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**Milestone XProtect®**  
Analytics 2.2

Dacolian LPR

Administrator's Getting Started Guide



The Open Platform Company



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## About this Guide

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### ***Dear Milestone Customer,***

With the purchase of Milestone XProtect Analytics – Dacolian LPR you have chosen a powerful and flexible analytics solution.

**This guide is aimed at system administrators only.** It describes how to install XProtect Analytics – Dacolian LPR. It also includes a brief introduction to the XProtect Analytics – Dacolian LPR Administrator application through which you subsequently configure your analytics solution.

Where to find more information:

- For more **detailed information about configuration** through the XProtect Analytics – Dacolian LPR Administrator application, refer to the separate XProtect Analytics – Dacolian LPR Administrator’s Manual. The manual also contains information about using positive/negative lists, about combining analytics detections with surveillance system events, tips and tricks about using cameras for license plate recognition, etc.
- End users **view analytics data** together with video through the XProtect Smart Client. For more information about this, refer to the separate XProtect Analytics User’s Manual.

Above manuals are available on the XProtect Analytics software DVD as well as from [www.milestonesys.com](http://www.milestonesys.com).

Please check [www.milestonesys.com](http://www.milestonesys.com) for updates to make sure you install the most recent version of our software.

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## Minimum System Requirements

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### ***Surveillance Server Running XProtect Analytics***

**Operating System** Microsoft® Windows® 2008 Server R1/R2 (32 bit or 64 bit\*), Windows Server 2003 (32 bit or 64 bit\*), Windows 7 Professional (32 bit or 64 bit\*), Windows 7 Enterprise (32 bit or 64 bit\*), Windows 7 Ultimate (32 bit or 64 bit\*), Windows Vista® Business (32 bit or 64 bit\*), Windows Vista Enterprise (32 bit or 64 bit\*), Windows Vista Ultimate (32 bit or 64 bit\*), Windows XP Professional\*\* (32 bit or 64 bit\*).

\* Running as a 32 bit application—and only on XProtect Professional and XProtect Enterprise systems

\*\* On XProtect Corporate systems limited by Windows operating system to 10 concurrent, incomplete outbound TCP connection attempts

**CPU** Intel® Pentium® 4, 2.4 GHz or higher (Core™ 2 recommended).

**RAM** Minimum 1 GB (2 GB or more recommended).

**Network** Ethernet (1 Gbit recommended).

**Graphics Adapter** AGP or PCI-Express, minimum 1024×768, 16 bit colors.

**Hard Disk Type** E-IDE, PATA, SATA, SCSI, SAS (7200 RPM or faster).

**Hard Disk Space** Minimum 80 GB free (depends on number of cameras and recording settings).

**Software** Microsoft .Net 3.5 Framework with Service Pack 1. DirectX 9.0 or newer.

## **Smart Client Used for Viewing Analytics Data**

**Operating System** Microsoft Windows XP Professional (32 bit or 64 bit\*), Windows Server 2003 (32 bit or 64 bit\*), Windows Server 2008 R1/R2 (32 bit or 64 bit\*), Windows Vista Business (32 bit or 64 bit\*), Windows Vista Enterprise (32 bit or 64 bit\*), Windows Vista Ultimate (32 bit or 64 bit\*), Windows 7 Professional (32 bit or 64 bit\*), Windows 7 Enterprise (32 bit or 64 bit\*) or Windows 7 Ultimate (32 bit or 64 bit\*).

\* Running as a 32 bit application

**CPU** Intel Core2™ Duo, minimum 2.4 GHz or higher (more powerful CPU recommended for Smart Clients running high number of cameras and multiple views and displays).

**RAM** Minimum 1 GB (higher RAM recommended for Smart Clients running high number of cameras and multiple views and displays).

**Network** Ethernet (100 Mbit or higher recommended).

**Graphics Adapter** AGP or PCI-Express, minimum 1024×768 (1280×1024 recommended), 16 bit colors.

**Hard Disk Space** 100 MB free.

**Software** Microsoft .Net 3.5 Framework with service Pack 1. DirectX 9.0 or newer. Analytics Alert Plugin, for more information about the Analytics Alert Plugin, see the XProtect Analytics User's Manual on the surveillance system software DVDs and also available from [www.milestonesys.com](http://www.milestonesys.com).

To check which DirectX version is installed on a computer, click *Start*, select *Run...*, and type `dxdiag`. When you click *OK*, the

*DirectX Diagnostic Tool* window will open; version information is displayed near the bottom of its *System* tab. Should you require a DirectX update, the latest versions of DirectX are available from <http://www.microsoft.com/downloads/>.

XProtect Analytics works in tight integration with a range of different Milestone products—some of which require a particular version in order to work with XProtect Analytics—as well as video content analysis software supplying the analytics data. See the chapter *Important Prerequisites* in the following.

## **If Upgrading from XProtect Analytics 1.5 – LPR**

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If you are upgrading from XProtect Analytics 1.5 – LPR to XProtect Analytics 2.2 – Dacolian LPR, read the Release Notes on the XProtect Analytics 2.2 software DVD for important information about how to perform the upgrade **before** you complete the installation procedure outlined in this guide.

## Important Prerequisites

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XProtect Analytics works in tight integration with Microsoft Windows components as well as a range of different Milestone products.

For your analytics solution to be able to work properly, you should therefore verify that the following important components are in place on your system **before** you install XProtect Analytics:

### ***Milestone Surveillance System***

XProtect Analytics works with XProtect Professional, XProtect Enterprise and XProtect Corporate surveillance systems. The surveillance systems provide your analytics solution with live video and recordings from cameras on your network.

#### **If Using XProtect Professional or XProtect Enterprise**

If using XProtect Enterprise, version 6.5c or later is required for integration with XProtect Analytics.

If using XProtect Professional, version 6.5a or later is required for integration with XProtect Analytics.

If you require information about how to install XProtect Professional or XProtect Enterprise, refer to the Administrator's Manuals available on the surveillance system software DVDs as well as from [www.milestonesys.com](http://www.milestonesys.com).

When XProtect Professional or XProtect Enterprise is installed, do the following:

- **Add the cameras you require for license plate recognition:** If you have not already added the cameras you are going to use with your analytics solution to your surveillance system, do so on the XProtect Enterprise or XProtect Professional system before you begin configuring XProtect Analytics.
- **Adjust camera configuration for license plate recognition:** Once the cameras are added, adjust each required camera's settings on the on the XProtect

Enterprise or XProtect Professional system so the settings will match the requirements for license plate recognition: Specify a frame rate of 6 frames per second, and specify a low compression and—if possible—a low sharpness value for the cameras you want to use for license plate recognition.

- **User with full access:** Technically, the analytics solution will log in to your XProtect Enterprise or XProtect Professional system with a user account set up through the system's Management application (in version 7.0 or later) or Image Server Administrator (in versions earlier than 7.0). For this purpose, the user must have full access rights to all cameras used in connection with the analytics solution.

### **If Using XProtect Corporate**

If using XProtect Corporate, version 2.0b or later is required for integration with XProtect Analytics.

If you require information about how to install XProtect Corporate, refer to the Administrator's Manual available on the XProtect Corporate software DVD as well as from [www.milestonesys.com](http://www.milestonesys.com). When XProtect Corporate is installed, do the following:

- **Add the cameras you require for license plate recognition:** If you have not already added the cameras you are going to use with your analytics solution to your XProtect Corporate system, open the XProtect Corporate Management Client (in some versions called the Manager), and use the *Hardware Detection Wizard* to add the cameras you require for use with video contents analysis.
- **Adjust camera configuration for license plate recognition:** Once the cameras are added, adjust each required camera's settings so they will match the requirements for license plate recognition: Specify a frame rate of 6 frames per second, a low compression, and—if possible—a low sharpness value for the camera.

- **User with full access:** Technically, the analytics solution will log in to your XProtect Corporate system with a user account set up through the Management Client/Manager. For this purpose, the user account in question must have a role with full access rights to all cameras used in connection with the analytics solution.

## ***XProtect Transact***

XProtect Transact version 2.5c or later is required for integration with XProtect Analytics.

An add-on component used with the main surveillance system, XProtect Transact is normally used for integrating data streams from cash registers, ATMs, etc. with time-linked video.

XProtect Transact is, however, extremely good at handling data streams from other sources as well, and is thus ideal for integrating analytics data into your surveillance system.

XProtect Transact should be installed on the same computer as XProtect Enterprise, XProtect Professional or XProtect Corporate's Management Server.

If you require information about how to install XProtect Transact, refer to the XProtect Transact Administrator's Manual available on the XProtect Transact software DVD as well as from [www.milestonesys.com](http://www.milestonesys.com).

When XProtect Transact is installed, do the following:

### **Configure XProtect Transact for Use with Your Analytics Solution**

You basically need to make XProtect Transact aware that a new type of data—analytics data—is going to be used.

You do this by adding a so-called *source*:

1. Open the *Transact Administrator* application, select the *Sources* tab, and click its *Add New...* button.



2. The *New Source* window opens.

- In the *Source name* field, type a descriptive name for your type of analytics data.
- In the *Source providers* list, select *Analytics Transact Provider*.

Then click *OK*.

3. The *Create Source* window will open. Click the *Add New...* button.



4. You now get to specify a name for your source's configuration. If in doubt, give the configuration the

same name as you specified for your source in step 2.

At this stage, do not change the port number or add any source XSD files.

5. When ready, click *OK* twice, then the *Close* button to close the *Transact Administrator* application.

## ***XProtect Smart Client***

The XProtect Smart Client is the access client application used for viewing video from wherever you require. The Smart Client must be installed on every computer from which you want to be able to view video combined with analytics data.

If you require information about how to install the Smart Client, refer to the Smart Client User's Manual on the surveillance system software DVDs and also available from [www.milestonesys.com](http://www.milestonesys.com).

For Smart Clients to be able to work with the analytics solution, each Smart Client must have the **Alert Plugin for Smart Client** installed. This plugin enables the Smart Client to display analytics data received through the surveillance system's XProtect Transact add-on component. Smart Client users download and install the plugin from the surveillance system server. The Smart Client should be installed first, then the plugin. For more information about the Analytics Alert Plugin, see the XProtect Analytics User's Manual on the XProtect Analytics software DVD and also available from [www.milestonesys.com](http://www.milestonesys.com).

## ***Dacolian Intrada® ALPR***

To run XProtect Analytics for Dacolian license plate recognition, a Dacolian Intrada ALPR installation is required. Dacolian Intrada ALPR is included, and automatically installed, with the XProtect Analytics plugin for Dacolian LPR.

Third-party video content analysis tools, such as the one mentioned above, are developed by independent partners delivering solutions based on the Milestone open platform. These solutions can impact performance on the Milestone surveillance system.

## Server-Side Installation

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Before installing the XProtect Analytics software, make sure you understand the system requirements and prerequisites (see the previous sections). Installing XProtect Analytics involves three tasks:

- First you install the XProtect Analytics software itself.
- Then you install the required XProtect Analytics plugin. This plugin gives your analytics solution the required functionality, in your case license plate recognition. Technically, the plugin installs as a service, but it also gives you access to the Administrator application through which you manage your analytics solution.
- Finally, you install the alert plugin server-side installer. Once installed, this will allow Smart Client users to connect to the surveillance system server and download the plugin required to view analytics data in the Smart Client.

### ***Licences (SLCs and CLK)***

Unless you are going to install a trial version, you will be asked for Software License Codes (SLCs) and a Connection License Key (CLK) during installation. The SLCs gives you the right to install and run full versions of the various XProtect Analytics software components. The CLK determines how many cameras you are allowed to use with the analytics solution.

Normally, you will have received the SLCs and CLK from your Milestone vendor, typically in an e-mail. Should you not have received the SLCs and CLK, contact your Milestone vendor, or do the following:

**Tip:** The process described in the following can also be used if you need to register an SLC and CLK for XProtect Transact. Just note that there is only one SLC for XProtect Transact; therefore, you can leave out step 6. Also note that for XProtect Transact, the CLK determines the allowed number of Transact

sources rather than cameras.

1. Go to the Milestone Systems website at [www.milestonesys.com](http://www.milestonesys.com), click the *Login* link in the menu, and select *Software Registration*.
2. Log in to the Software Registration Service Center with your user name (e-mail address) and password. If you have not used the Software Registration Service Center before, click the *New to the system?* link, and follow the instructions for registering yourself as a user; then log in to the Software Registration Service Center using your registered user name and password.
3. In the Software Registration Service Center, click the *Add SLC* link.

**Where do you find your SLCs?** For XProtect Analytics you have two SLCs: one for the XProtect Analytics software itself, and one for the XProtect Analytics plugin. The SLCs are printed on your order confirmation and invoice as well as on the Product License Sheets enclosed with the XProtect Analytics software DVD.

4. Type the SLC for the XProtect Analytics software itself, then click *Submit*. When asked whether you want to add the SLC to your account, click *OK*.
5. Once your SLC has been added, click the *main menu* link.
6. Now click the *Add SLC* link again, and type the SLC for your XProtect Analytics plugin. Click *Submit*, *OK*, and then the *main menu* link.
7. You are now ready to obtain a Connection License Key (CLK) – a license for the number of camera connections you can view. Click the link representing the SLC of your XProtect Analytics plugin.

8. Click the *Add new MAC* link to register the MAC address of the computer on which you are installing the XProtect Analytics software.

**Where do you find the MAC address?** A MAC address is a 12-digit hexadecimal number (example: 0123456789AF), also called the computer's Physical Address. To find a computer's MAC address do the following: Click *Start > Run*. Type `cmd` in the *Open* field and click *OK*. Write `ipconfig /all` at the command prompt. Find the *Physical Address*. When you write the MAC address omit all hyphens: The MAC address 01-23-45-67-89-AF must be written as 0123456789AF during the registration.

9. Type the computer's MAC address (without hyphens) in the first field. Then type a description in the second field (for example the computer's IP address, physical location or user).
10. Click the *Submit* button.
11. When asked whether you want to add the device's MAC address to the SLC, click *OK*.
12. Click the *Get all keys via email* link to have your CLK sent to you by e-mail.
13. Click the *Logout* link to log out of the Software Registration Service Center.

## ***Installing the Analytics Software***

To install the Milestone XProtect Analytics Software, do the following:

1. Insert the XProtect Analytics software DVD, and click *Install XProtect Analytics Server*. Alternatively, if you downloaded XProtect Analytics from the internet, locate and double-click the file *Analytics.Installer.en-US.msi*.

After a short while the XProtect Analytics setup wizard opens. Click *Next* to begin the installation process.

2. On the wizard's second page, read and accept the license agreement. Then click *Next*.
3. On the next wizard page, select *Install licensed version* and specify your user name, organization and the Software License Code (SLC) for the XProtect Analytics software itself.

**Trial version?** If installing a trial version, select *Install 30 days trial* and specify your user name and organization.

When ready, click *Next*.

4. On the next wizard page, select the folder in which you want to install XProtect Analytics. Then click *Next*.
5. Click the *Install* button to begin the actual installation.
6. When installation is complete, click the *Finish* button.

## ***Installing the XProtect Analytics Plugin for Dacolian LPR***

1. Insert the XProtect Analytics software DVD, and click *Install Dacolian LPR Plugin*. Alternatively, if you downloaded XProtect Analytics from the internet, locate and double-click the file *DacolianLPRPlugin.Installer.en-US.msi*. After a short while the XProtect Analytics Dacolian LPR setup wizard opens. Click *Next* to begin the installation process.
2. On the wizard's second page, read and accept the license agreement. Then click *Next*.
3. On the next wizard page, select *Install licensed version* and specify your user name, organization and the Software License Code (SLC) for the XProtect Analytics plugin.

**Trial version?** If installing a trial version, select *Install 30 days trial* and specify your user name and organization.

When ready, click *Next*.

4. Specify your Connection License Key (CLK).

**Trial version?** This step is not required if you install a trial version.

When ready, click *Next*.

5. Click the *Install* button to begin the actual installation.
6. When installation is complete, click the *Finish* button.

## ***Installing the Alert Plugin Server-Side Installer***

1. Insert the XProtect Analytics software DVD, and click *Install XProtect Analytics Alert Plugin ...*. Alternatively, if you downloaded XProtect Analytics from the internet, locate and double-click the file *AlertPluginServerInstaller\_en-US.exe*.
2. The compressed alert plugin server-side installer automatically extracts itself and installs. Once it is installed, your surveillance server's Download Manager will confirm the installation.
3. The Download Manager's default configuration ensures that the alert plugin immediately will be visible for download from the surveillance server's download page. In most cases you can therefore simply click *OK* to close the confirmation window. You only need to open the Download Manager if you actively want to hide the plugin from your users until a later point in time.



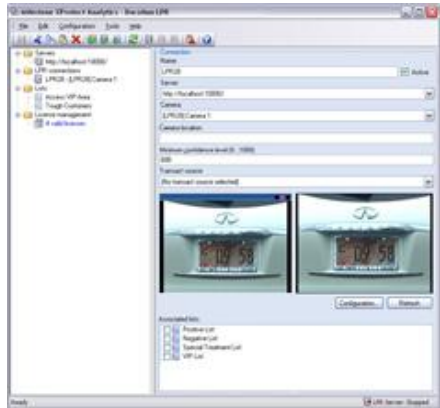
After installation, you can open XProtect Analytics' Dacolian LPR Administrator application—either from Windows' *Start* menu or by double-clicking the *Dacolian LPR Administrator* desktop shortcut—and start configuring your analytics solution.

## Recommended Configuration Sequence

When using the Administrator application for the first time, we recommend that you do things in a certain order.

For detailed information about each configuration step, refer to the separate XProtect Analytics – Dacolian LPR Administrator’s Manual available on the XProtect Analytics software DVD as well as from [www.milestonesys.com](http://www.milestonesys.com).

You can check the list  as you go along.



- Open the Administrator application, either from Windows’ Start menu or by double-clicking the *Dacolian LPR Administrator* desktop shortcut.
- Specify surveillance system servers. By specifying which surveillance system server(s) XProtect Analytics should connect to, you automatically give XProtect Analytics information about the cameras connected to the surveillance system server(s).
- Specify LPR connections. LPR connections define the exact analytics configuration for each camera you are going to use for license plate recognition.
- If required, specify lists of license plates that you want your analytics solution to treat in a special way. Once you have specified lists, you can use them in combination with LPR connections to trigger surveillance system events. The surveillance system events can in turn trigger external units (for example gates, lights, etc.).

- Save your configuration in the Administrator application.
- Make sure the Dacolian LPR Server service is running (restart it if required).
- If required, specify which surveillance system events should be triggered when license plates on—or not on—your lists are recognized.
- You can now use a Smart Client to connect to your analytics solution, and view license plate recognition data combined with time-linked video. For more information, refer to the XProtect Analytics User's Manual, available on the XProtect Analytics software DVD as well as from [www.milestonesys.com](http://www.milestonesys.com).

# Built-in Help System

XProtect Analytics features a very comprehensive built-in help system.

To access the help system, simply click the help icon or press F1 on your keyboard when working in the Administrator application.

