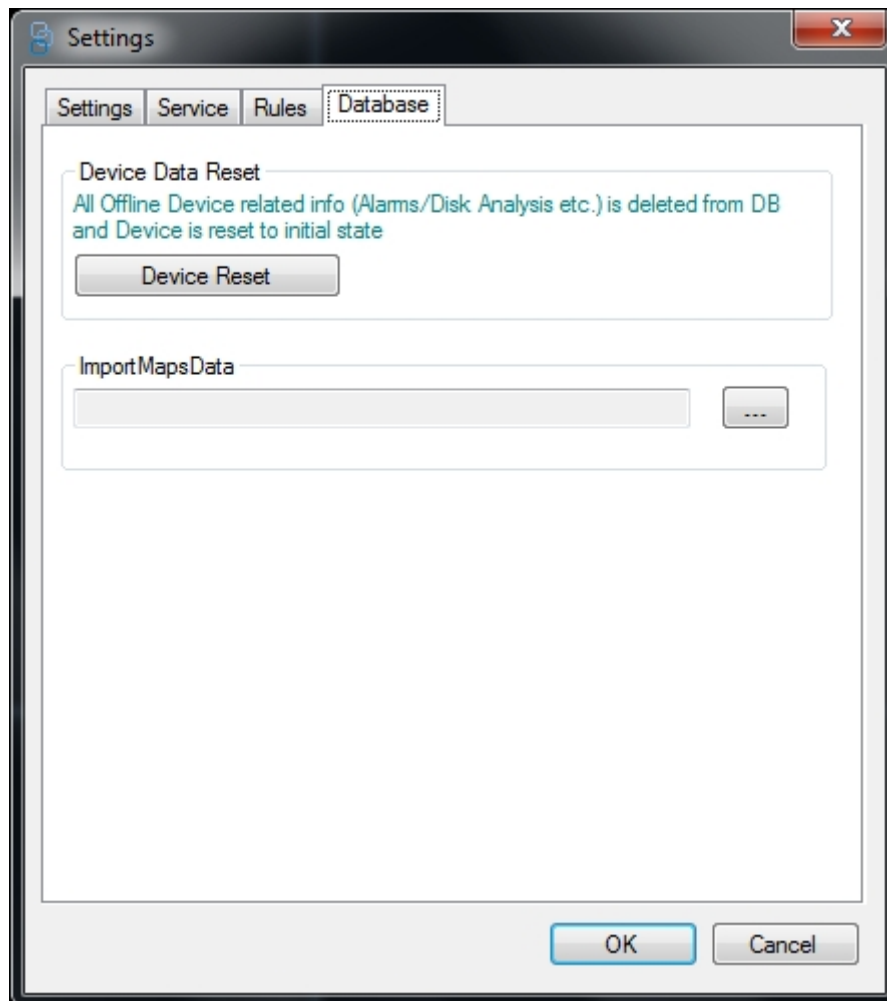
## Database

Device Reset (Resets the device and deletes all the information related to offline device from the database).

Application will use the setting where ever required.

Import Maps Data allows user to import Offline maps to the application.

Figure 50: Settings Database Tab

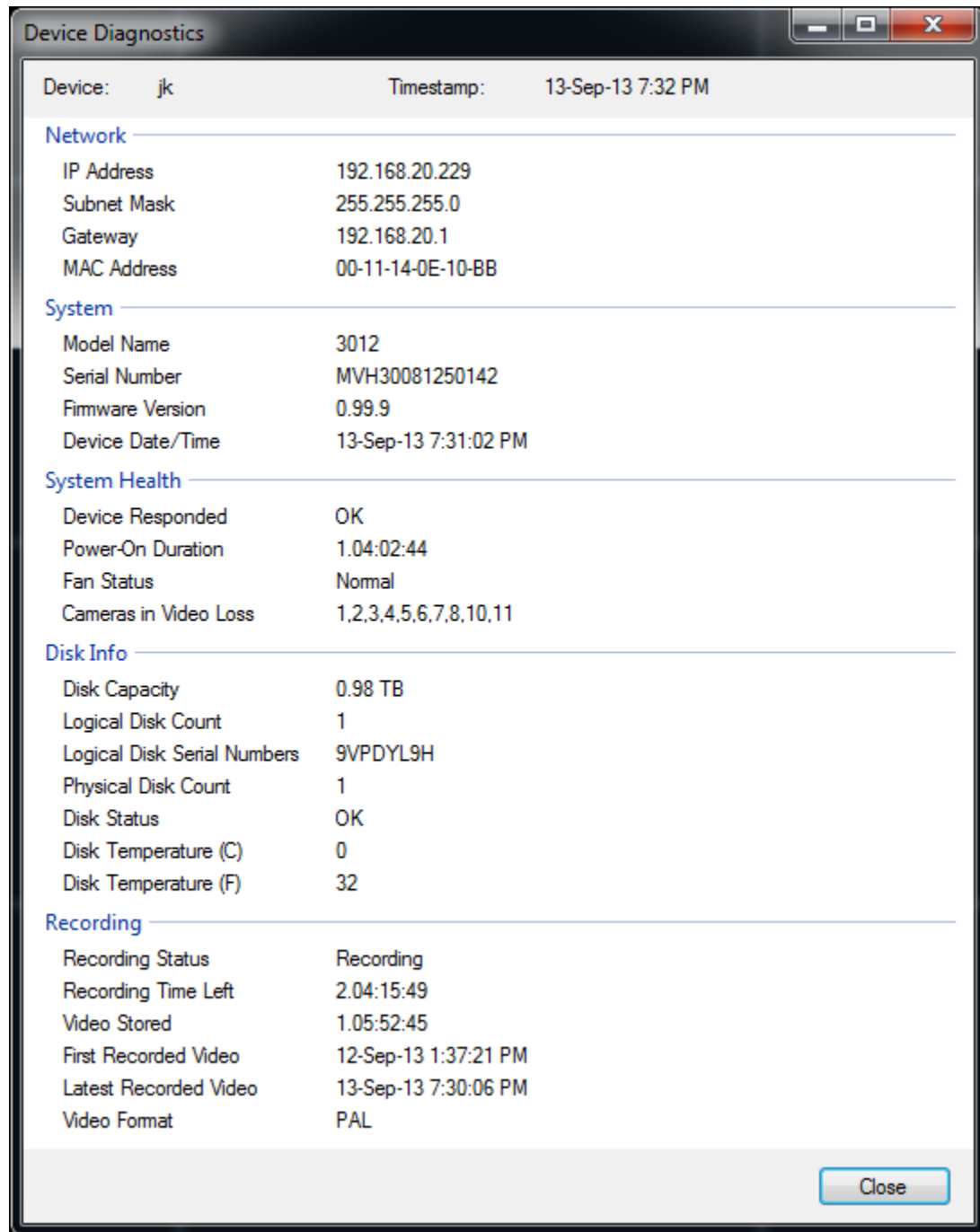




# Diagnostics

User chooses Run Health Diagnostics from the Device context menu.

**Figure 51: Diagnostics Screen**



## Disk Analysis

User chooses Disk Analysis from the Device context menu or Toolbar Icon. Disk Analysis is retrieved and displayed in graphic format. Such dialog is generated by HAL. The dialog will clearly show the video data available on the disk. It will show the video type (Alarm, Video Loss, and No Video) for each camera through color coding. Refresh can be done to get retrieve the latest disk analysis.

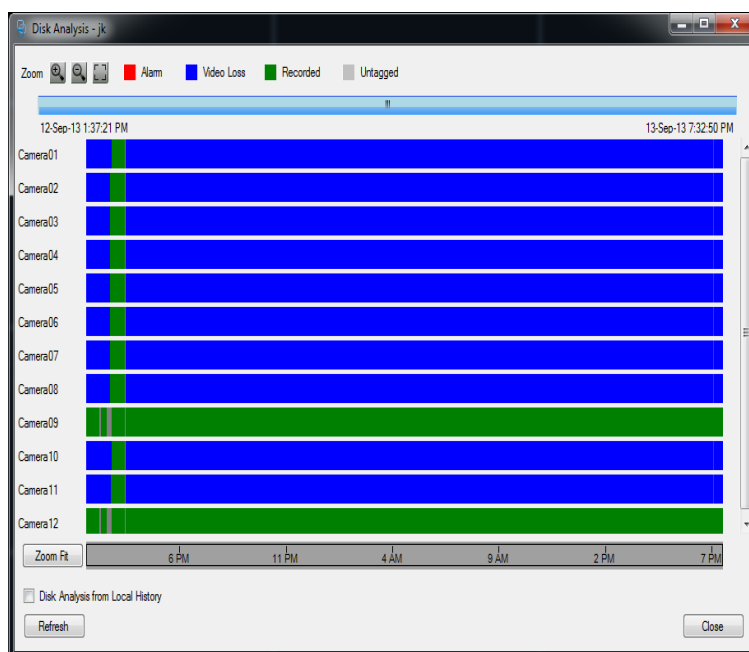
User can use mouse roller to zoom in and zoom out without holding the Ctrl key.

User can also zoom in to specific area of timeline within the specified right and left marker boundaries.

By default, Disk analysis displays information to the earliest reported time on the device media.

User can choose ZoomFit to fit the Disk Analysis to default layout.

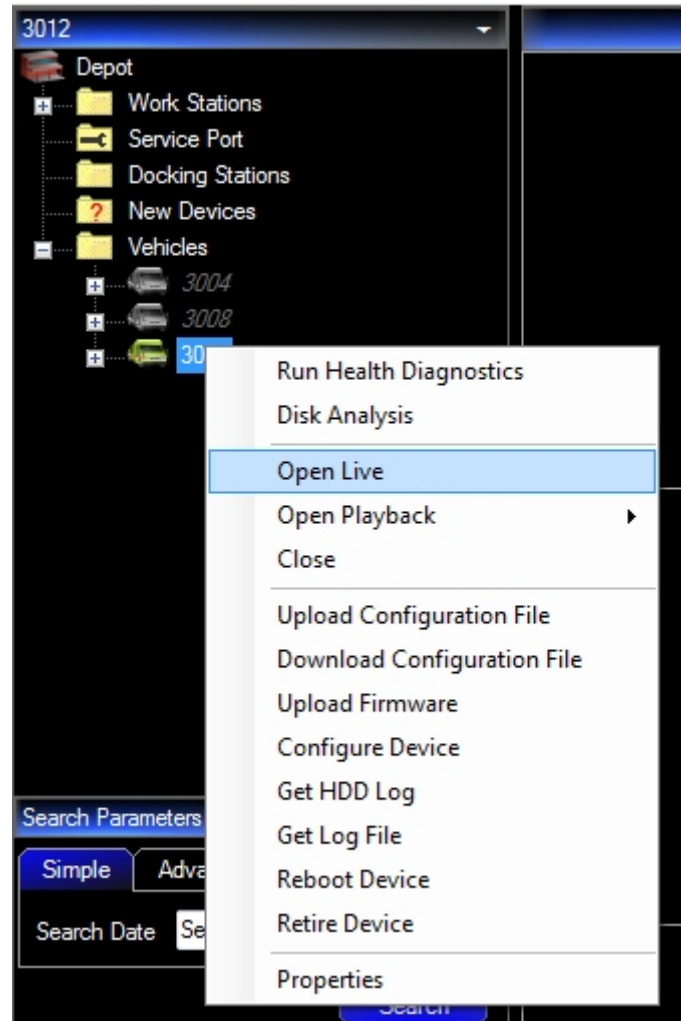
**Figure 52: Disk Analysis Screen**



## Open Live

User can choose “Open Live” from Device context menu to view live videos of a device which is in 'Reachable' state.

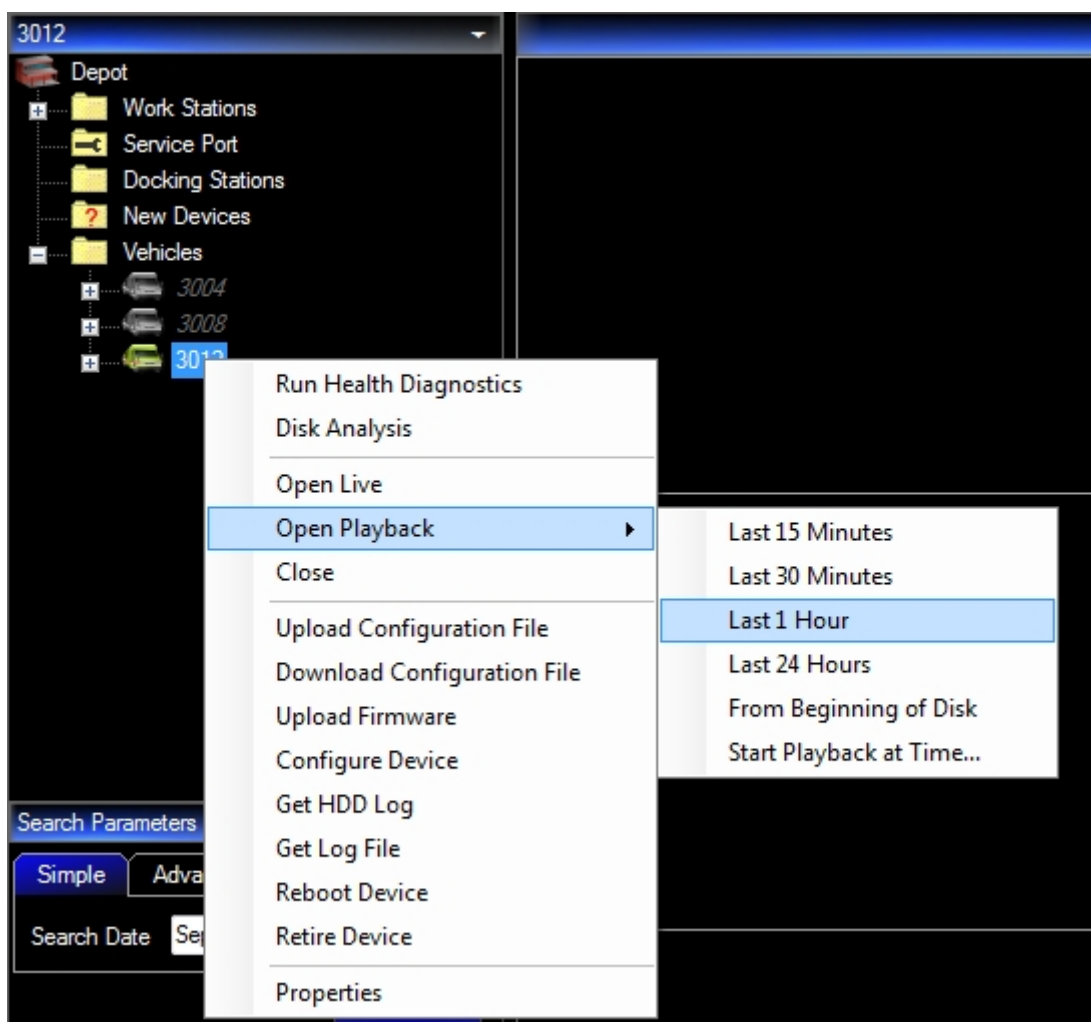
**Figure 53: Open Live Command**



## Open Playback

User chooses “Open Playback” from Device context menu to view playback videos on device, user can select playback Last 15 Minutes or 30 Minutes ... so on.

**Figure 54: Open Playback**



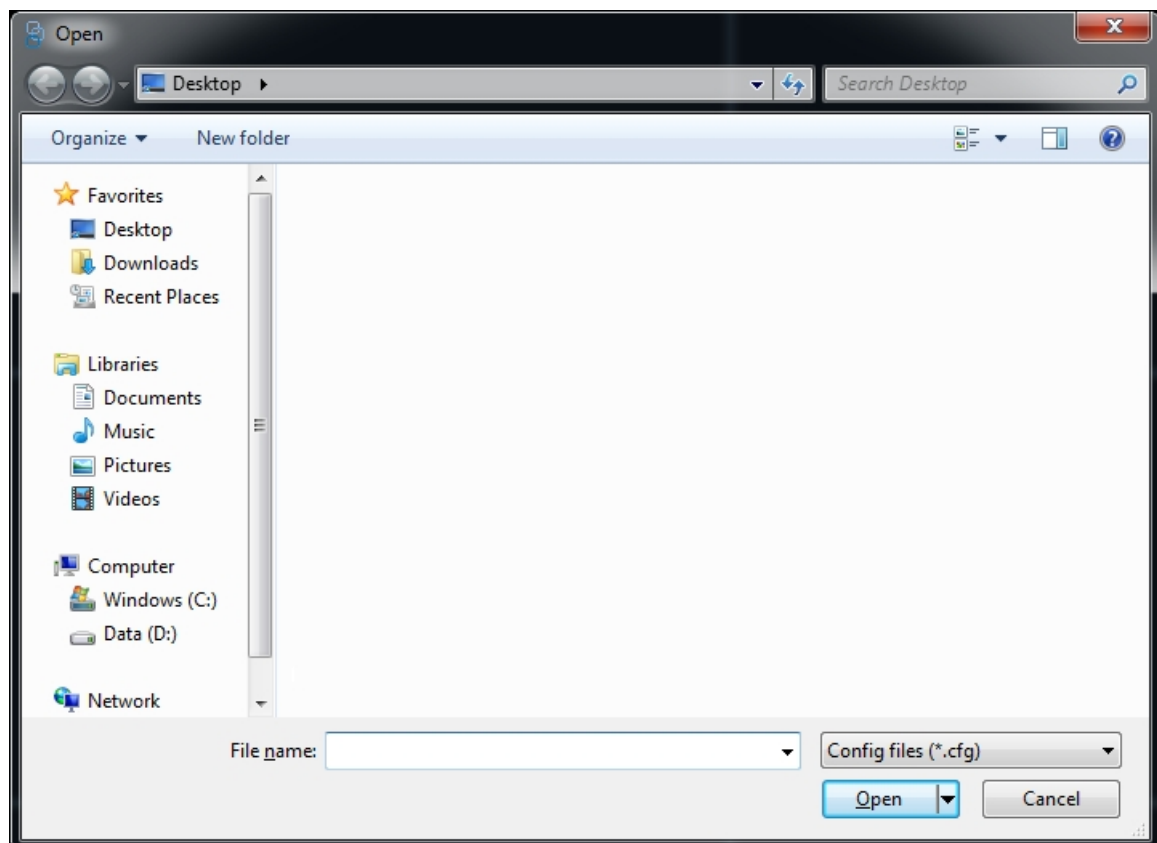
## Close

User chooses “Close” from Device context menu; this will close the video streams playing in viewer pane.

## Upload Configuration File

User chooses Upload configuration from device context menu.  
This opens the file dialog to select the Configuration file in “.cfg.” file format.

**Figure 55: Open File Dialog**

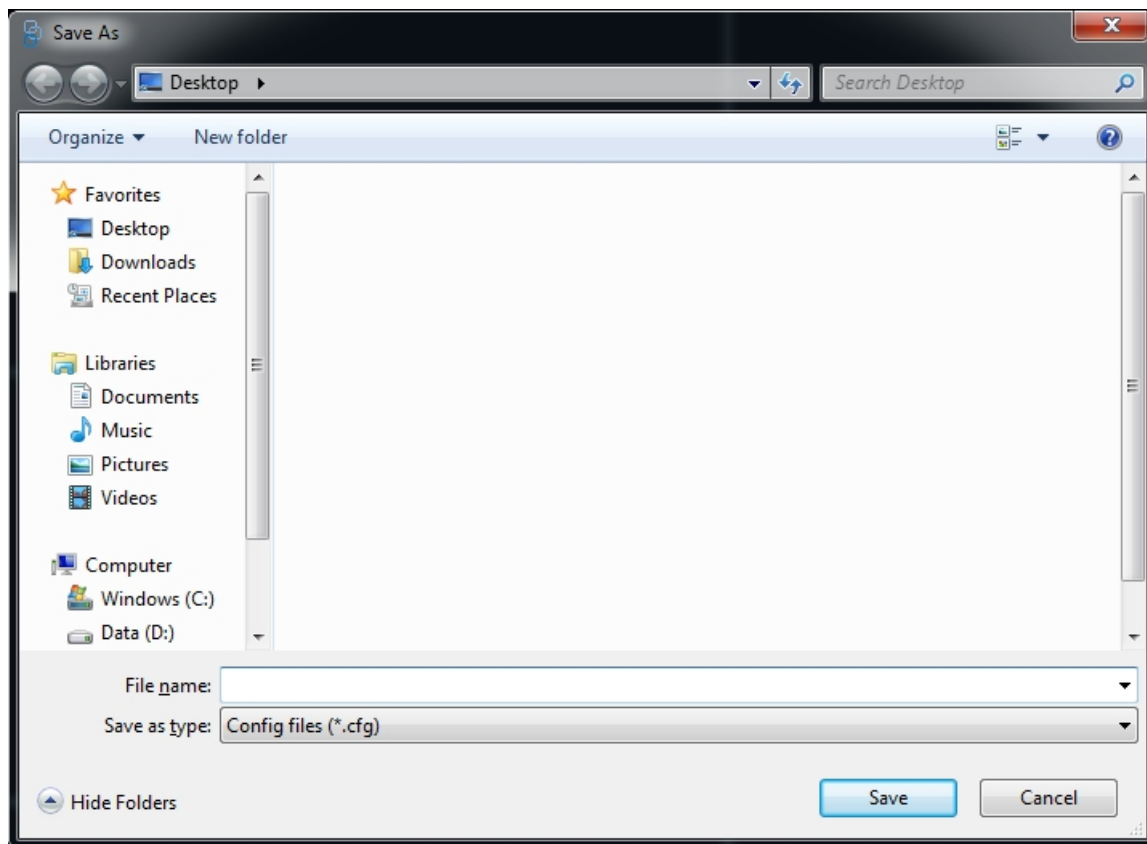


## Download Configuration

User chooses Download configuration from device context menu.

This opens “save as” file dialog, user can locate where to save the configuration of device in “.cfg.” file format.

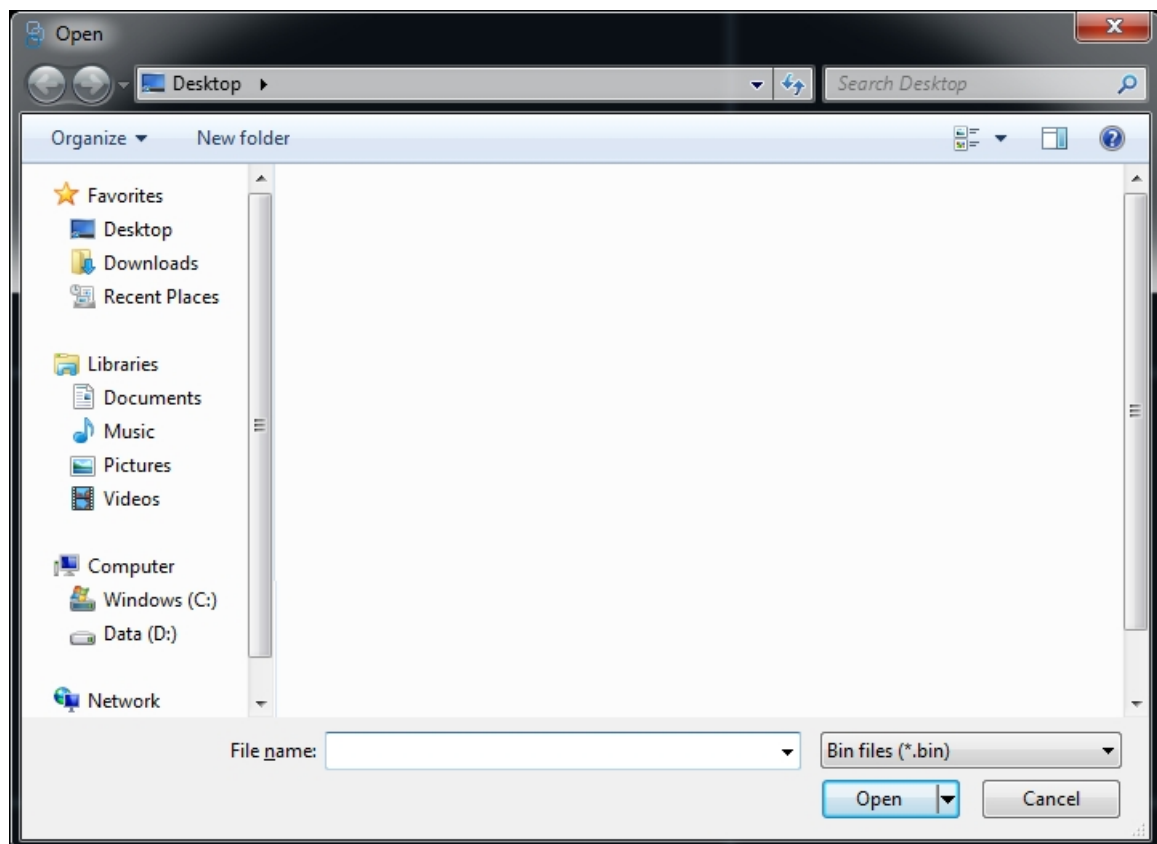
**Figure 56: Save As Dialog**



## Upload Firmware

User chooses “Upload Firmware” from Device context menu .This will open a dialog to browse the firmware for the device (.bin).You can select the appropriate firmware and upload to the device.

**Figure 57: Open File Dialog**



## Configure Device

User chooses “Configure Device” from device context menu. This will open the device configuration properties window in different tabs.

Reload option is provided in each tab to reload the default values for the configuration.

### Cameras:

Information related to device cameras is displayed in cameras tab.

Figure 58: Cameras Tab

3012 - Configuration

Cameras Events Alarms Network Notifications System

**Camera Settings**

Camera: 1

Title: Camera01

☒ Enable ☐ Record Audio

**Recording Settings**

	Primary	Alternate
Enable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Resolution:	4CIF	QCIF
Framerate:	7	3
Alarm Framerate:	15	3

**Video Settings**

Brightness: 0

Contrast: 0

Color: 0

**Camera Audio**

Input Name	Record	Level
CAMAUDIO01	<input type="checkbox"/>	0

**Copy to**

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ Select All

Copy

Total IPS : 360  
Max IPS : 960

Reset

OK Cancel



## Events:

Information related to events is displayed in events tab.

**Figure 59: Events Tab**

**3012 - Configuration**

Cameras **Events** Alarms Network Notifications System

**Event Identification**

☐ Event Enabled Add Event Delete Event

☒ Disable if Active at Startup

Event:

Event Name:

Trigger Mask Duration:  Sec.

Trigger Delay Duration:  Sec.

Event Priority:

**Event Trigger**

☒ Input

☐ Speed Above  mph

☐ Impact

☐ Acceleration

**Output Actions**

**Protect Video**

☒ Create Protected Video

Pre Alarm:  Min.

Post Alarm:  Min.

☐ Activate Alarm Framerate

Select Cameras: ☐ 1 ☐ 2

☐ Enable Audio (System wide)

**MUX Output**

☐ Camera Callup Mode:  Seconds:

☐ Cycle Display

MUX Display:

Select Cameras: ☒ 1 ☐ 2

☐ Activate Output Mode:  Seconds:  ☐ ALARMOUT01

☐ Activate Buzzer Mode:  Seconds:  ☐ ALARMOUT02

☐ Shutdown DVR

Reset

OK Cancel

**Alarms:**

Information related to alarms is displayed in alarms tab.

**Figure 60: Alarm Tab**

3004 - Configuration

Cameras Events **Alarms** Network Notifications System

Alarm Input

Input	Name	Type
1	Tag Button	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
2	ALARMIN02	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
3	ALARMIN03	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
4	ALARMIN04	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
5	ALARMIN05	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
6	ALARMIN06	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
7	ALARMIN07	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
8	ALARMIN08	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
9	ALARMIN09	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
10	ALARMIN10	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
11	ALARMIN11	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
12	ALARMIN12	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.

Alarm Output

Output	Name	Type
1	ALARMOUT01	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.
2	ALARMOUT02	<input checked="" type="radio"/> N.O. <input type="radio"/> N.C.

Acceleration Alarms

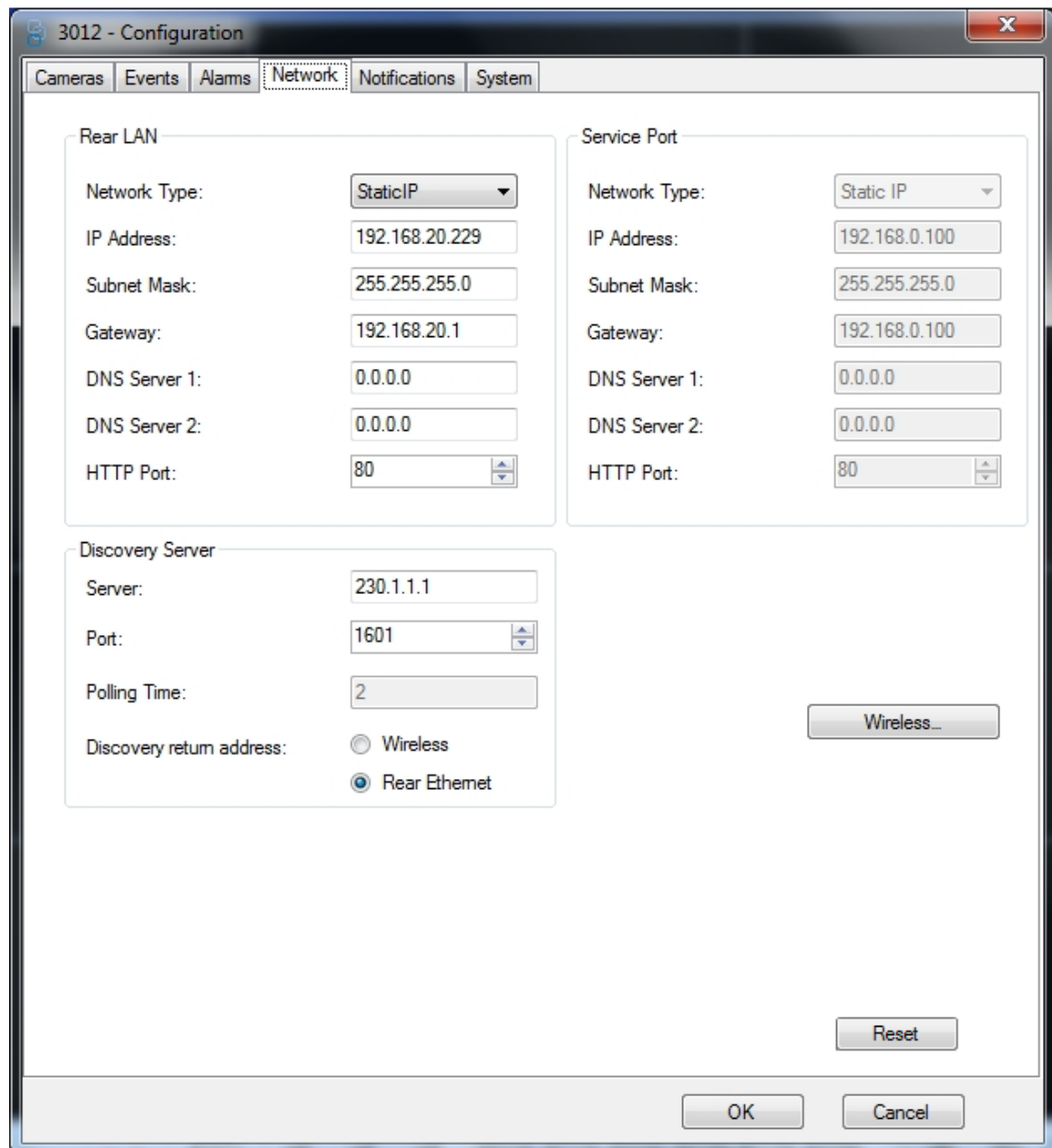
Alarm Name	Event Trigger	Fault LED
Rabbit Start / Hard Brake	<input type="checkbox"/>	<input type="checkbox"/>
Swerve / Rapid Maneuver	<input type="checkbox"/>	<input type="checkbox"/>
Hard Turn	<input type="checkbox"/>	<input type="checkbox"/>

Reset

OK Cancel

**Network:**

Information related to Network is displayed in network tab.

**Figure 61: Network Tab**

The screenshot shows the '3012 - Configuration' window with the 'Network' tab selected. The window is divided into three main sections: 'Rear LAN', 'Service Port', and 'Discovery Server'. Each section contains several configuration fields.

**Rear LAN:**

- Network Type: StaticIP (dropdown)
- IP Address: 192.168.20.229
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.20.1
- DNS Server 1: 0.0.0.0
- DNS Server 2: 0.0.0.0
- HTTP Port: 80 (spin box)

**Service Port:**

- Network Type: Static IP (dropdown)
- IP Address: 192.168.0.100
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.0.100
- DNS Server 1: 0.0.0.0
- DNS Server 2: 0.0.0.0
- HTTP Port: 80 (spin box)

**Discovery Server:**

- Server: 230.1.1.1
- Port: 1601 (spin box)
- Polling Time: 2
- Discovery return address: ☐ Wireless, ☒ Rear Ethernet

Buttons: 'Wireless...' (button), 'Reset' (button), 'OK' (button), 'Cancel' (button).

**Notifications:**

Information related to Notifications is displayed in Notifications tab.

**Figure 62: Notifications Tab**

The screenshot shows the '3012 - Configuration' window with the 'Notifications' tab selected. The window contains two main sections: 'Notifications' and 'G-Sensor'.

**Notifications Section:**

Alarm Type	Buzzer	Fault LED	Relay 1	Relay 2	Relay Mode	Duration (secs)
Video Loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Timeout	5
Over/Under Temp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Timeout	5
Storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Timeout	5
Record Off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Timeout	5
Fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Timeout	5

**G-Sensor Section:**

☐ Enabled

**Actions**

<input type="checkbox"/> Buzzer	Mode:	Timeout
<input type="checkbox"/> Fault LED	Mode:	Timeout
<input type="checkbox"/> Disable HDD	Mode:	Timeout

Buttons: Reset, OK, Cancel

**System:**

Device related Information is displayed in system tab.

**Figure 63: Systems Tab**

The screenshot shows the '3012 - Configuration' window with the 'System' tab selected. The window contains several sections for configuring the device:

- Device Information:** Includes fields for 'Device ID' (MVH30081250142) and 'Depot Assignment' (Default\_Depot), with a 'System Info...' button.
- Startup Settings:** Includes 'Power Delay On (secs)' (0), 'Power Delay Off (mins)' (0), 'Video Mode' (AutoDetect), and a checked 'Enable Buzzer' checkbox.
- Audio:** Includes an 'Input' section with 'Enable Audio' checked, and a table for audio inputs:

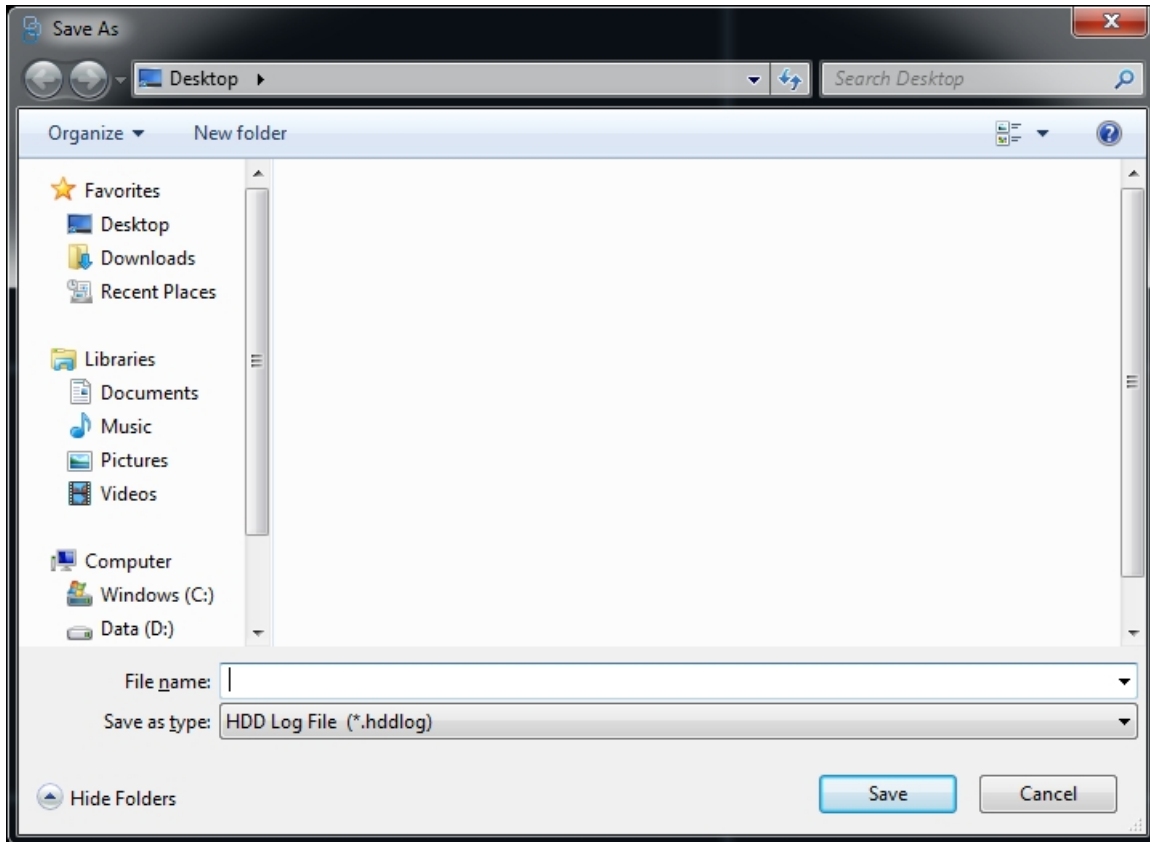
Input	Name	Record	Level
1	AUDIO01	<input checked="" type="checkbox"/>	0
2	AUDIO02	<input checked="" type="checkbox"/>	0
- MUX Setup:** Includes 'Display Mode' (12-UP), 'Resting Camera' (Camera01), 'Cycle Mode' (checked), and 'Dwell Time (secs)' (3).
- Miscellaneous:** Includes buttons for 'Date&Time...', 'DataManagement...', and 'Serial Settings...'.

At the bottom right, there are 'Reset', 'OK', and 'Cancel' buttons.

## Get HDD Log

User chooses “GetHDDLog” from device context menu. This will open a dialog to save the log file in .hddlog format.

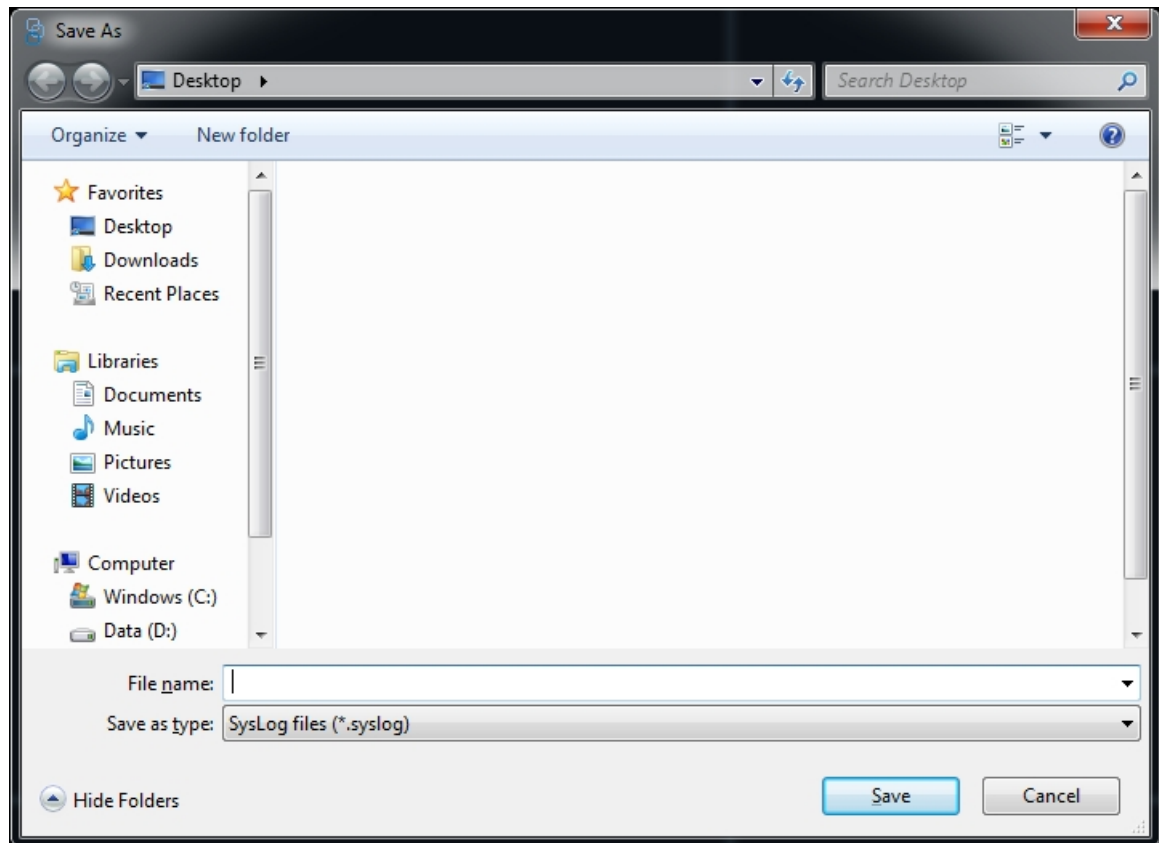
**Figure 64: Open Dialog**



## Get Log File

User chooses “Get Log File” from device context menu. This will open a dialog to save the log file in .syslog format.

**Figure 65: Open Dialog**



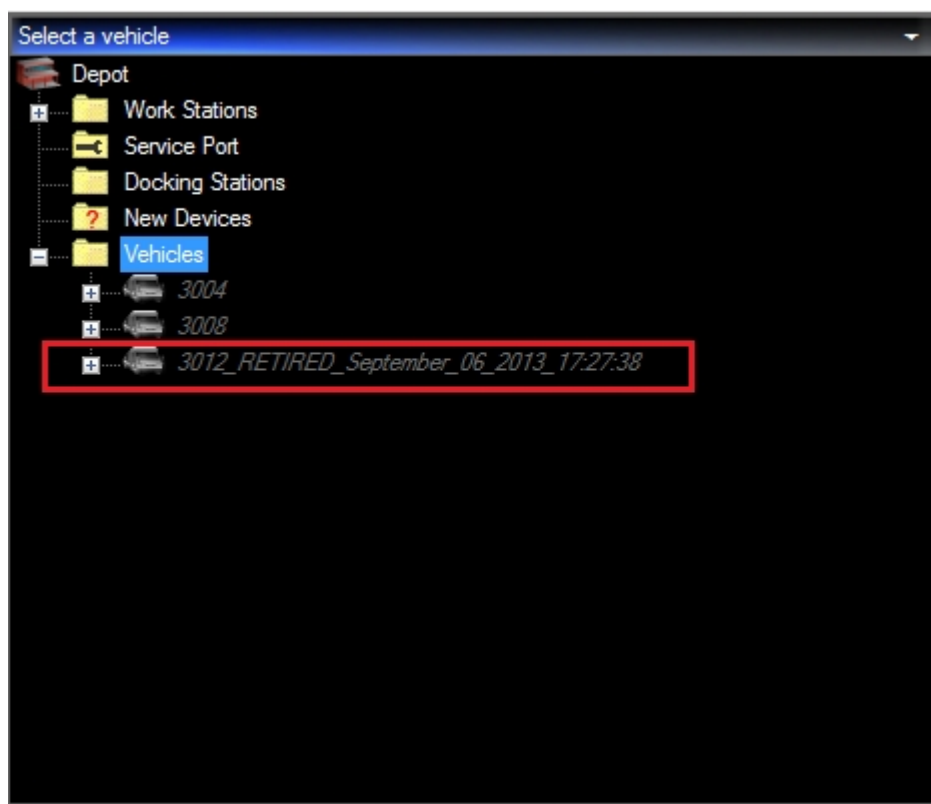
## Reboot Device

User chooses “Reboot Device” from device context menu. This will reboot the device.

## Retire Device

User chooses “Retire Device” from reachable device context menu. This will ask a confirmation dialog whether to continue or not, once confirmed the device will retire. The purpose of retiring a device is, if a device is in Reachable state, it cannot be deleted directly, first it has to be retired which will free the resources it is bound to and then finally deleted if required.

**Figure 66: Select a Vehicle Dialog**





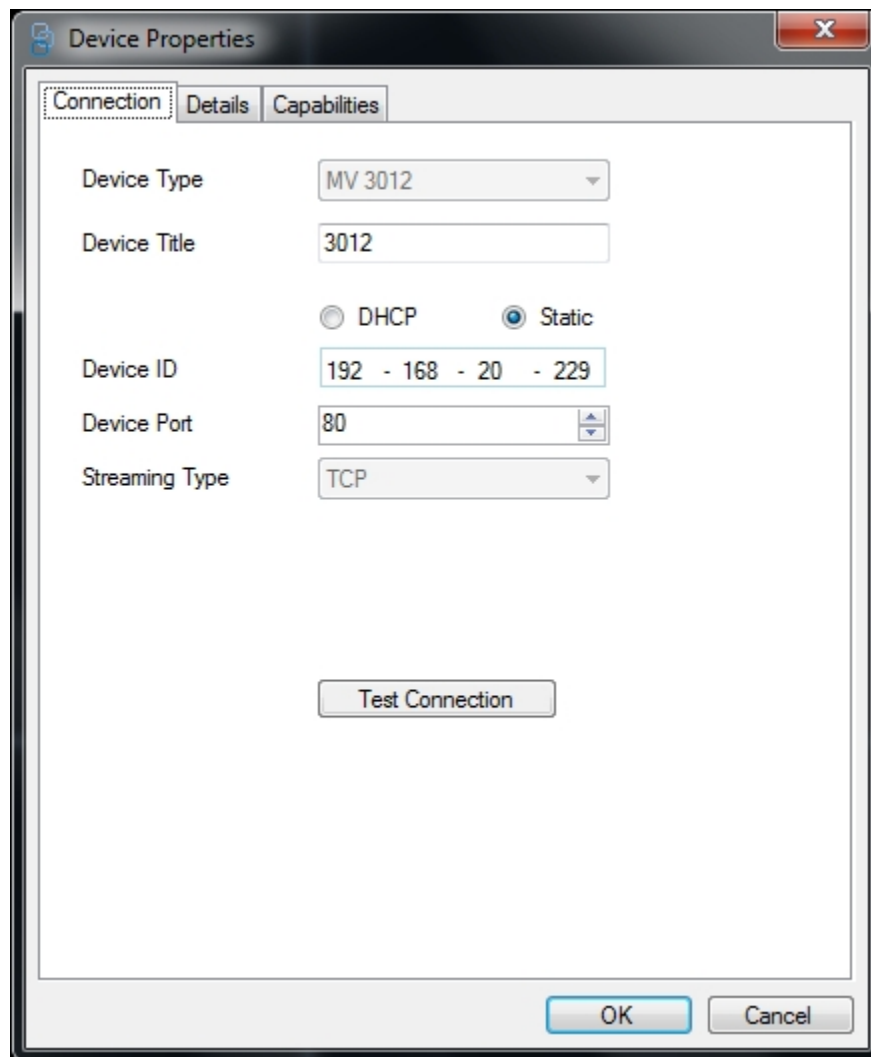
## Properties

User chooses to Properties from device context menu, this will open the device properties in different tabs.

### Connection:

Device connection Information is displayed in Connection tab.

**Figure 67: Connection Tab**



The screenshot shows a 'Device Properties' dialog box with three tabs: 'Connection' (selected), 'Details', and 'Capabilities'. The 'Connection' tab contains the following fields and controls:

- Device Type:** A dropdown menu showing 'MV 3012'.
- Device Title:** A text input field containing '3012'.
- IP Configuration:** Two radio buttons, 'DHCP' (unselected) and 'Static' (selected).
- Device ID:** A text input field containing '192 - 168 - 20 - 229'.
- Device Port:** A spin box showing the value '80'.
- Streaming Type:** A dropdown menu showing 'TCP'.
- Test Connection:** A button located below the input fields.
- Buttons:** 'OK' and 'Cancel' buttons are located at the bottom right of the dialog.

## Details:

Device details are displayed in Details tab.

**Figure 68: Details Tab**

The screenshot shows a 'Device Properties' dialog box with three tabs: 'Connection', 'Details', and 'Capabilities'. The 'Details' tab is active. It contains the following fields:

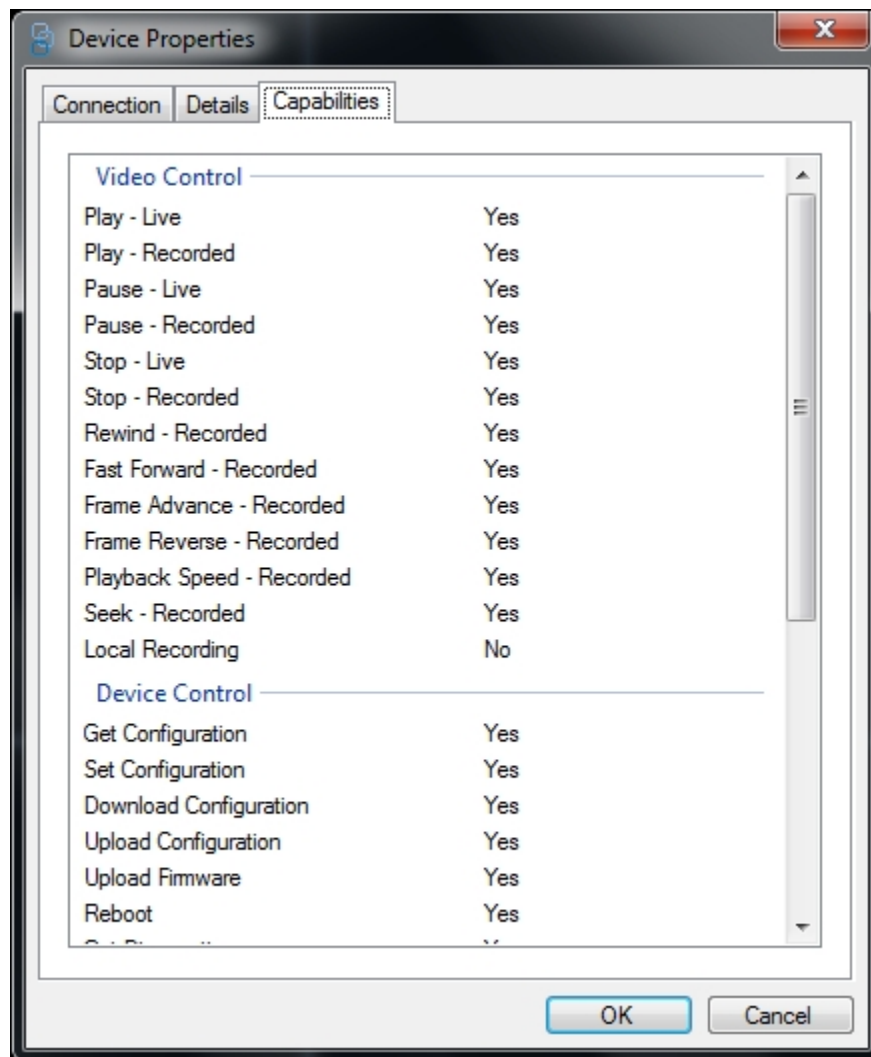
- Device Title: 3012
- Camera Count: 12
- Vehicle Type: Paratransit Van (dropdown menu)
- Contact Info (grouped box):
  - Name: [text input]
  - Phone: [text input]
  - Street: [text input]
  - City: [text input]
  - State/Province: [text input]
  - Zip/PostalCode: [text input]
  - Region/Country: [text input]
- Notes: [text area]

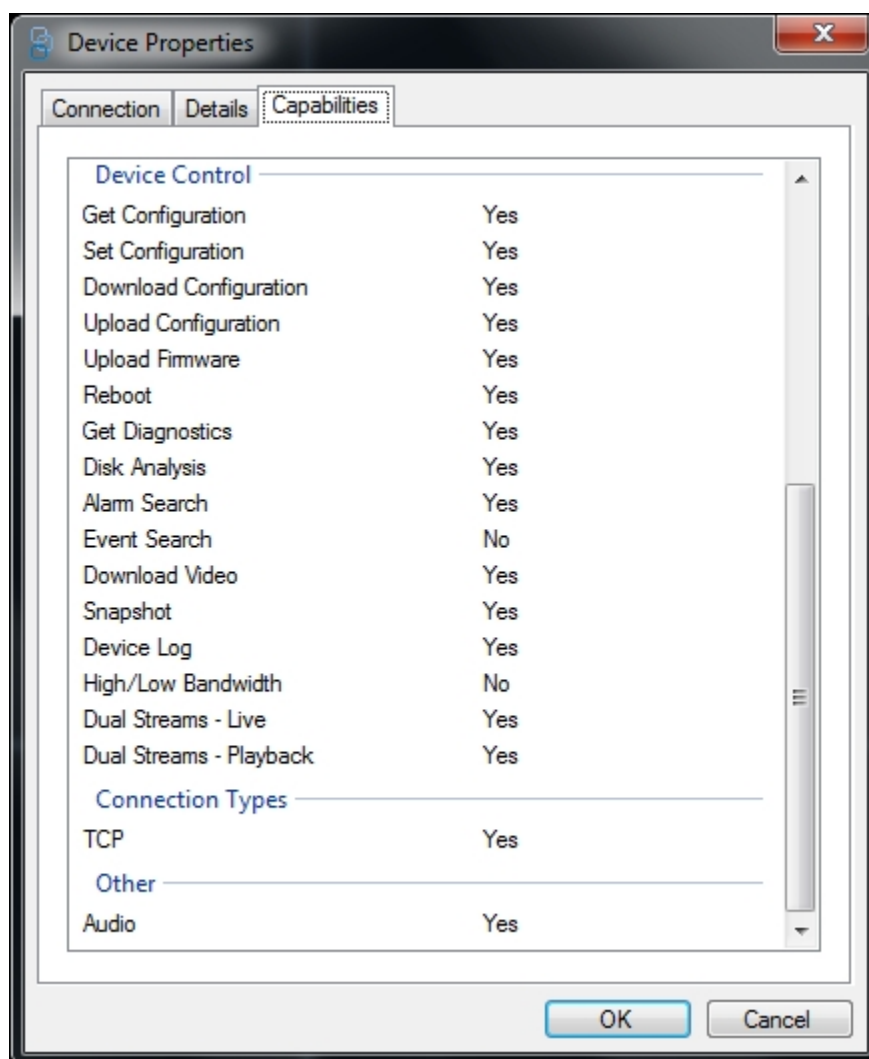
At the bottom right are 'OK' and 'Cancel' buttons.

**Capabilities:**

Device capabilities are displayed in Capabilities tab.

**Figure 69: Capabilities Tab/Video Control**

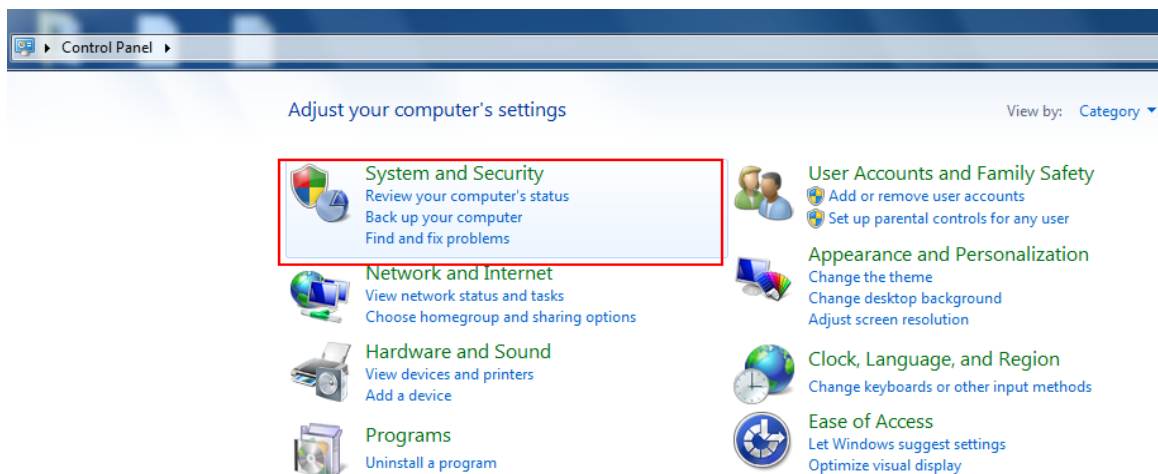


**Figure 70: Capabilities Tab/Device Control**

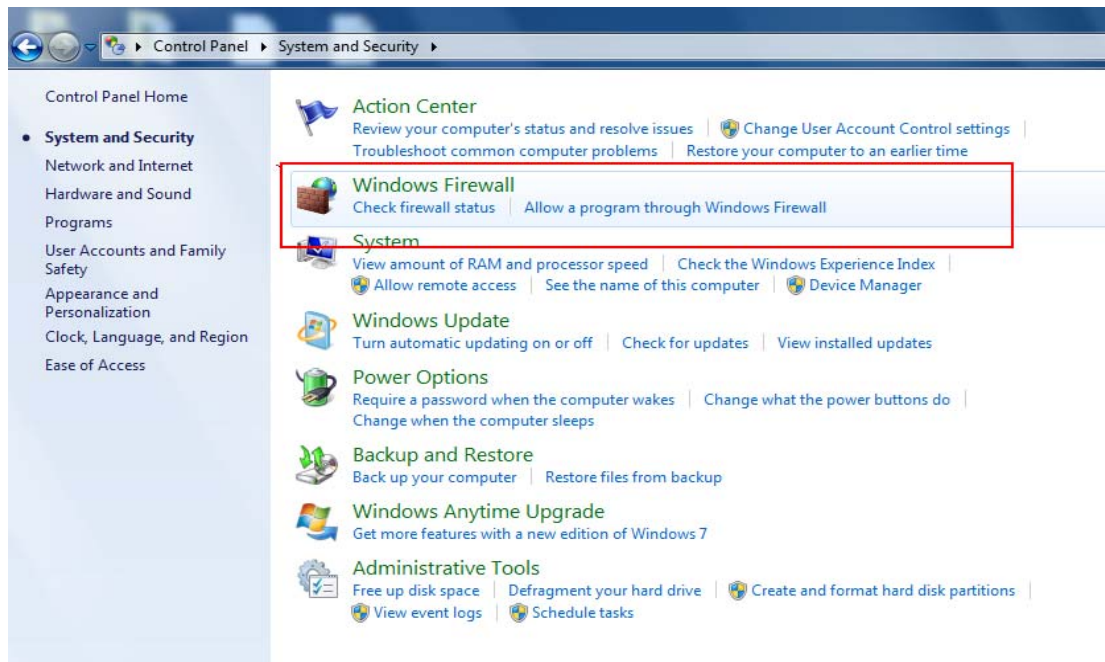
# Appendix A: Windows Firewall

## Steps to follow to add a port or program when Windows Firewall is ON

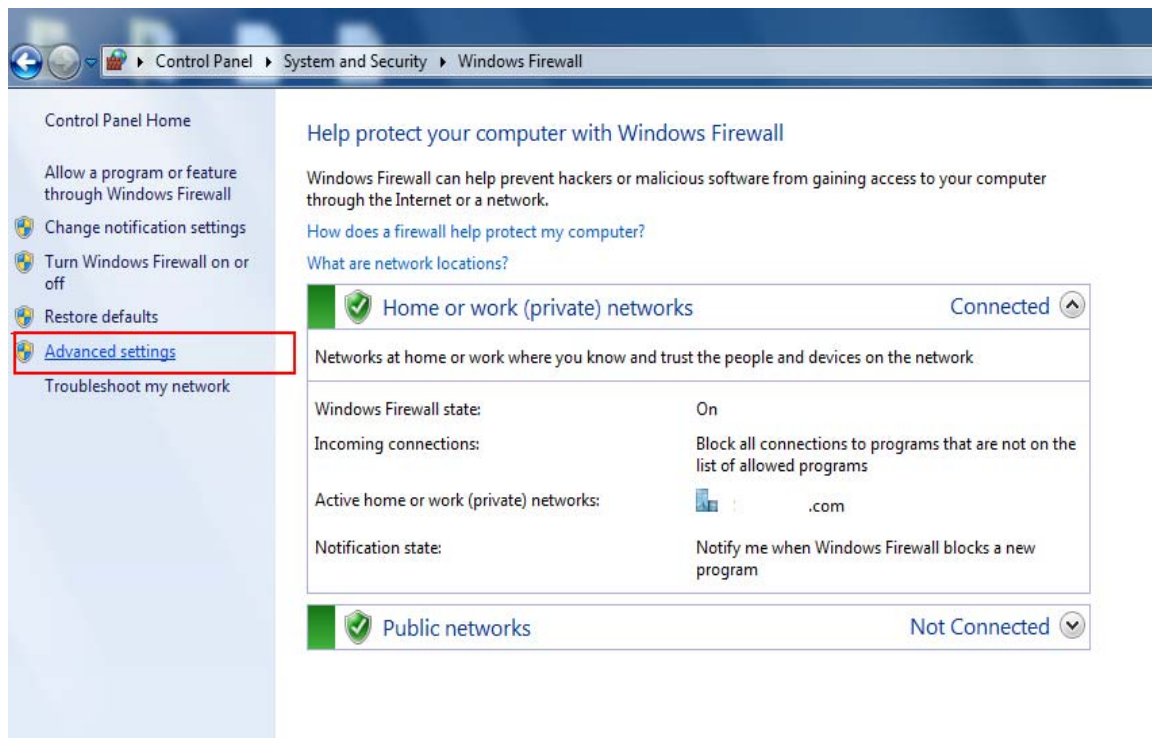
- 1) Goto Control Panel and select "System & Security".



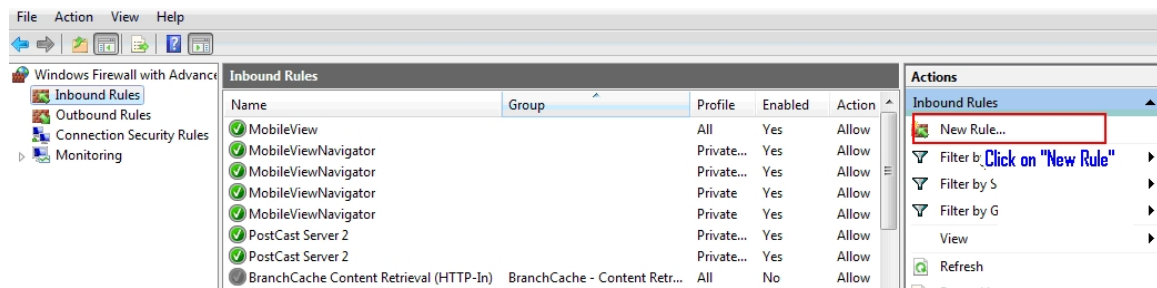
## 2) Click on “Windows Firewall”.



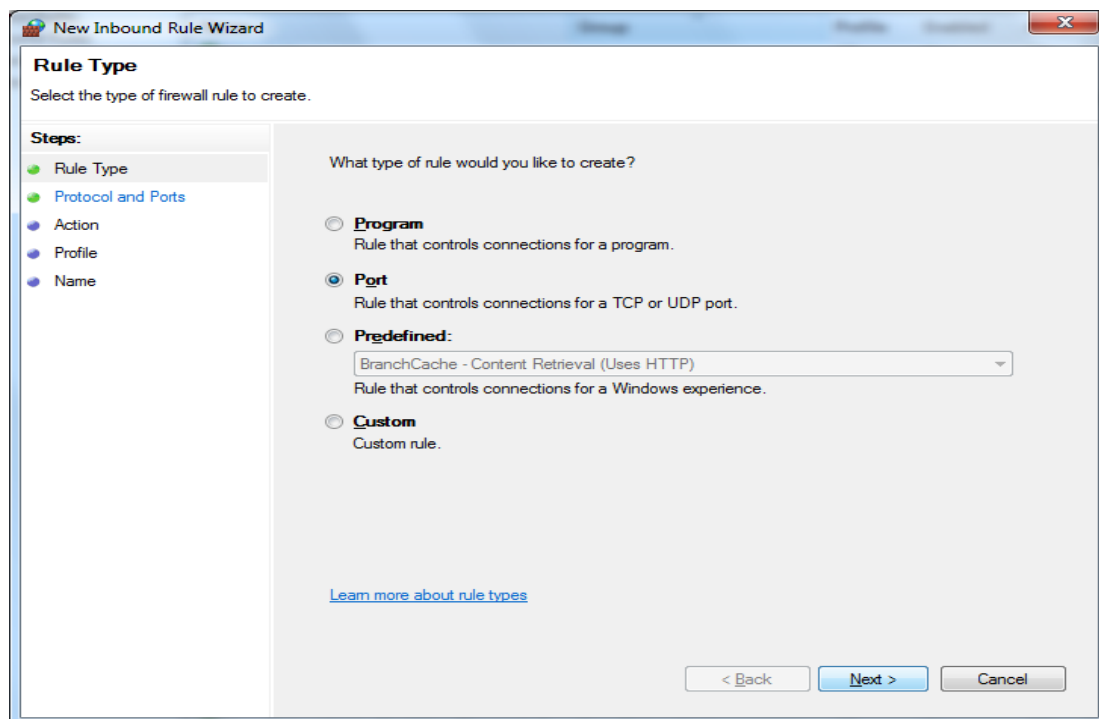
## 3) Now Click on “Advanced Settings”.



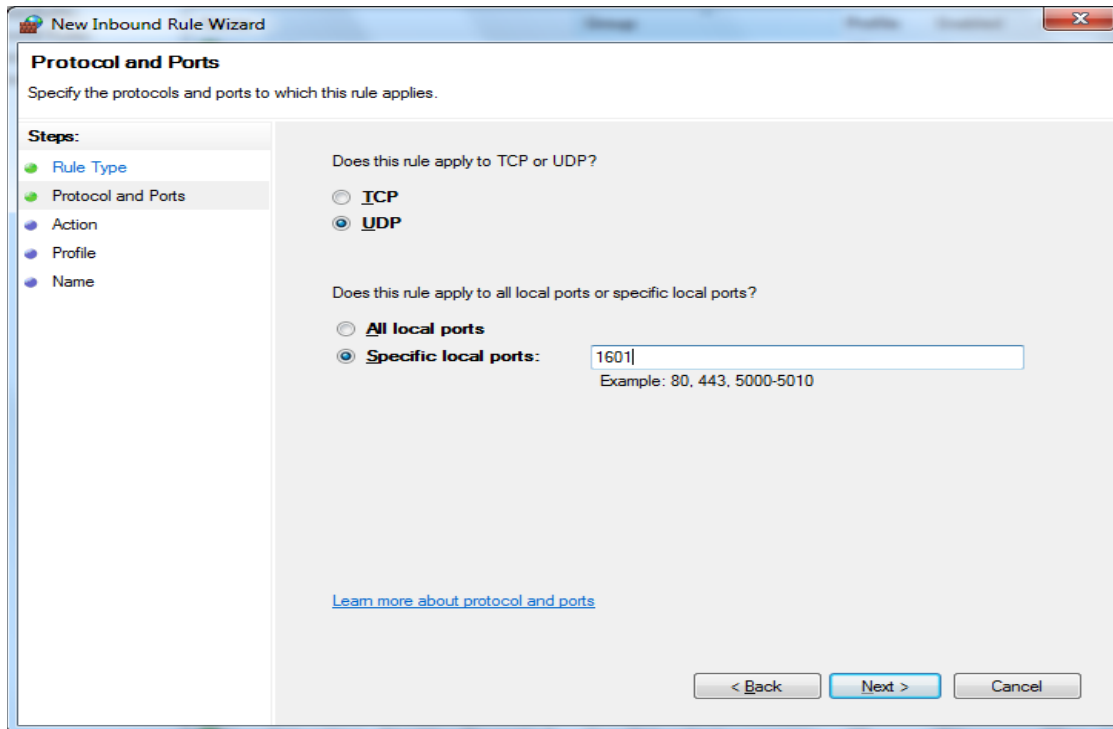
4) From “Advanced Settings”, select “Inbound Rules” & click on “New Rule”.



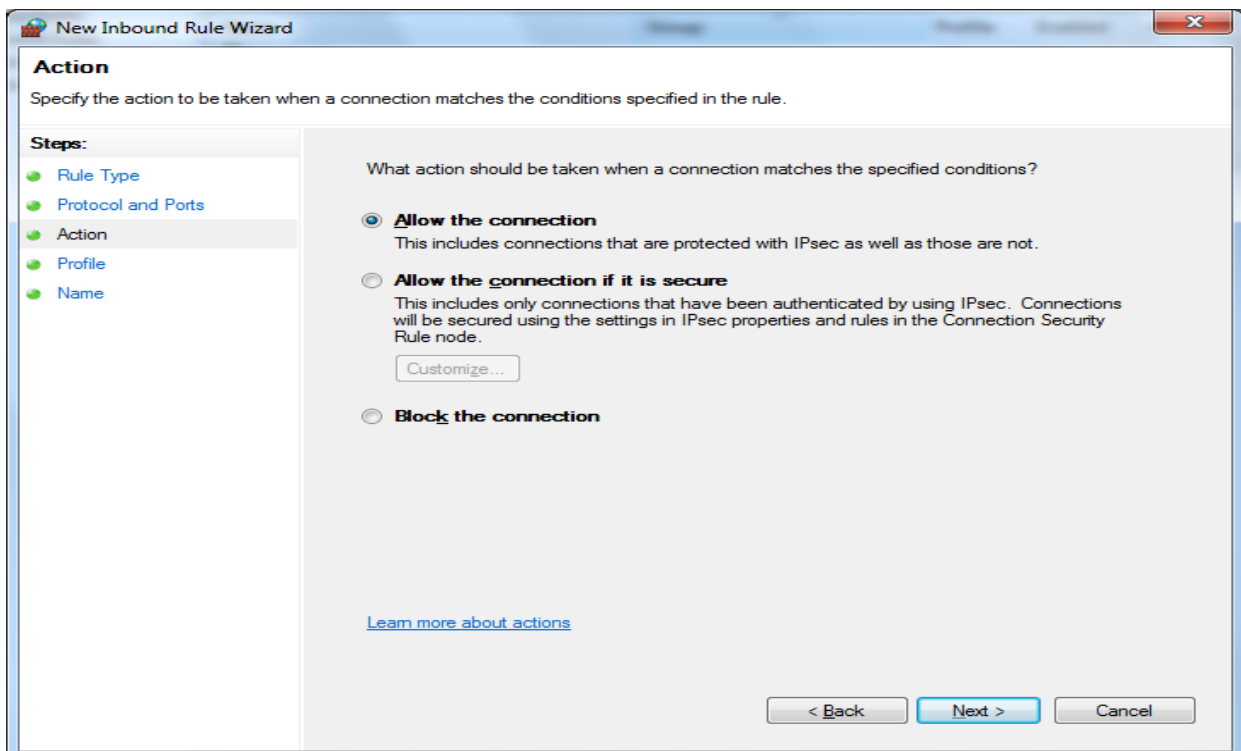
5) Select the type of firewall rule to create. A program or port can be selected and then click on “Next”.



- 6) Specify the protocols and ports to which the rule applies (Ex: 1601 or input required port number).

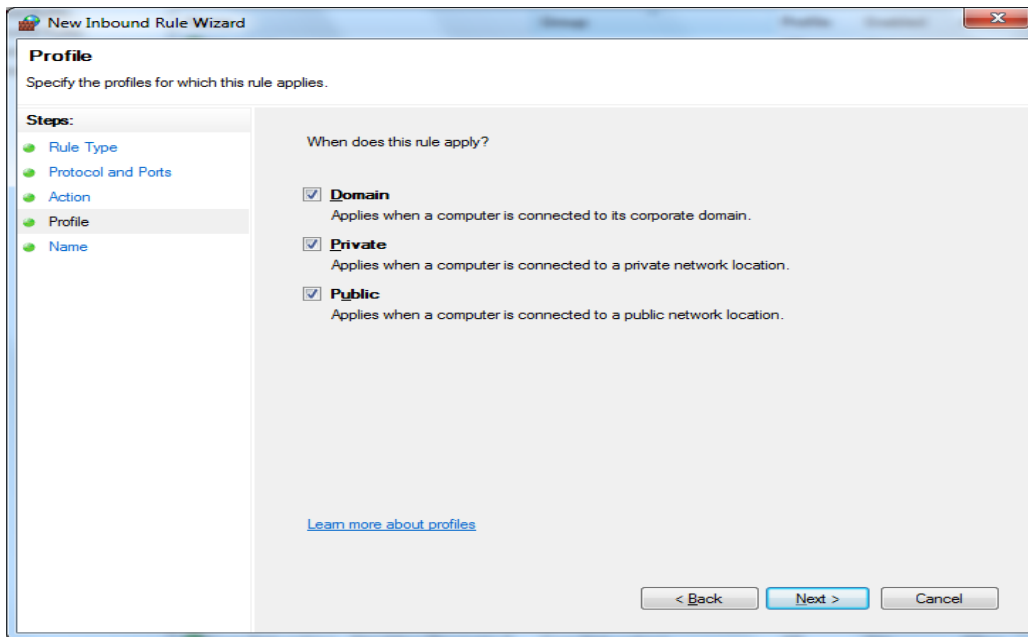


- 7) Click on “Allow the connection”.

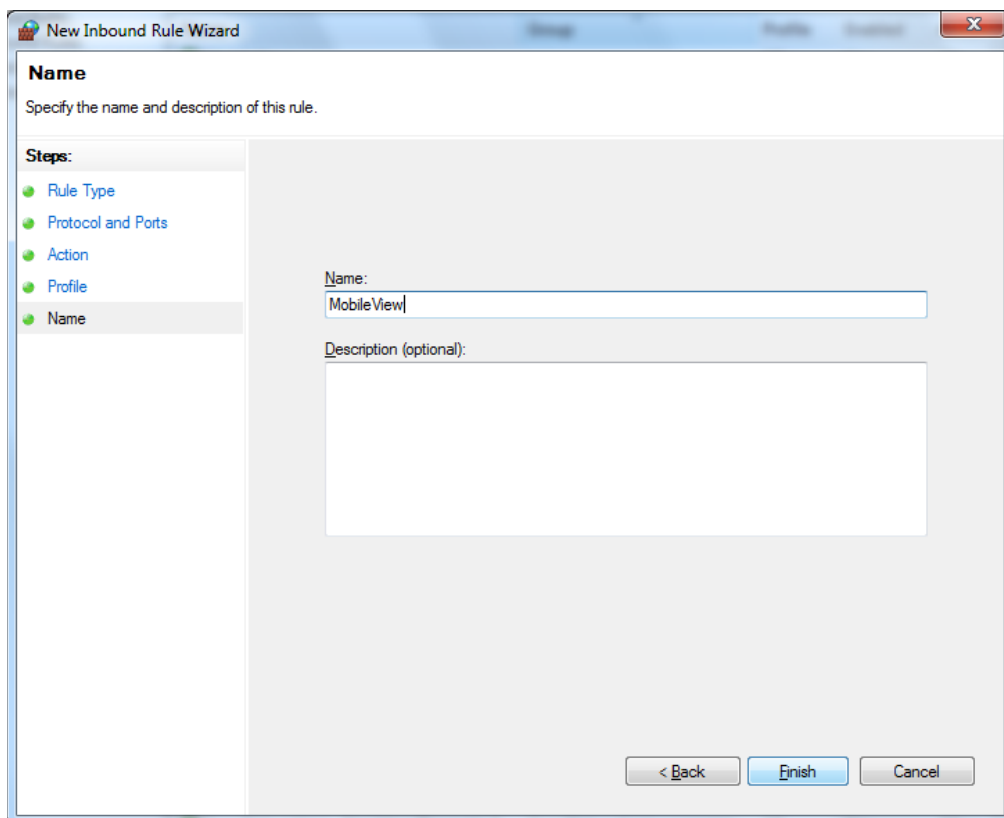




8) Specify the profiles for which the rule applies.



9) Specify the name and description of the rule and click on “Finish”.





# Appendix B:

# Open Source Libraries

MobileView Navigator 1.1 uses following open source libraries:

- OpenStreetMaps
- Sqlite

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