

The IM-ACX is a Transaction and Control Bridge between Milestone’s XProtect VMS and the ISONAS Access Control System.

Summary

This document provides a basic overview as well as installation and operating instructions for the IM-ACX™ software package.

Table of Contents

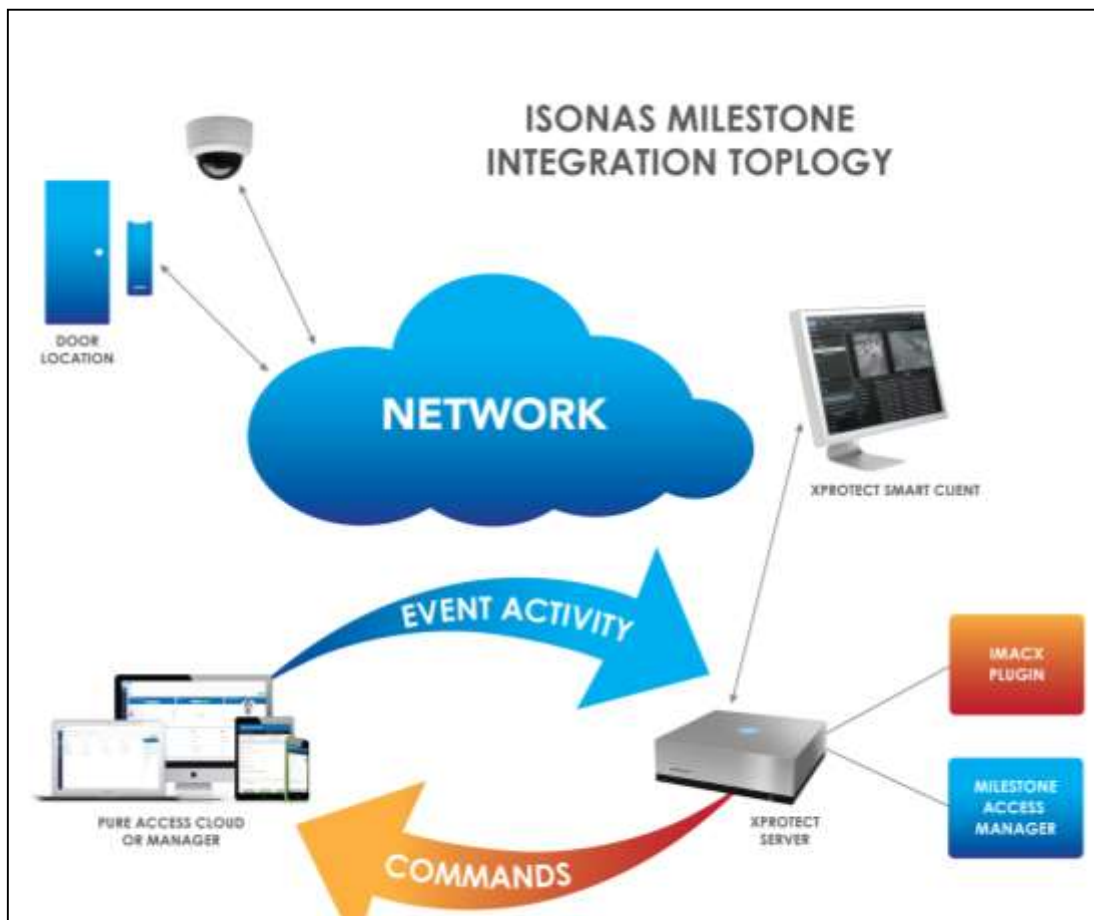
- 1. System Overview 1
 - 1.1. Logical View 1
 - 1.2. Operational View 2
- 2. Features & Benefits 2
- 3. Event Data Flow 3
 - 3.1. Events from ISONAS generate events in XP 3
 - 3.2. Commands from SC generate events in ISONAS 4
- 4. Operational Data Flow (Basic Overview) 4
 - 4.1. Smart Client / XP-Access to Access Control System 4
 - 4.2. Access Control System to Milestone / Smart Client 5
- 5. System Setup (Overview) 5
 - 5.1. General Installation Process 5
 - 5.2. Configure ISONAS Pure Access(on ISONAS) 6
 - 5.3. Configure ISONAS PANRServ 6
 - 5.4. Install and Configure ISONAS IM-ACX 6
 - 5.5. Install ISONAS IM-ACX Plug-in and Configure Milestone XProtect Access 6
 - 5.6. Configure Milestone Smart Client 6
 - 5.7. Test and Configure IM-ACX as a Windows Service 7
- 6. System Installation and Configuration 8
 - 6.1. IM-ACX Core Installation Checklist 8
 - Configure ISONAS Pure Access 8
 - Configure Milestone XProtect 8
 - Server Firewall Settings 8
 - Access the ISONAS PANRServ application 8
 - Configure ISONAS PANRServ “Input” 9
 - Configure ISONAS PANRServ “Output” 10
 - Run the ISONAS PANRServ application 10
 - Download the IM-ACX Installation packages 11
 - Stop the Milestone Event Server 11
 - Install and Configure IM-ACX plug-in 13
 - Restart the Milestone Event Server 13
 - Install and Configure IM-ACX application 15
 - Review IM-ACX Installation Results 16
 - Launch the IM-ACX 17
 - Configure IM-ACX 18
 - Restart the IM-ACX Application 19
 - Configure XP-Access (XProtect Enterprise) 20
 - Configure Basic XP-Access settings (XProtect Enterprise) 21

Fix screen show	21
Configure XP-Access (XProtect Corporate).....	22
Configure XP-Access settings (XProtect Corporate)	23
6.2. Test IM-ACX and Configure as a Windows Service	26
Configure XProtect	26
Associate Cameras to Doors.....	26
XProtect Smart Client Configuration	26
Test XProtect [X] ISONAS Function	27
Test ISONAS [X] XProtect Function	28
Configure IM-ACX to run as a Windows Service	28
Stop the IM-ACX Desktop application	28
Define the IM-ACX Windows Service.....	29
Start the IM-ACX Windows Service	30
Allow IM-ACX to resynchronize the two systems.....	30
Test the IM-ACX Windows Service configuration	30
6.3. Configure XProtect’s Deep-Links [X] [X] ISONAS Pure Access integration	31
Configure the Pure Access URL within IM-ACX.....	32
Refresh Milestone’s Card Holder Database.....	33
Test the SmartClient’s Deep-Links feature	33
Pure Access Display	34
6.4. IM-ACX Detailed Description	34
6.4.1. Links for Help.....	37
6.5. IM-ACX Integration Operations	37
6.5.1. IM-ACX Log file	37
6.6. Milestone Configuration Process.....	38
6.6.1. XProtect Enterprise Management Application.....	38
6.6.2. XProtect Corporate Management Application	46
7. Operations	52
7.1. Start up.....	52
7.2. Recovery.....	52
8. Example Smart Client Views	53
8.1. Access Denied.....	53
8.2. Notification / Alert.....	53
9. Startup Command Line Options.....	54
10. Legal.....	55
10.1. Trademarks.....	55
10.2. Licenses and Copyrights	55
10.3. Surveillance Privacy	55

1. System Overview

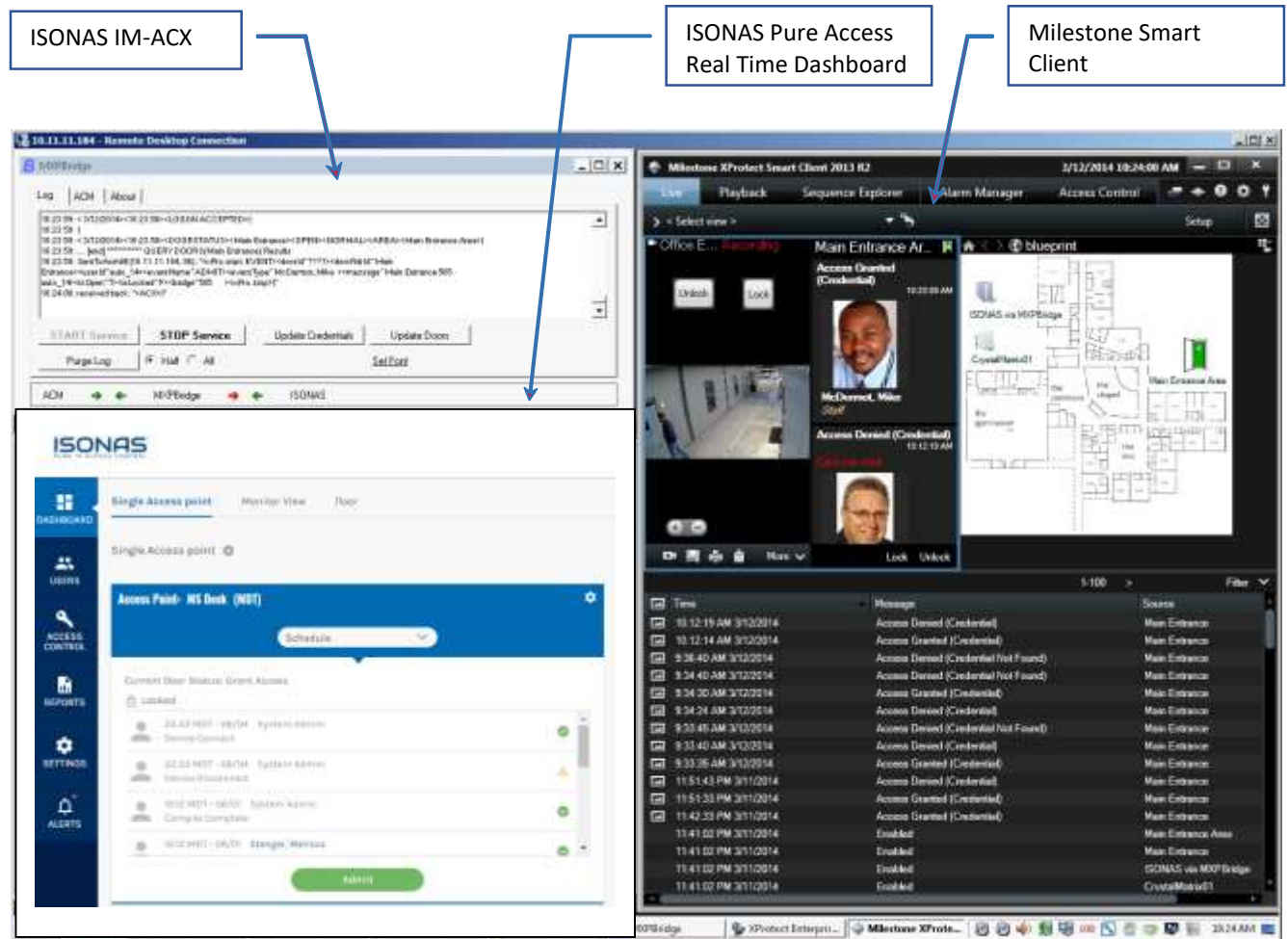
IM-ACX™ functions as a bidirectional communication link between Milestone XProtect Access (XP-Access) and ISONAS Access Control systems. It logs access control events into the XProtect Event and Alerts lists (for viewing and review by Smart Client users), and enables Smart Client users to easily control (i.e. Unlock and Lock) security system devices such as electric strikes and magnetic locks.

1.1. Logical View



Note: XProtect and Pure Access Manager should reside on separate servers. Two servers are shown in this manual to help illustrate the concepts.

1.2. Operational View



2. Features & Benefits

- Unifies Access Control and Video Surveillance into a single powerful security solution.
- Enables Smart Client users to easily operate one or more Access Control systems.
- Live Viewing
 - Live monitoring of access control events.
 - Dedicated functions in the Smart Client enable users to:
 - Effectively monitor events
 - Manually control passage of cardholders presenting credentials at Access Points.
 - A dedicated Access Control tab within the XProtect Smart Client for access control operations saves time and ensures a greater automation.
 - View live video linked to events from the access control system in XProtect Smart Client.
 - Access control events can be displayed with related camera images.
 - Centralized door state overview and control.
- Map Integration
 - Integrates with the interactive maps function available in various XProtect platforms.

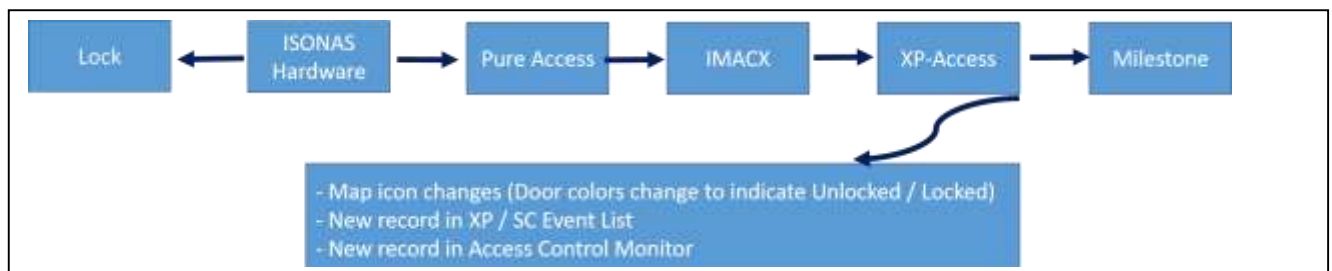
- Door items can be added to the map, displaying current state (Opened/Closed, Locked/Unlocked) of each door.
- Notification
 - Associate custom Alarm definitions with Access Control events.
 - Access Request Notification works as a fly out and draws attention to specific events related to the access control system, enabling instant actions, such as taking a snapshot when a door is opened and closed.
- Investigation
 - Conduct Access Control event investigations.
 - Filter searches to easily find what is needed, such as searching for all denied access events or a specific card holder
- Multiple Access Control systems
 - Operate multiple access control systems from the same user interface. This may be relevant when coordinating access control across different buildings or sites.

3. Event Data Flow

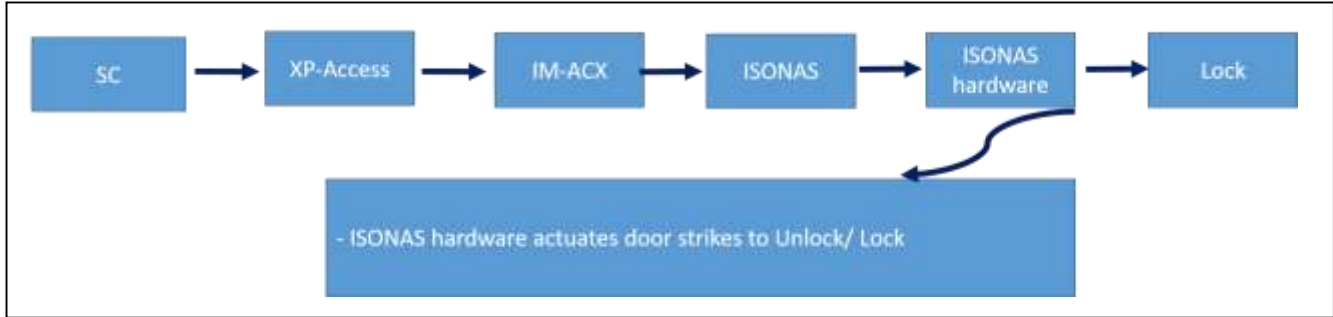
Legend for descriptions below:

Code	Description
	Access Control System
Pure IP	ISONAS Pure IP Reader-Controller
ISONAS	ISONAS Pure Access & PANRServ (Servers / Services)
	Communication Link between Systems
IM-ACX	ISONAS IM-ACX
	Milestone XProtect System
XP	Milestone XProtect
XP-Access	XProtect Access Manager
SC	Smart Client

3.1. Events from ISONAS generate events in XP

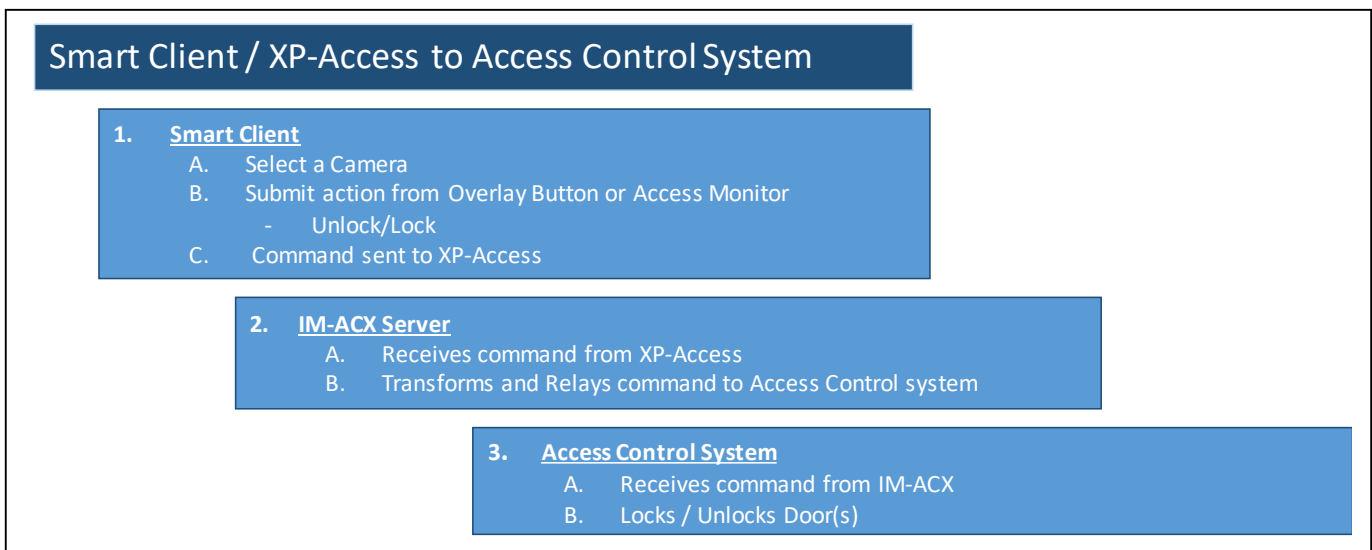


3.2. Commands from SC generate events in ISONAS

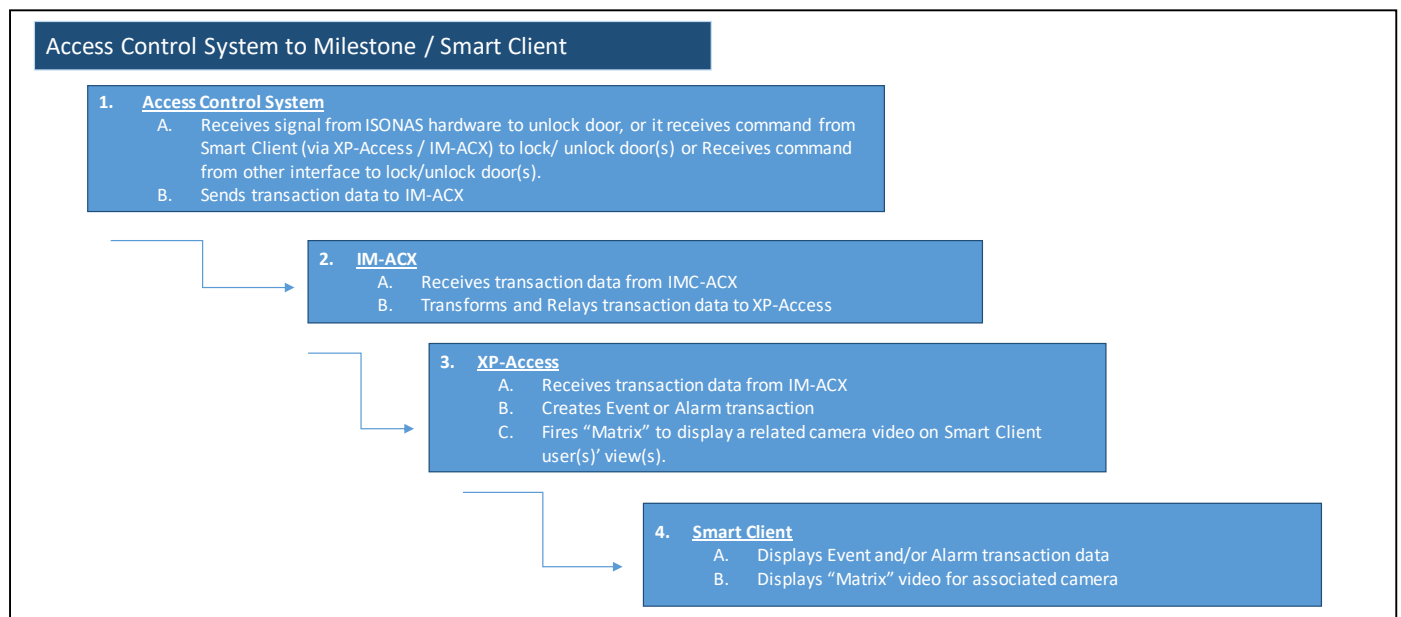


4. Operational Data Flow (Basic Overview)

4.1. Smart Client / XP-Access to Access Control System



4.2. Access Control System to Milestone / Smart Client

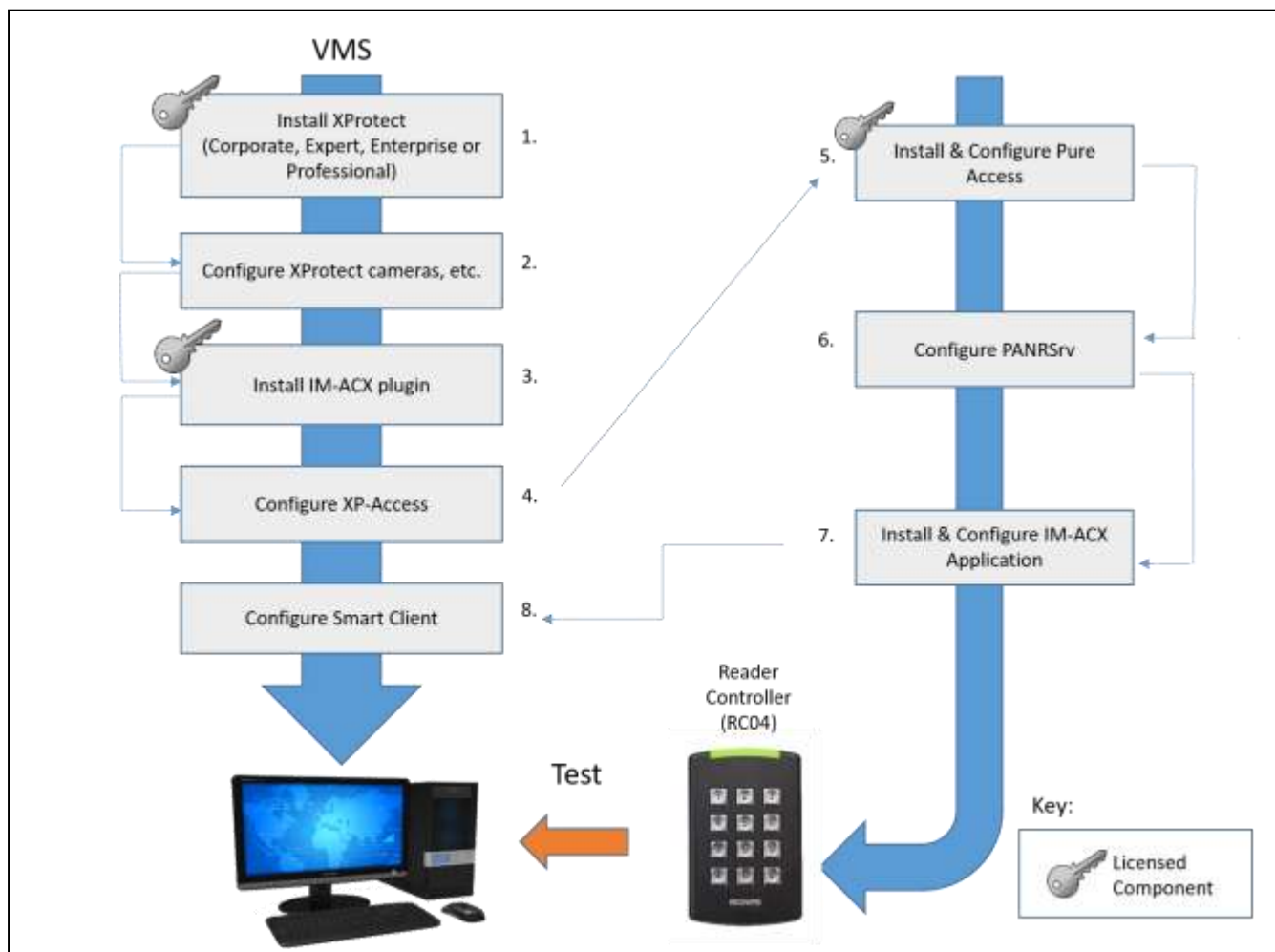


5. System Setup (Overview)

5.1. General Installation Process

The overall flow of configuring the system is shown in the diagram below.

- The core Milestone and ISONAS applications are installed and configured
- The specific Plug-ins that support the interface are installed
- The IM-ACX application is installed
- The appropriate configurations are made
- And then the integrated systems are tested.



Assuming that both a functioning XProtect system and a functioning ISONAS system are already in place, the basic setup of XProtect Access integration setup is outline below.

Note: Refer to the “System Installation and Configuration” section for specific instructions about the installation and configuration of IM-ACX and its integration with ISONAS and XProtect.

5.2. Configure ISONAS Pure Access (Cloud or Manager)

1. A working AC system which includes:
 - a. A Pure IP reader-controller that will be used for testing
 - b. Two test personnel records
 - i. One person who will be accepted by the reader-controller
 1. Assign an image to that person
 2. Assign a credential to that person
 - ii. One person who will be rejected by the reader-controller
 1. Assign an image to that person
 2. Assign a credential to that person

5.3. Configure ISONAS PANRServ

1. Define "Input" for receiving incoming commands from IM-ACX (originating in Smart Client / XProtect Access).
2. Define “Output” for sending real-time events to IM-ACX.

5.4. Install and Configure ISONAS IM-ACX

1. Install IM-ACX server (Milestone server).
2. Configure IM-ACX using its Desktop application interface.
 - a. Assign IP port for listening for commands / requests from XP-Access.
 - b. Assign IP address of XProtect Access server.
 - c. Assign IP address and port for sending commands to PANRServ
 - d. Assign IP port for listening for Events from ISONAS.

Note: these will come in as default to local host upon download

5.5. Install ISONAS IM-ACX Plug-in and Configure Milestone XProtect Access

1. Install IM-ACX Plug-in (on Milestone server - into the Event Server “MIP Plug-in” folder).
2. Assign IP address of IM-ACX server.
3. Assign IP port for sending commands / requests to IM-ACX (Access Control System).
(This is the corollary to the “XProtect Access Port” in the IM-ACX properties, referenced above.)
4. Assign User ID and Password for sending commands / requests to IM-ACX / Access Control system.

5.6. Configure Milestone Smart Client

1. Define Views (containing XProtect Access interface data).

5.7. Test and Configure IM-ACX as a Windows Service

1. Test the Interface’s core functionality
 - a. Assign a Door to a Camera
 - b. Verify an “Admit” from the Smart Client operates the door.
 - c. Verify the “Admit” activity records appear on the Smart Client’s Access Control Tab
2. Install the IM-ACX application as a Windows Service.

6. System Installation and Configuration

It is assumed that the reader has an understanding of ISONAS Pure Access and Milestone XProtect. Only the unique system configurations are shown here.

6.1. IM-ACX Core Installation Checklist

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
001		<p>Configure ISONAS Pure Access</p> <ol style="list-style-type: none"> 1. Pure Access is configured with: <ol style="list-style-type: none"> a. At least one reader-controller b. At least one person (with credential & picture) that is accepted by this reader-controller c. At least one person (with credential & picture) that is rejected by this reader-controller 2. See the ISONAS Youtube channel for detailed instructions on setting up a basic Pure Access System 	
002		<p>Configure Milestone XProtect</p> <p>Assure the following conditions are met:</p> <ol style="list-style-type: none"> 1) Milestone XProtect Enterprise or Corporate is installed (Version dated 2014 or newer) 2) Milestone Management Application is available 3) You have the proper user logon to be able to configure the XProtect Management application, and Smart Client 4) A couple cameras have been defined within the Milestone XProtect. 	
003		<p>Server Firewall Settings</p> <p>Typical and recommended installation will be to install both services on the Milestone Management Sever.</p> <p>If you choose to use two servers, where the IM-ACX application is installed on one server, and a 2nd server supports the XProtect application.</p> <p>In this case, any related firewalls on the servers and/or networking equipment need to configured to allow traffic thru on the following IP-ports:</p> <p>TCP-protocol’s IP-Ports: 85, 86, 87, & 88</p>	

004		<p>Access the ISONAS PANRServ application</p> <p>Windows Navigation: Start Button → Programs → ISONAS → PANRServ</p>
------------	--	---

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
-------------	--------------------	-------------	-----------------------

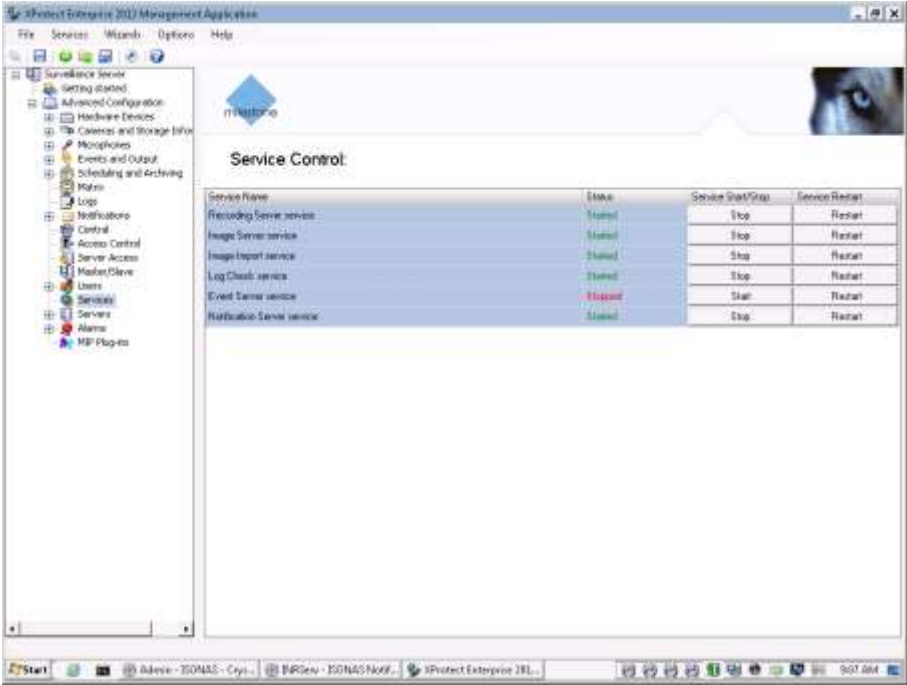
005		<p>Configure ISONAS PANRServ Input and Output Communication Channels</p> <p>The Pure Access Section determines the tenant and credentials the data and information should be connected to. The "Input" receives incoming commands from IM-ACX (originating in Smart Client / XP-Access). The output section sends commands, events and requests to IM-ACX.</p> <p>**for Pu</p>
------------	--	--


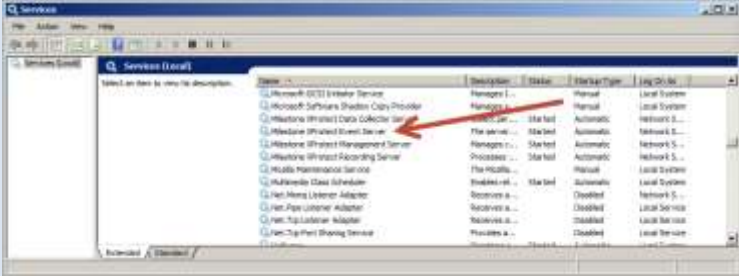
The screenshot shows the PANRServ configuration interface with the following sections:

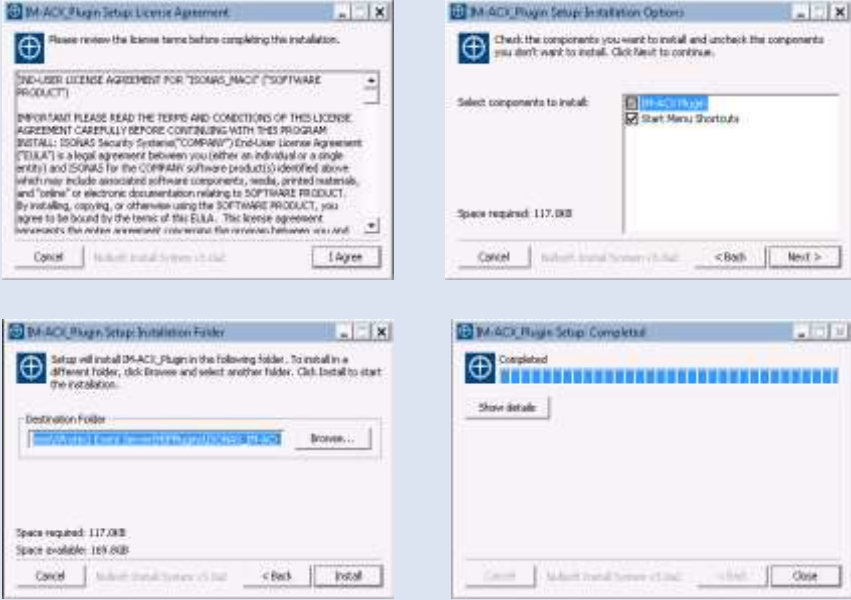
- Pure Access:** Includes fields for Portal, Uri (https://isonaspureaccessdemo.com), Username (adigiorgio@digitalprovisions.com), Password, and a checkbox for 'Send Lock message' with a 'seconds after Admit' field.
- Basic (Input):** Includes fields for Port (7102), User (admin), Password, and a 'Set Image Path' field (C:\apps\IM-ACX\Apps_ISONAS_Images).
- Server Connection (Output):** Includes fields for IP Address (127.0.0.1) and Port (1225).
- Options:** Includes checkboxes for 'Auto-start communication when application starts' and 'Minimize to system tray', a 'Log level' dropdown (3: More), and a 'Date and Time' dropdown.
- Service:** Includes a checkbox for 'Run as a service', 'Service startup delay', and 'Service log days'.

Callouts in the image highlight the 'Uri' field in the Pure Access section and the 'Send Lock message' checkbox in the Basic (Input) section.

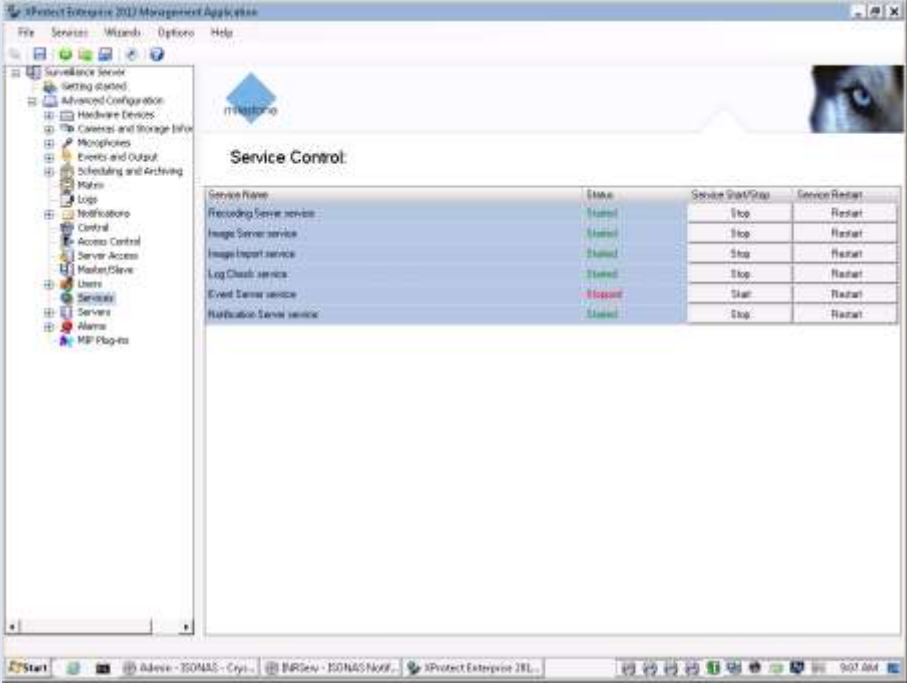
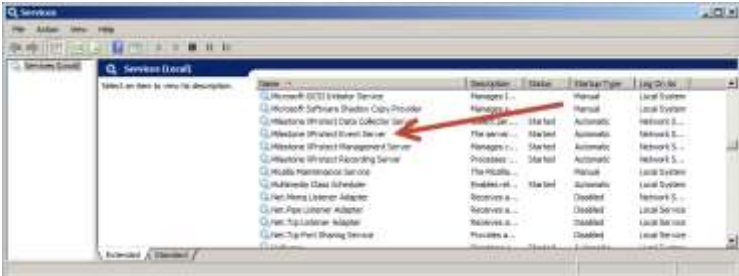
		<p>Actions:</p> <p>Pure Access Section:</p> <ol style="list-style-type: none"> 1) Enter the URL for Pure Access Cloud along with an administrator’s login information <ol style="list-style-type: none"> a) Usually this is https://isonaspureaccesscloud.com b) Enter your latch interval under “Send lock message” this is usually 3 secs. <p>**For Pure Access Manager the URL is the address of the server you are running Pure Access on and the login is your designated login to use to get into the application and requires https:// at the beginning.</p> <p>Basic Input Section:</p> <ol style="list-style-type: none"> 1) Retain the shown default values for the Input 2) Username: admin password: apassword 3) Image Path Default is C:ISONAS/IMACX/Images <p>Server Connection(Output):</p> <ol style="list-style-type: none"> 1) Leave all existing default values for the output <p>**Note: These values should correlate to the input and output values in IM-ACX.</p>
Step Number	Mark when Complete	Description (Core IM-ACX Install)
006		<p>Run the ISONAS PANRServ application.</p> <p>Windows Navigation: Start Button → Programs → ISONAS → PANRServ</p> <p>For now, leave the PANRServ window running, but you can minimize it.</p>

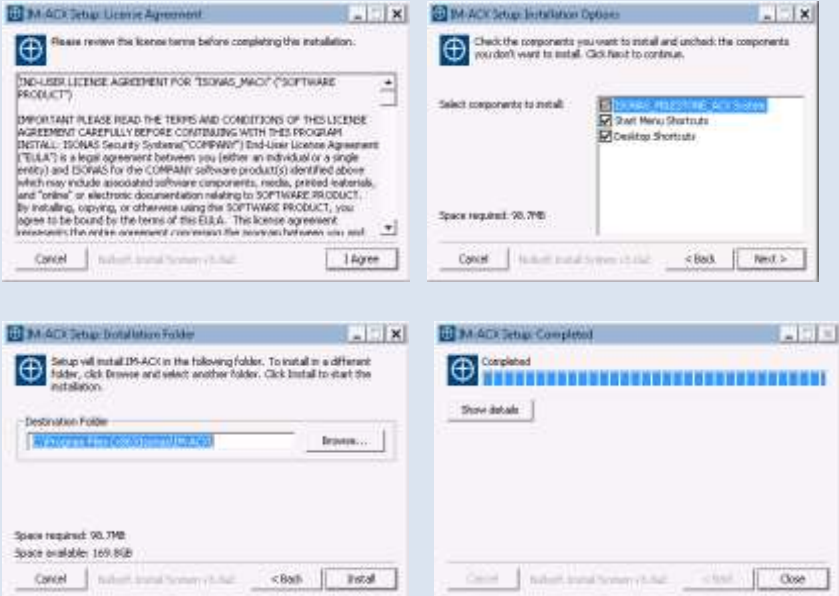
Step Number	Mark when Complete	Description (Core IM-ACX Install)																												
007		<p>Download the IM-ACX Installation packages</p> <p>The IM-ACX is distributed in two (2) Windows installation packages. You should have received an email with links to those files.</p> <p>Download both files and save them to your workstation.</p> <p>These files can be found on our website here</p>																												
008		<p>Stop the Milestone Event Server</p> <p>The Milestone Event Server must be stopped to allow the new IM-ACX plug-in to be discovered and initialized when the event server service starts.</p>																												
008a		<p>XProtect Enterprise Navigation within the Milestone Management Application Click on the Services on the “tree” Stop the “Event Server” entry</p>  <table border="1" data-bbox="737 1220 1430 1360"> <thead> <tr> <th>Service Name</th> <th>Status</th> <th>Service Start/Stop</th> <th>Service Restart</th> </tr> </thead> <tbody> <tr> <td>Recording Server service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Image Server service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Image Import service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Log Check service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Event Server service</td> <td>Stopped</td> <td>Start</td> <td>Restart</td> </tr> <tr> <td>Notification Server service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> </tbody> </table>	Service Name	Status	Service Start/Stop	Service Restart	Recording Server service	Started	Stop	Restart	Image Server service	Started	Stop	Restart	Image Import service	Started	Stop	Restart	Log Check service	Started	Stop	Restart	Event Server service	Stopped	Start	Restart	Notification Server service	Started	Stop	Restart
Service Name	Status	Service Start/Stop	Service Restart																											
Recording Server service	Started	Stop	Restart																											
Image Server service	Started	Stop	Restart																											
Image Import service	Started	Stop	Restart																											
Log Check service	Started	Stop	Restart																											
Event Server service	Stopped	Start	Restart																											
Notification Server service	Started	Stop	Restart																											

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
008b		<p>XProtect Corporate</p> <p>Stopping the Milestone Corporate Event Server is done from the standard Windows “Service Manager”.</p> <p>Navigation From the “Control Panel”, search for “Services”</p>  <p>Select the “View Local Services” option</p> <p>Select the Milestone XProtect Event Service, and stop it.</p> 	

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
009		<p>Install and Configure IM-ACX plug-in</p> <p>Note: The IM-ACX plug-in <u>must be</u> installed on the host computer that is running the Milestone XProtect Event Server.</p> <p>Copy the Plug-In Installation Package to the Milestone server.</p> <p>Run the Plug-In Installation Package.</p> <p>Note: The plug-in program will be installed in a directory under the XProtect Event Server, where it becomes an integral component of the Event Server sub-system.</p>  <p>The screenshots show the following steps: 1. License Agreement screen with 'I Agree' button. 2. Installation Options screen with 'IM-ACX Plug-In' and 'Start Menu Shortcuts' selected. 3. Installation Folder screen with a file path and 'Install' button. 4. Completed screen with 'Close' button.</p>	
010		<p>Restart the Milestone Event Server</p> <p>The Milestone Event Server must be stopped and restarted, so it loads the new IM-ACX Plug-in.</p>	

This will create some Start Menu items under the ISONAS section.

Step Number	Mark when Complete	Description	(Core IM-ACX Install)																												
010a		<p>XProtect Enterprise</p> <p>Navigation within the Milestone Management Application</p> <p>Click on the Services on the “tree” Start the “Event Server” entry</p>  <table border="1" data-bbox="737 625 1430 764"> <thead> <tr> <th>Service Name</th> <th>Status</th> <th>Service Start/Stop</th> <th>Service Restart</th> </tr> </thead> <tbody> <tr> <td>Preloading Server service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Image Server service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Image Import service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Log Check service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> <tr> <td>Event Server service</td> <td>Stopped</td> <td>Start</td> <td>Restart</td> </tr> <tr> <td>Validation Service service</td> <td>Started</td> <td>Stop</td> <td>Restart</td> </tr> </tbody> </table>	Service Name	Status	Service Start/Stop	Service Restart	Preloading Server service	Started	Stop	Restart	Image Server service	Started	Stop	Restart	Image Import service	Started	Stop	Restart	Log Check service	Started	Stop	Restart	Event Server service	Stopped	Start	Restart	Validation Service service	Started	Stop	Restart	
Service Name	Status	Service Start/Stop	Service Restart																												
Preloading Server service	Started	Stop	Restart																												
Image Server service	Started	Stop	Restart																												
Image Import service	Started	Stop	Restart																												
Log Check service	Started	Stop	Restart																												
Event Server service	Stopped	Start	Restart																												
Validation Service service	Started	Stop	Restart																												
010b		<p>XProtect Corporate</p> <p>Starting the Milestone Corporate Event Server is done from the standard Windows “Service Manager”.</p> <p>Select the Milestone XProtect Event Service, and start it.</p> 																													

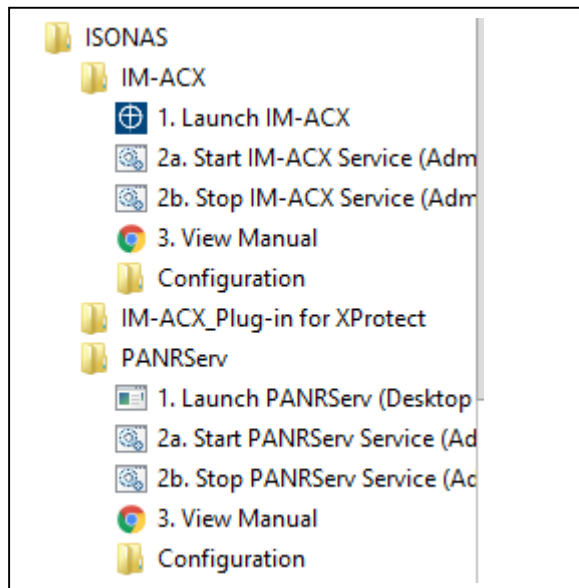
Step Number	Mark when Complete	Description	(Core IM-ACX Install)
011		<p>Install and Configure IM-ACX application</p> <p>Note The IM-ACX application can be installed on the Milestone server as well.</p> <p>Copy the Plug-In Installation Package to the Milestone server to the downloads or my documents or directory of your choice.</p> <p>Run the IM-ACX application Installation Package.</p> 	

012

Review IM-ACX Installation Results

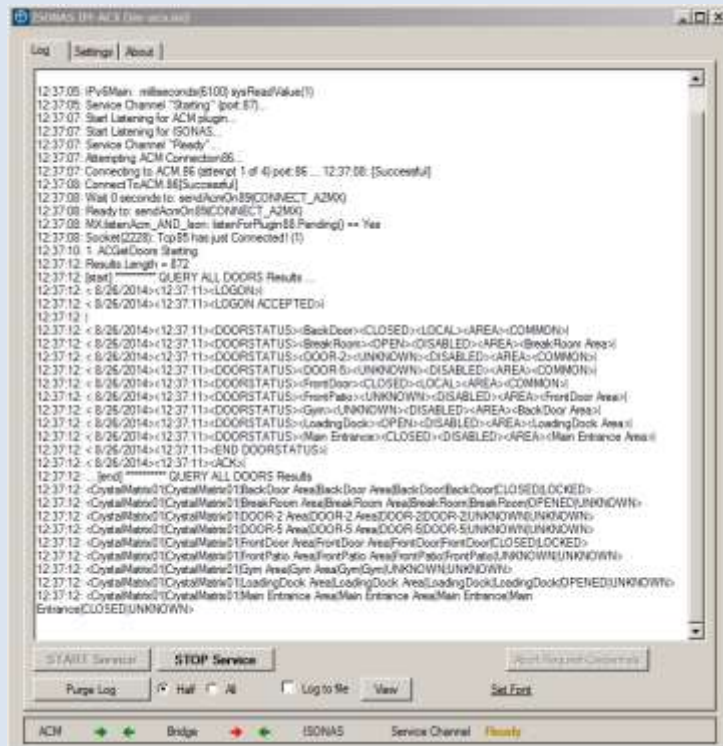
The installers generate a set of links:

- Desktop
- Start Menu



Note: The menu items that include the word (Admin) may require you to right-click on that entry, and select "Run as Administrator". This is dependent on the computer's security configuration.

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
013		<p>Launch the IM-ACX</p> <p>Launch the IM-ACX desktop application from its new shortcut icon on the desktop, or from the new entry in the Start Menu under the ISONAS system shortcuts.</p> <p>IM-ACX will use its default configuration and “look” for its accompanying plug-in within the Milestone Event Server. The initial contact will fail because the system has not yet been formally configured and the communication links have not yet been established.</p>	

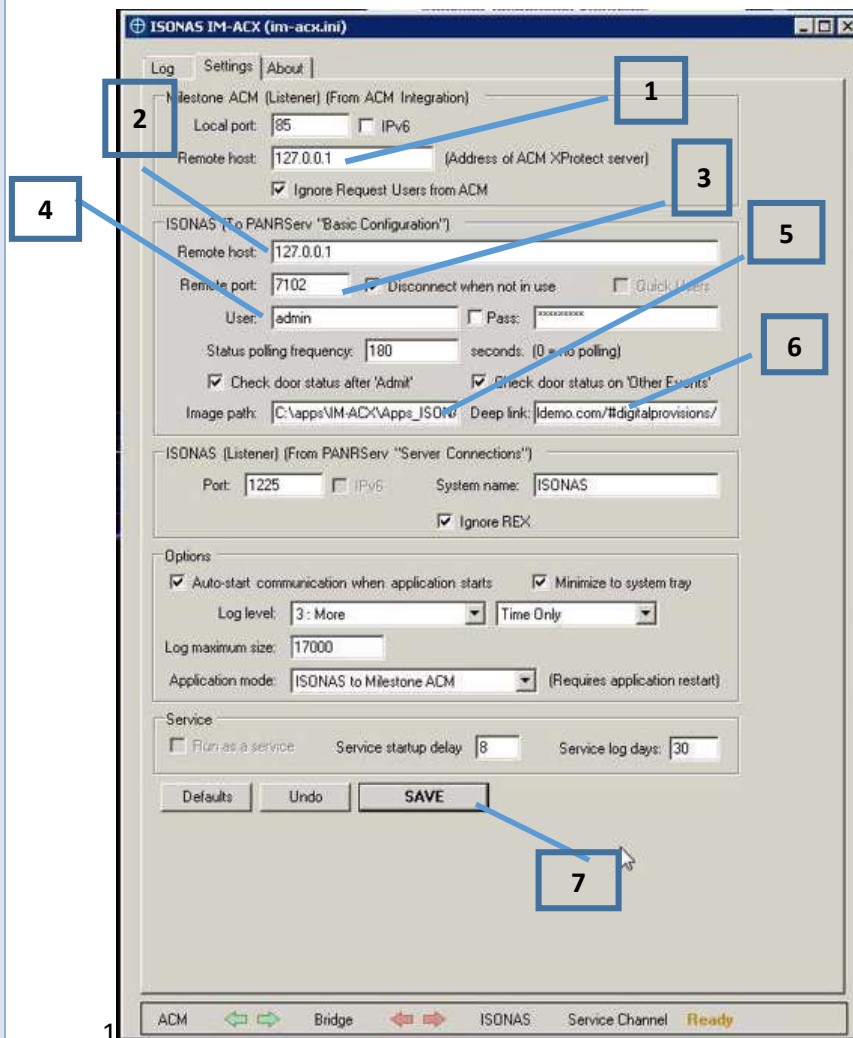


See the next section for detail descriptions of the IM-ACX application’s features

014

Configure IM-ACX

Assuming Milestone Management service and IMACX services are on the same server, most fields can be left with their default settings. With the exception of the deep links, which will be the Pure Access address.



Specific fields to review include:

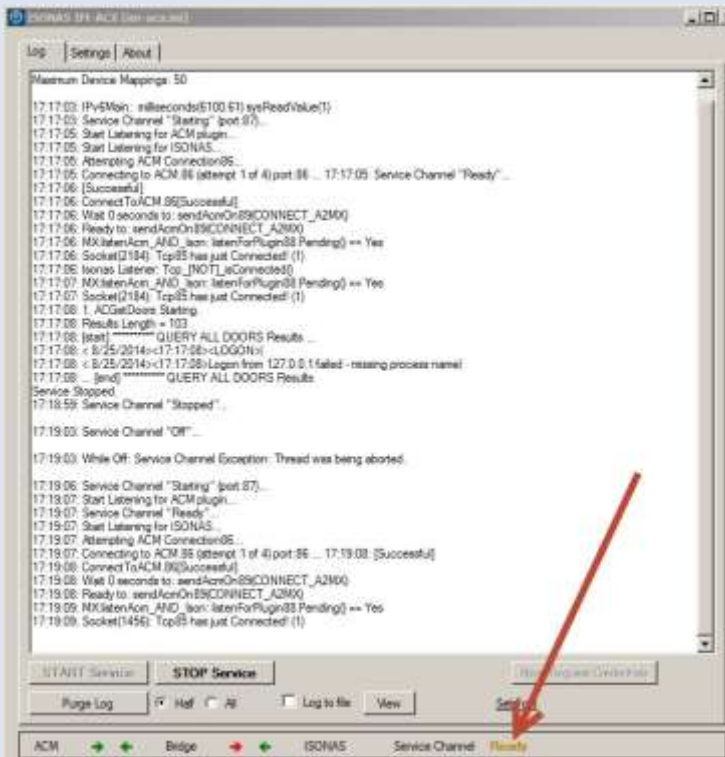
1. IP address of XP-Access server.
2. IP address of the PANRServ server.
3. IP Port that PANRServ is listening on (Match value configure within PANRServ (7102 or equiv).
4. User Name & Password for logon to PANRServ process.
5. Location where Pure Access stores the "cardholder photos".

		6. URL to the site's Pure Access tenant login for deep links	
		7. Once the configuration is updated, save the configuration.	
Step Number	Mark when Complete	Description	(Core IM-ACX Install)

Restart the IM-ACX Application

Stop and Start the IM-ACX application.

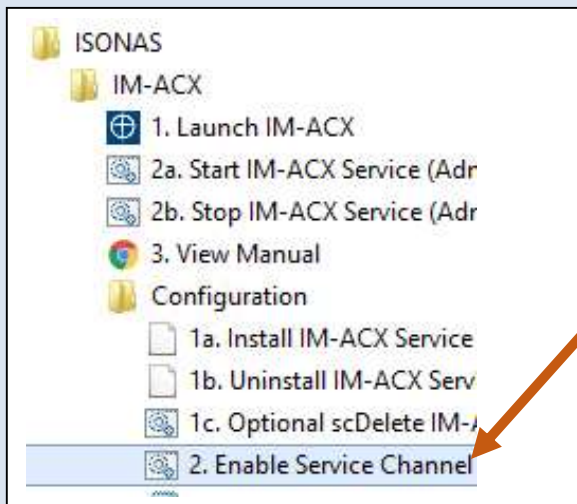
Review the “Service Channel” status.



If the Service Channel is not shown in the “Ready” status, then your system may require you to use the “Enable Service Channel” option from the Start menu.

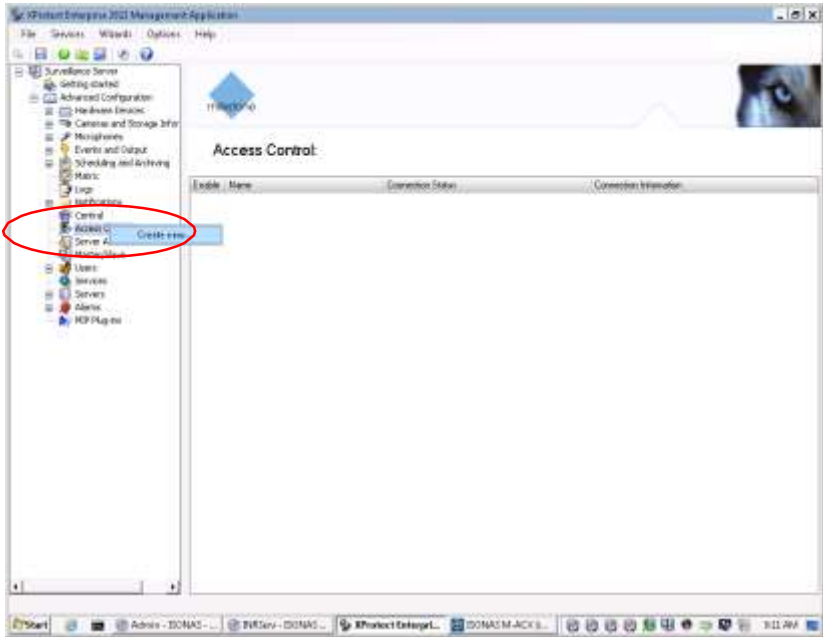
Navigate to the ISONAS → IM-ACX → Configuration section

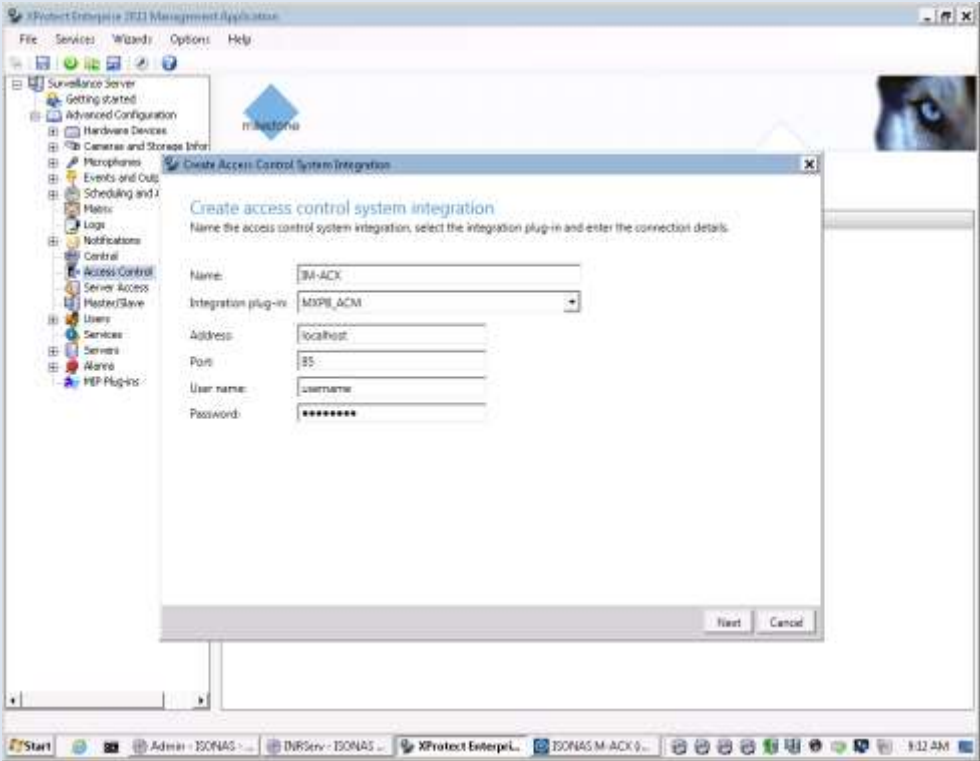
Right click on “Enable Service Channel”, and select the “Run as Administrator” option.



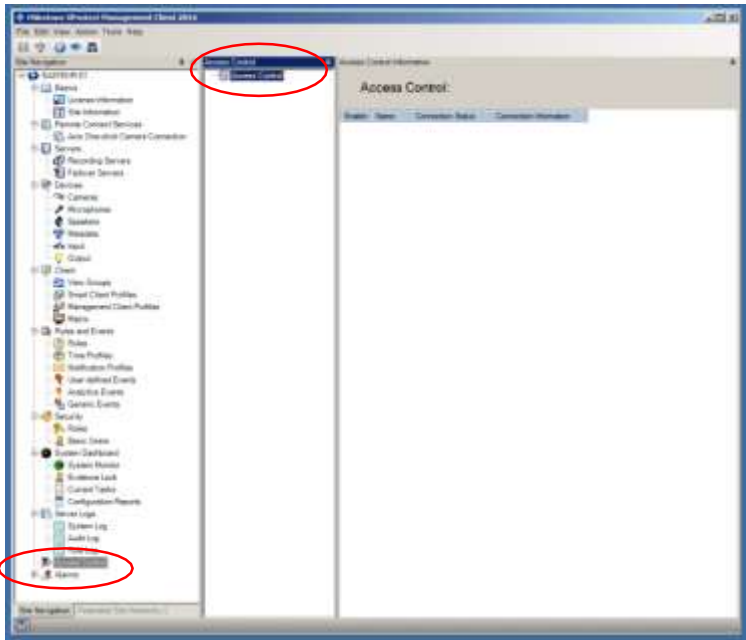
Once the Service Channel has been enabled: Stop and restart the IM-ACX application.

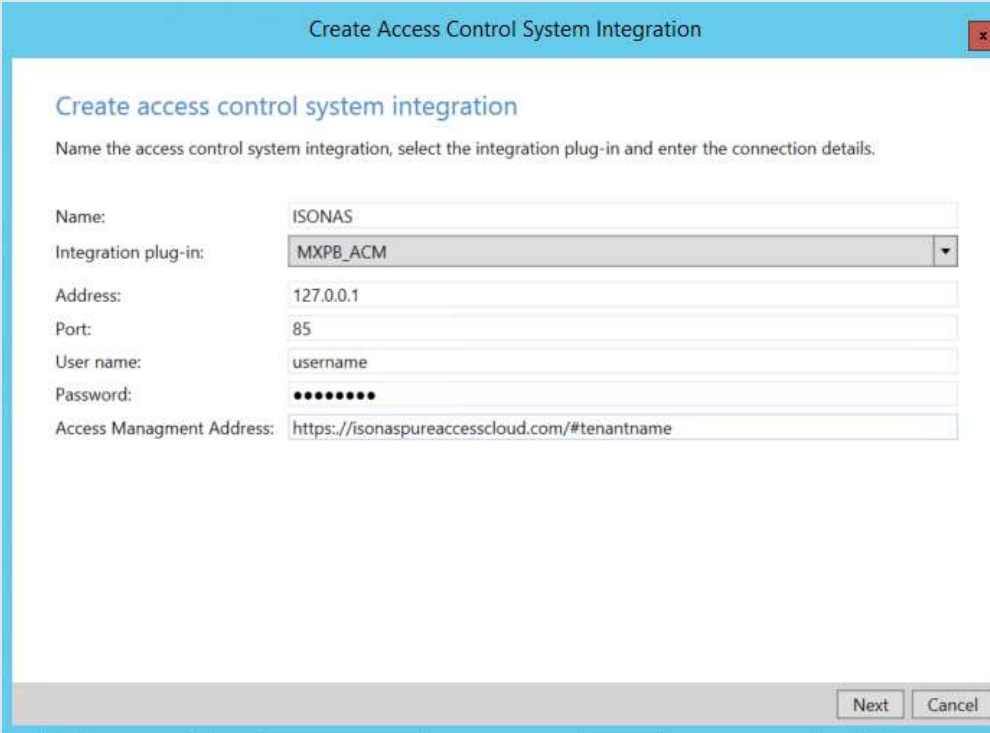
Step Number	Mark when Complete	Description	(Core IM-ACX Install)
016		<p>Configure XP-Access (XProtect Enterprise)</p> <ol style="list-style-type: none"> 1. Launch the Milestone Management application. <ol style="list-style-type: none"> a. Select the "Access Control" subsystem from the main options panel. b. Right-click the Access Control subsystem and select "Create new ..." to initialize the link to ISONAS. 	

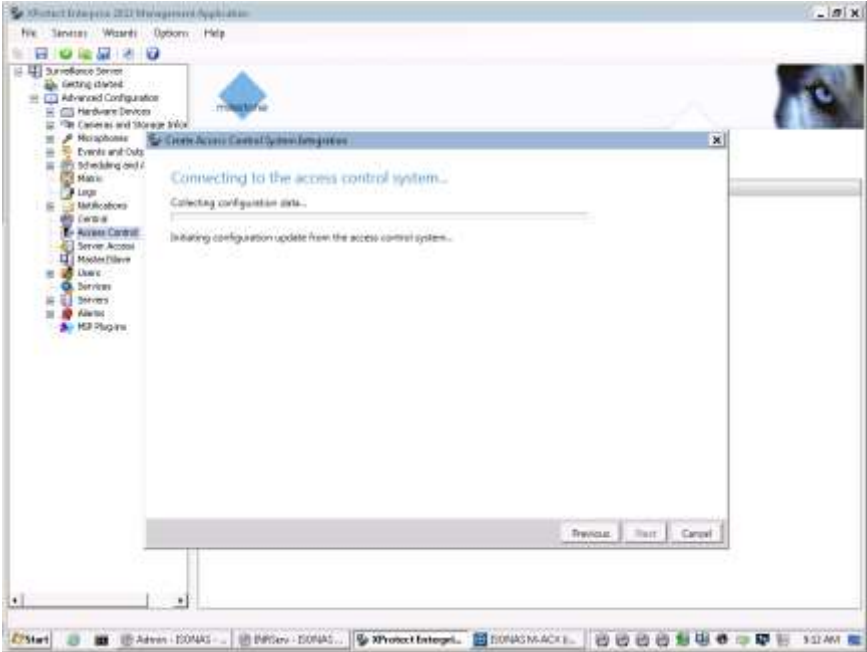
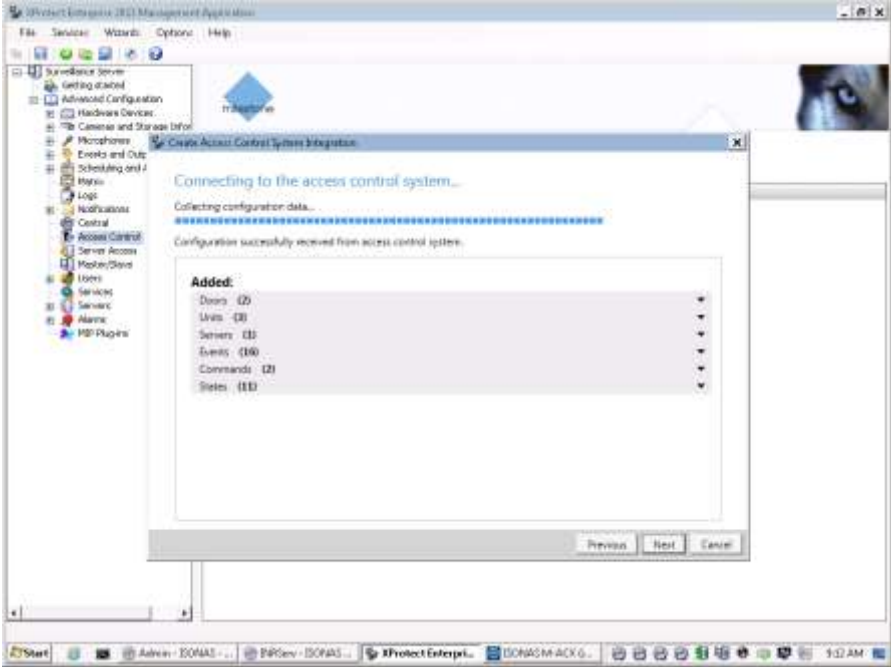


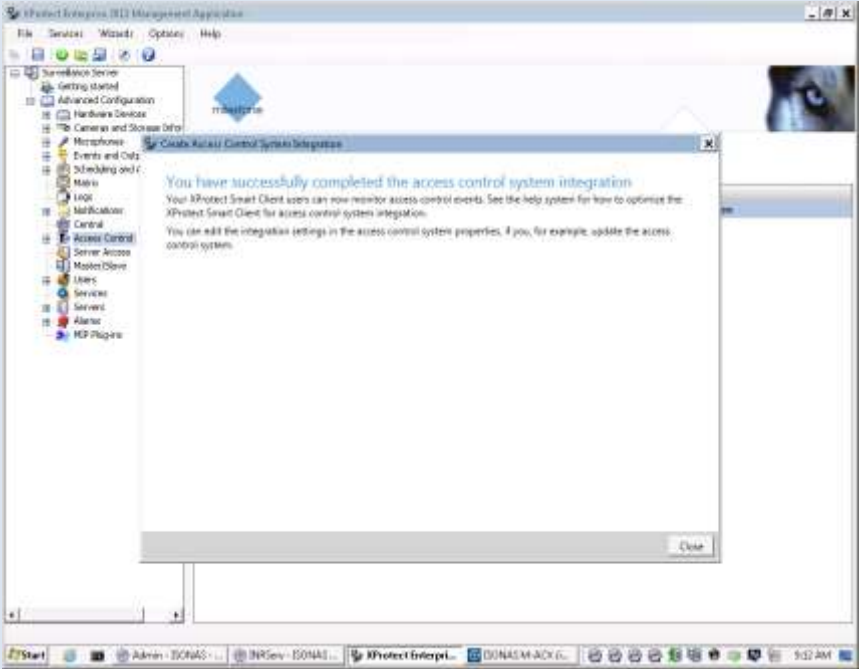
Step Number	Mark when Complete	Description	(Core IM-ACX Install)
017		<p>Configure Basic XP-Access settings (XProtect Enterprise) Fix screen show</p>  <p>Actions:</p> <ol style="list-style-type: none"> 1) Enter the Name "IM-ACX" (or any descriptive name). 2) Select the IM-ACX plug-in. 3) Specify the IP Address of the IM-ACX server. 4) IP Port used to talk to IM-ACX. The default setting should be acceptable. 5) Specify a valid Pure Access logon User ID and Password. 	

Step Number	Mark when Complete	Description	(Core IM-ACX Install)
018		<p>Configure XP-Access (XProtect Corporate)</p> <ol style="list-style-type: none"> 1. Launch the Milestone Management application. <ol style="list-style-type: none"> a. Select the "Access Control" subsystem from the main options panel. b. In the middle pane, right-click the tree's top entry (Access Control) and select "Create new ..." to initialize the link to ISONAS. 	



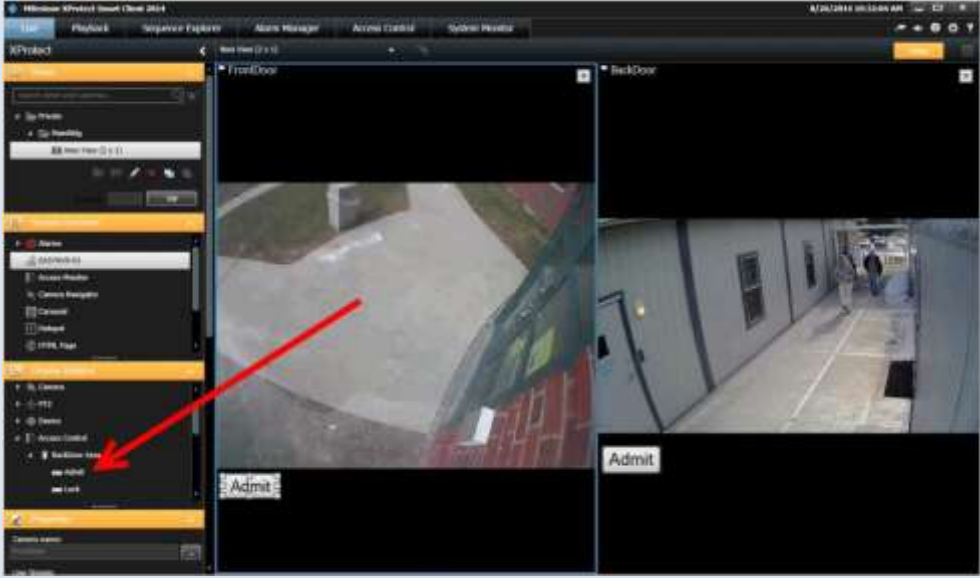
Step Number	Mark when Complete	Description (Core IM-ACX Install)
019		<p>Configure XP-Access settings (XProtect Corporate)</p>  <p>Actions:</p> <ol style="list-style-type: none"> 1) Enter the Name "IM-ACX" (or any descriptive name). 2) Select the IM-ACX plug-in. 3) Specify the IP Address of the IM-ACX server which will default to local host. 4) IP Port used to talk to IM-ACX. The default setting should be acceptable. 5) The default username and password should be used. 6) To take advantage of the Access Management Function, simply add your Pure Access url plus the tenant name. You can simple copy and paste this from your browser.

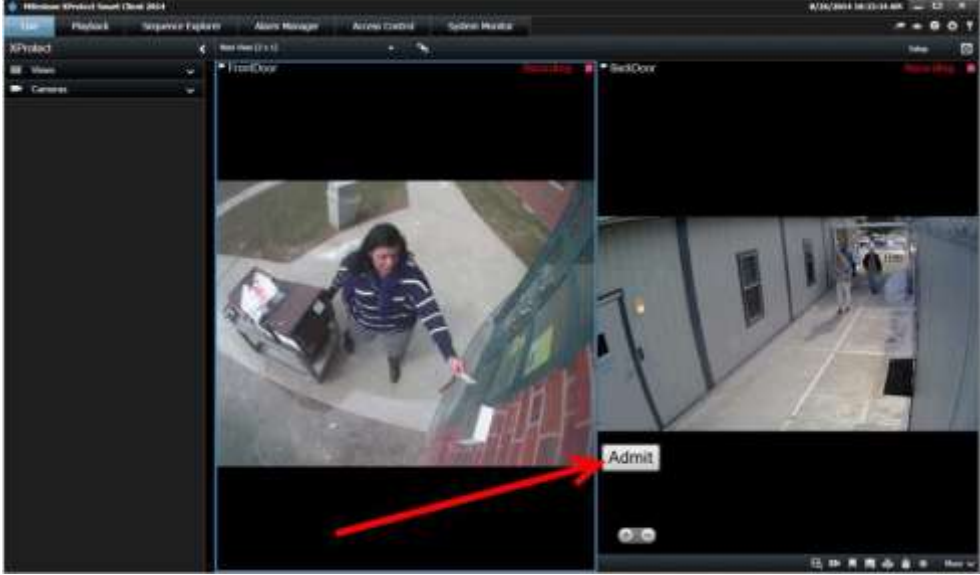
Step Number	Mark when Complete	Description	(Core IM-ACX Install)
020		<p>Milestone system imports the configuration from the Pure Access system.</p>  	

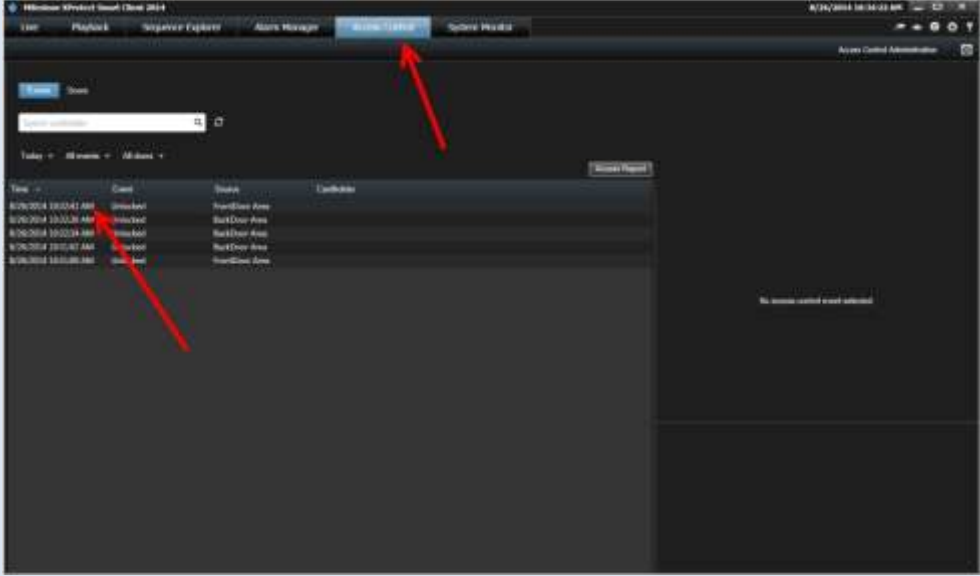
Step Number	Mark when Complete	Description	(Core IM-ACX Install)
021		<p>The core IM-ACX integration configuration is complete.</p>  <p>The screenshot shows the XProtect Enterprise 2012 Management Application interface. A dialog box titled 'Complete Access Control System Integration' is displayed in the foreground. The dialog contains the following text: 'You have successfully completed the access control system integration. Your XProtect Smart Client users can now monitor access control events. See the help system for how to optimize the XProtect Smart Client for access control system integration. You can edit the integration settings in the access control system properties, if you, for example, update the access control system.' The background shows the application's tree view with categories like Surveillance Series, Advanced Configuration, Hardware Devices, Camera and Storage Info, Microphones, Events and Outlets, Scheduling and Control, Mailbox, IAGI, Multicast, Central, Access Control, Server Access, Master Device, Users, Services, Servers, Alarms, and HCP Plugins. The taskbar at the bottom shows several open applications including 'Admin - ISONAS...', 'XProtect Enterprise...', and 'DINASIM-ACX...'. The system clock indicates 9:32 AM.</p>	

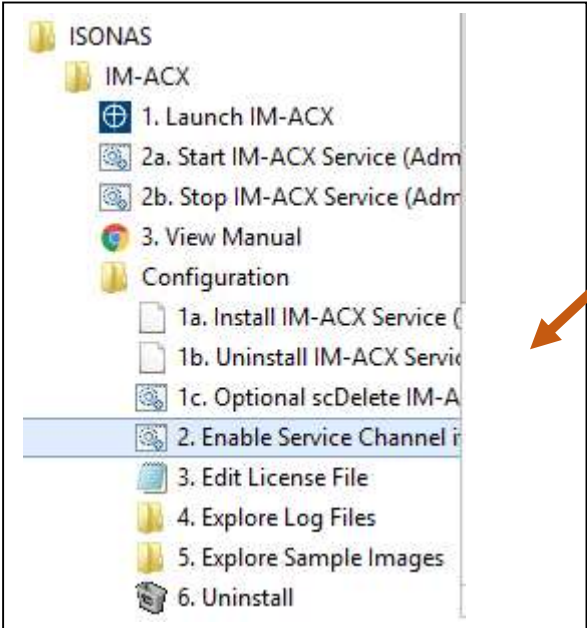
Note: There is a processing time with Milestone that may take up to 3 min to bring in all users.


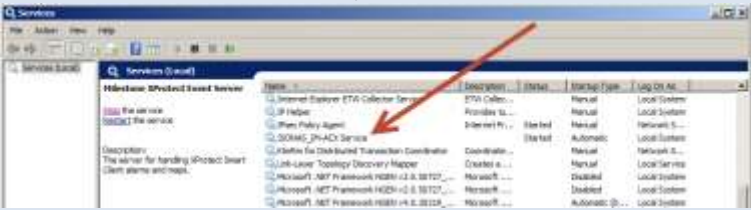
6.2. Test IM-ACX and Configure as a Windows Service

Step Number	Mark when Complete	Description	(Test IM-ACX Install)
001		<p>Configure XProtect</p> <p>For detailed instructions on the configuration of the Milestone XProtect, please reference the sections listed later in this document, named: Milestone Configuration Process</p>	
002		<p>Associate Cameras to Doors</p> <p>Using the Milestone Management application, access the IM-ACX setting.</p> <p>Through the “Associate Cameras” tab, map a camera to a door.</p> <p>If additional cameras and doors are available, map the additional cameras to the appropriate doors.</p>	
003		<p>XProtect Smart Client Configuration</p> <p>Using the XProtect Smart Client, define a view that includes the cameras w/doors.</p>  <p>Place an “Overlay button” from the associated door onto the appropriate camera view. For this test, use the “Admit” button.</p>	

Step Number	Mark when Complete	Description (Test IM-ACX Install)
004		<p>Test XProtect → ISONAS Function</p> <p>Toggle the XProtect Smart Client out of “Setup” mode. Hover the mouse over one of the camera views, and use the “Admit” button to unlock the door for a few seconds.</p> <p>Verify that the door physically unlocked.</p>  A screenshot of the XProtect Smart Client software interface. The window title is 'XProtect Smart Client 2014'. The interface shows a 'View' pane on the left with a 'Camera' dropdown. The main area displays two camera feeds: 'FrontDoor' and 'BackDoor'. The 'FrontDoor' feed shows a person in a blue and white striped jacket standing near a door. A red arrow points from the bottom of the 'FrontDoor' feed to an 'Admit' button located in the bottom right corner of the software interface. The 'BackDoor' feed shows an empty hallway. The top of the interface has tabs for 'Playback', 'Alarm Manager', 'Access Control', and 'System Monitor'. The bottom right corner has a 'View' dropdown and some status icons.

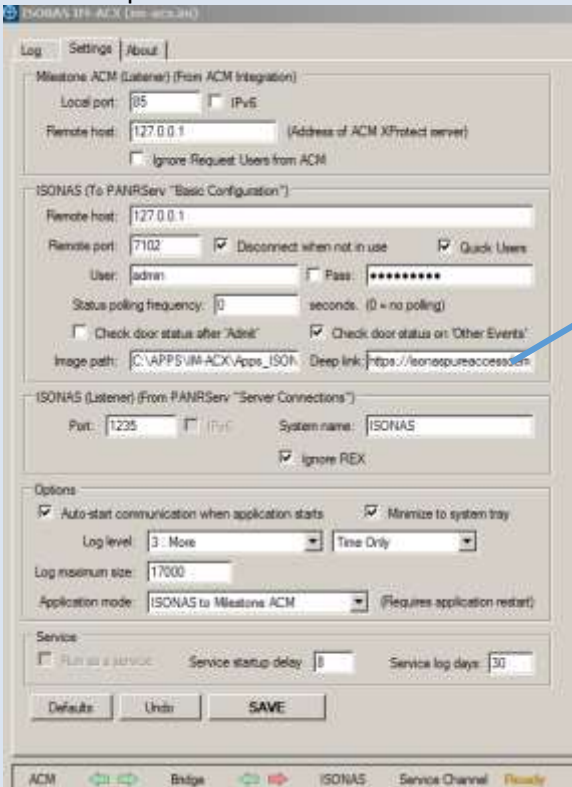
Step Number	Mark when Complete	Description (Test IM-ACX Install)
005		<p>Test ISONAS → XProtect Function</p> <p>Open the XProtect Smart Client's Access Control Tab.</p> <p>Review the historical event list, and verify that the test admit activity has been recorded.</p>  <p>This data is reported to XProtect, by the ISONAS application.</p>
006		<p>Configure IM-ACX to run as a Windows Service.</p> <p>Note: The IM-ACX can run as either a Windows Service, or a Desktop application. But only one copy of IM-ACX can be running at any specific time. This means the desktop application needs to be closed, before the Windows Service version is started, and vice-versa.</p>
007		<p>Stop the IM-ACX Desktop application</p>

Step Number	Mark when Complete	Description	(Test IM-ACX Install)
008		<p>Define the IM-ACX Windows Service From the Windows Start menu:</p> <ul style="list-style-type: none"> • Navigate to the ISONAS → IM-ACS → Configuration section. • Right-click on “Install IM-ACX Service” entry • Select the “Run as Administrator” option. 	

Step Number	Mark when Complete	Description (Test IM-ACX Install)
009		<p>Start the IM-ACX Windows Service</p> <p>Starting the Milestone Corporate Event Server is done from the standard Windows “Service Manager”.</p> <p>Navigation:</p> <ul style="list-style-type: none"> From the “Control Panel”, search for “Services”  <ul style="list-style-type: none"> Select the “View Local Services” option Select the IM-ACX Service, and start it. 
010		<p>Allow IM-ACX to resynchronize the two systems</p> <p>Wait about 3 minutes, to allow IM-ACX to fully resynchronize the XProtect application with Crystal Matrix.</p>
011		<p>Test the IM-ACX Windows Service configuration</p> <p>Rerun the “Admit tests” that were previously run.</p>

6.3. Configure XProtect's Deep-Links ← → ISONAS Pure Access integration

A Milestone SmartClient user can use the Deep Links feature to quickly access a card holder's record within the ISONAS Pure Access application. The card holder data can then be reviewed and/or updated.

Step Number	Mark when Complete	Description	(Deep Links Config.)
001		<p>Configure Deep Links</p> <p>Any Pure Access user that has been granted web access in Pure Access and has been given permission to modify users and user details can utilize the deep links feature and make adjustments to card holders.</p> <p>To enable the DeepLinks connection.</p> 	<p>Deep Link address should have your full Pure Access URL For example: https://isonaspureaccesscloud/#customername</p>

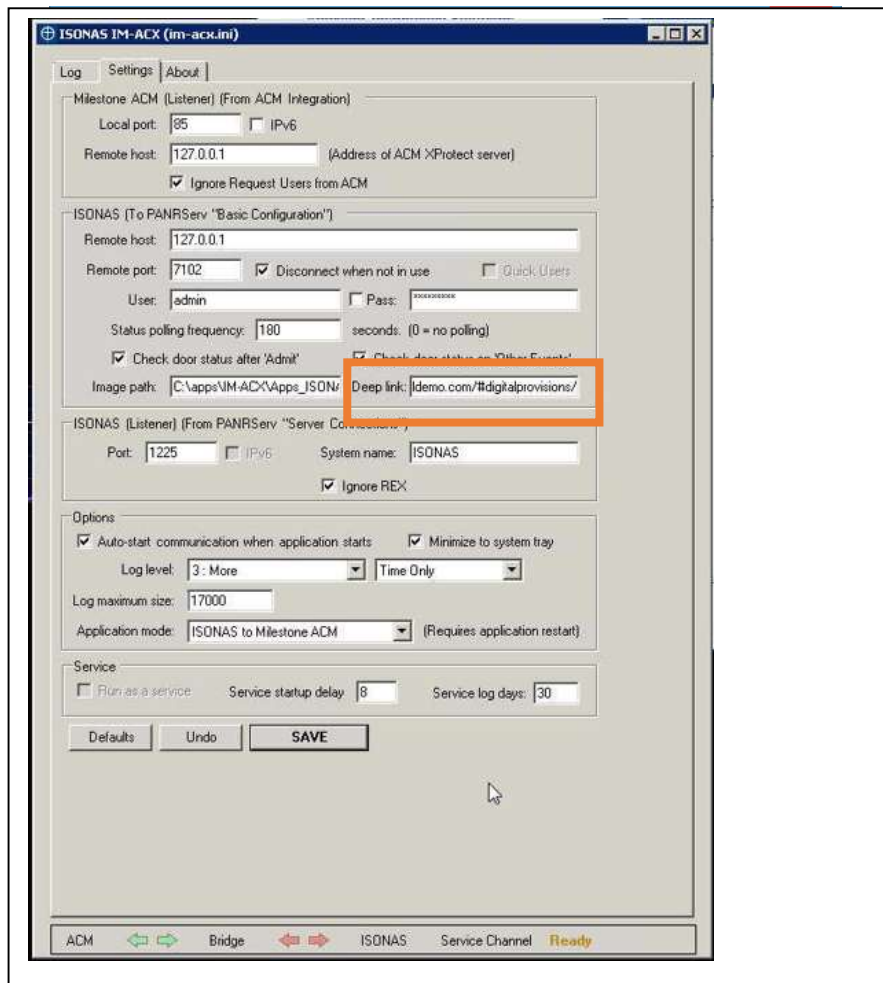
002

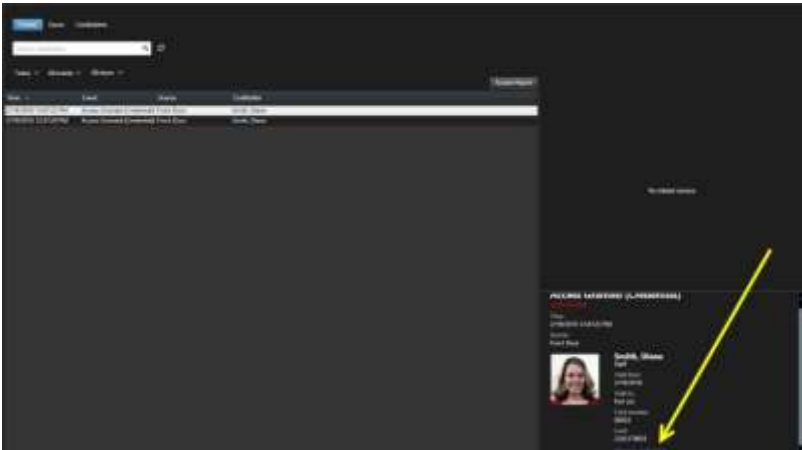
Configure the Pure Access Tenant URL within IM-ACX

Pure Access should already be configured.

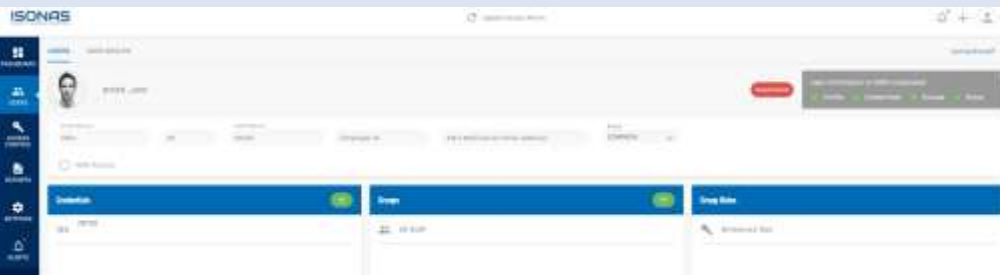
Determine the site's network-wide URL.

Updated IM-ACX's settings with that URL, in field (#1) shown below:



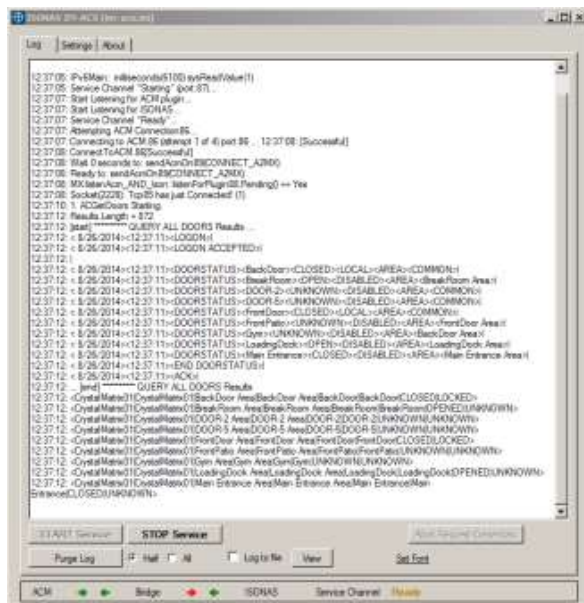
Step Number	Mark when Complete	Description (Deep Links Config.)
003		<p>Refresh Milestone’s Card Holder Database</p> <p>Within the XProtect Management Application, navigate to the Access Control entry.</p> <p>Open the Properties of the ISONAS entry, and click on the “Refresh” button</p>
004		<p>Test the SmartClient’s Deep-Links feature.</p> <p>Within the XProtect SmartClient, the DeepLinks feature can be accessed in two different ways.</p> <ul style="list-style-type: none"> From the Access Control Tab’s event detail display From the Event Notification Window <p>To test from the “Access Control” tab, select the Events listing, and then select on a specific event that is associated with a card holder. The card holder info appears in the lower right section of the window.</p> <p>At the bottom of the card holder data, click on the “Manage CardHolder” link</p> 

Step Number	Mark when Complete	Description	(Deep Links Config.)
005		<p>Pure Access Display.</p> <p>Your Default browser should open and direct you to the login of your Pure Access account. You will need to login to Pure Access, and navigate to the user screen and make any adjustments necessary.</p>	



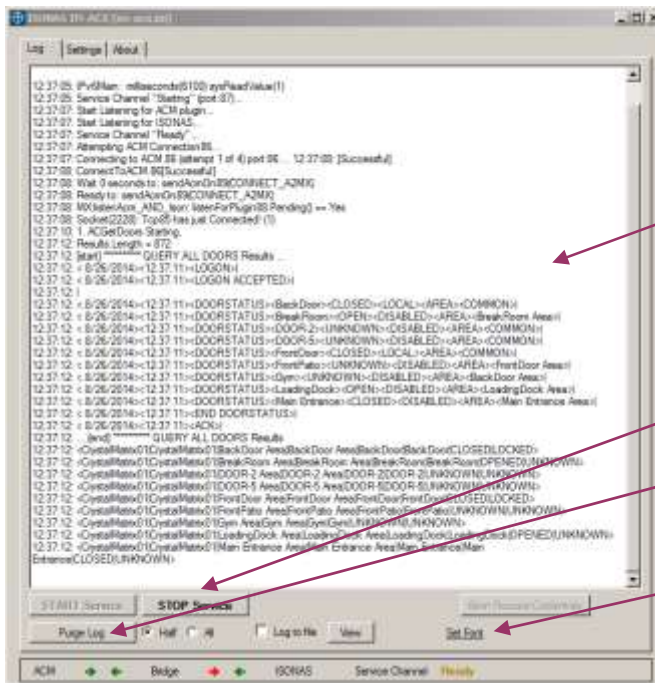
6.4. IM-ACX Detailed Description

The IM-ACX desktop application can be launched from its desktop shortcut icon, or from the Start Menu entry under the ISONAS system shortcuts.



IM-ACX runs on any server which has network connectivity with XProtect and the Access Control system. However, it is normally installed on the server hosting ISONAS Crystal Matrix and other ISONAS services.

The log / status window scrolls data about events in real-time. The level of details is adjustable in the XP-Access (Settings) tab.



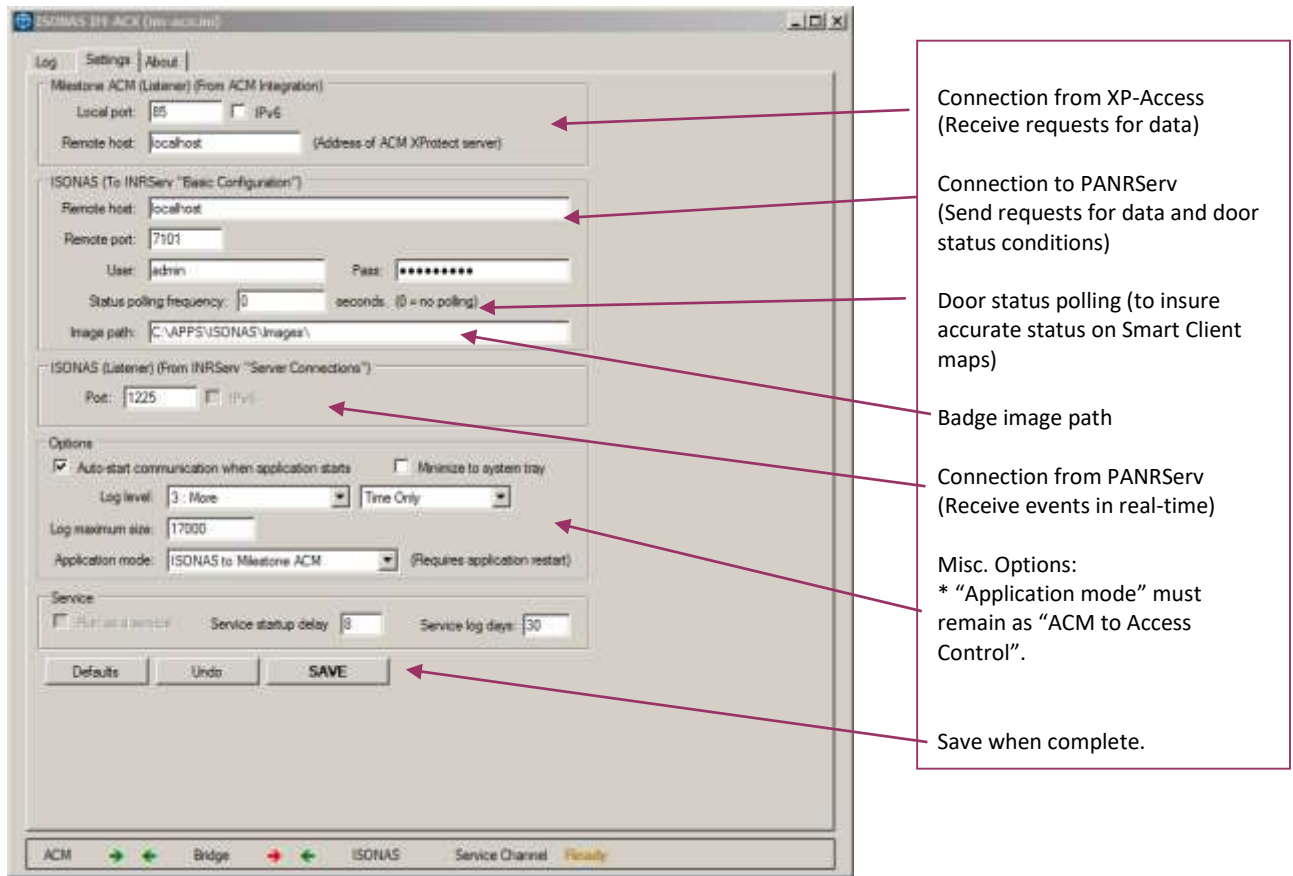
Log / Status window

Stop / Start Service

Clear log window

Set log window font

The XP-Access (Settings) tab contains the configuration data.



1. Assign IP port for listening for commands / requests from XP-Access
(This is the corollary to the "Port" in the XP-Access properties, referenced below.)
2. Assign IP address of XP-Access server.
3. Assign IP address and port for sending commands to PANRServ.
(This is the corollary to the "Listener" in PANRServ, referenced above.)
4. Assign IP port for listening for Events from ISONAS.
(This is the corollary to the "Transmitter" in PANRServ, referenced above.)

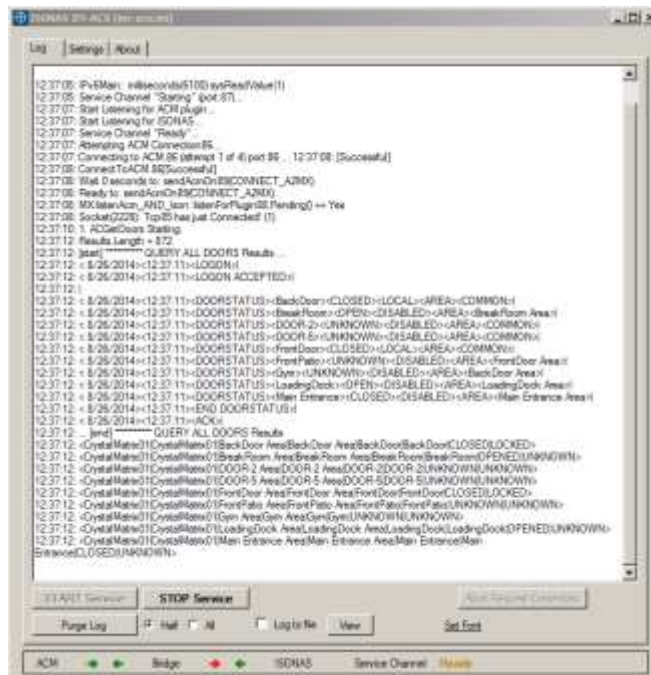
6.4.1. Links for Help

Refer to the “About Box” for links to contact ISONAS if help is required.



6.5. IM-ACX Integration Operations

6.5.1. IM-ACX Log file

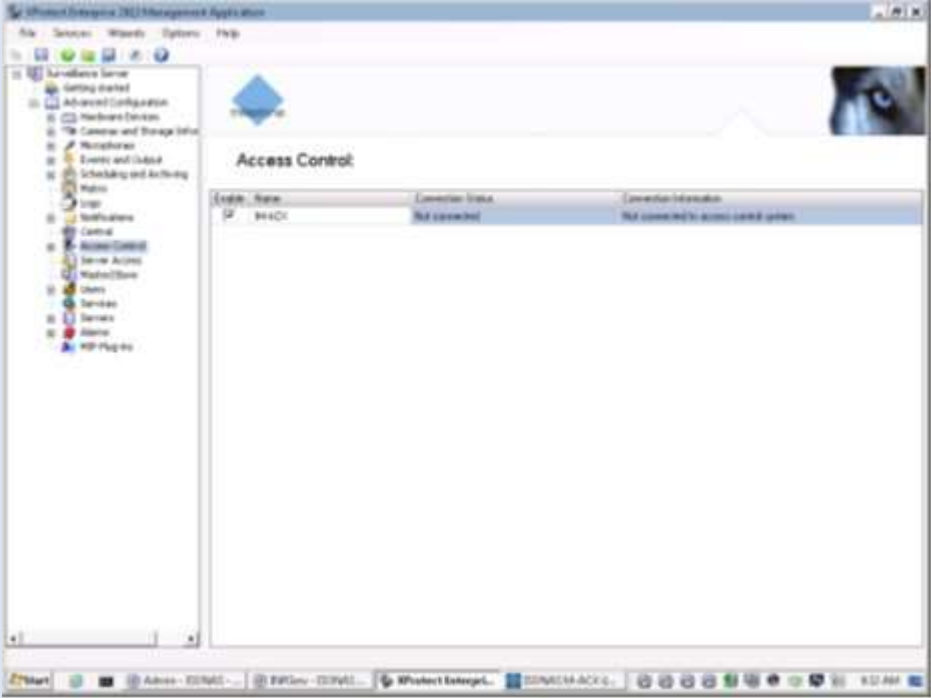


The IM-ACX log file lists transactions that have passed between the Milestone & ISONAS system. This is a powerful troubleshooting tool.

6.6. Milestone Configuration Process

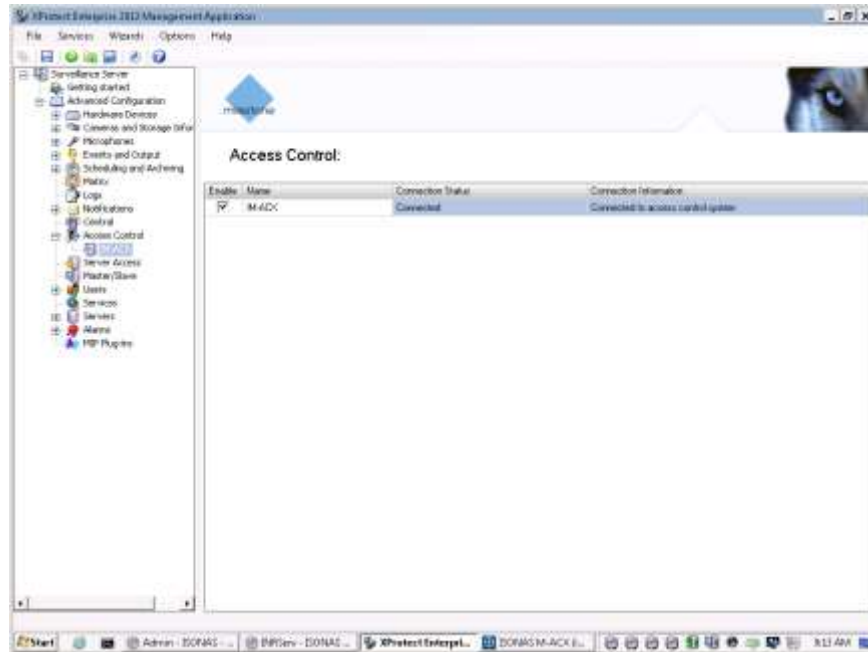
6.6.1. XProtect Enterprise Management Application

The XProtect Management Application provides the configuration options for the interface with the Access Control system.

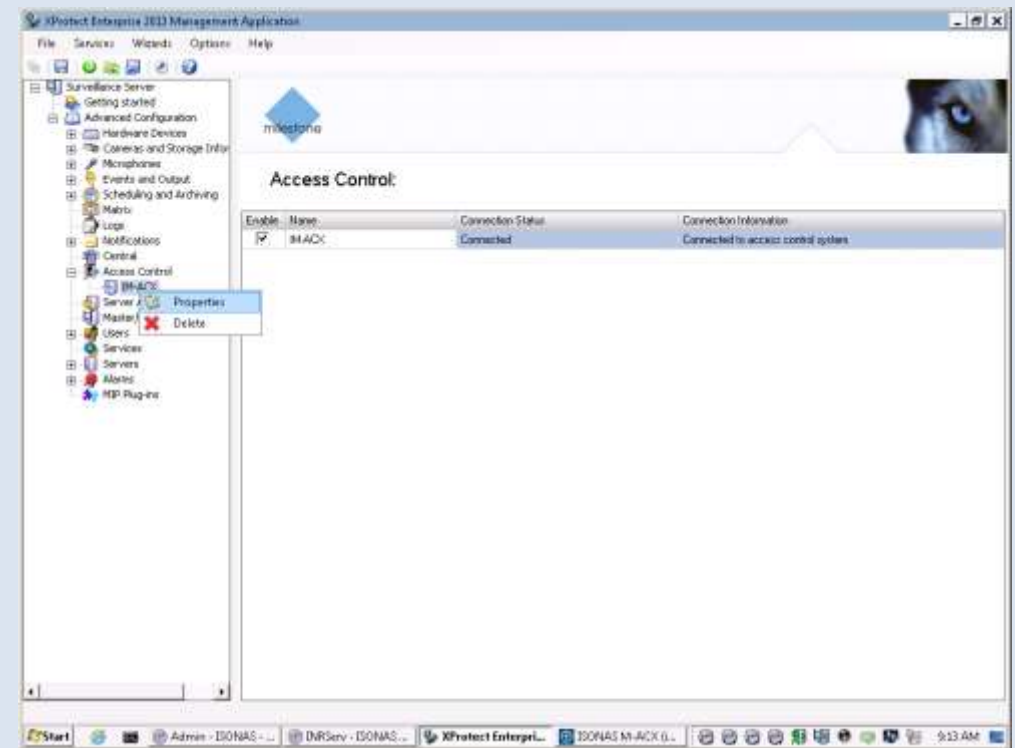
Step Number	Mark when Complete	Description (XProtect Mgmt -- Enterprise)
001		<p>Select the "Access Control" entry listed in the management application's system tree.</p> 

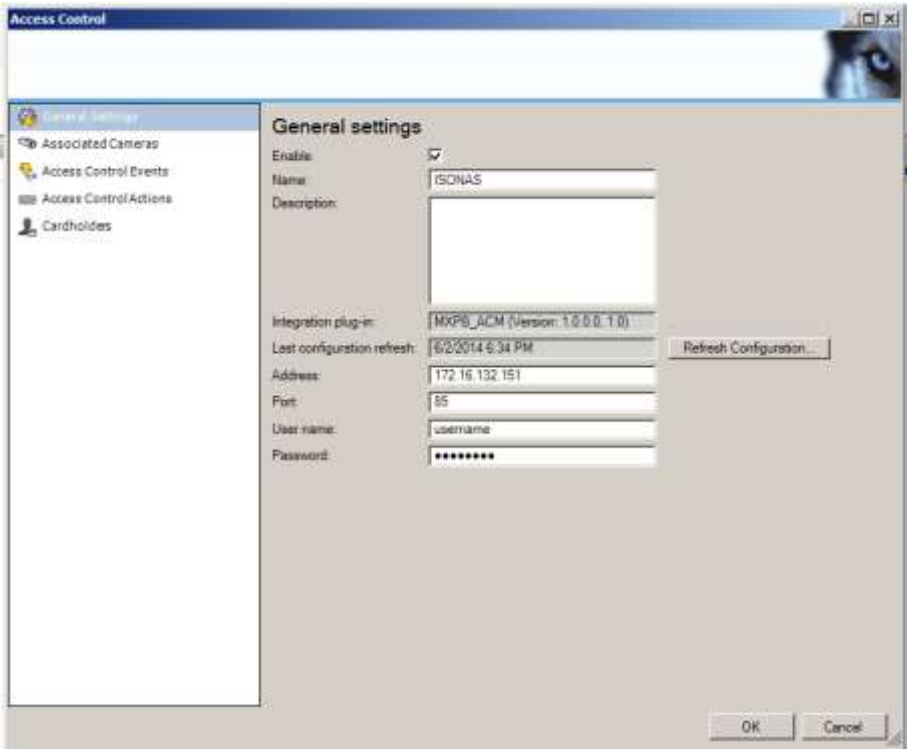
Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
-------------	--------------------	-------------	-------------------------------

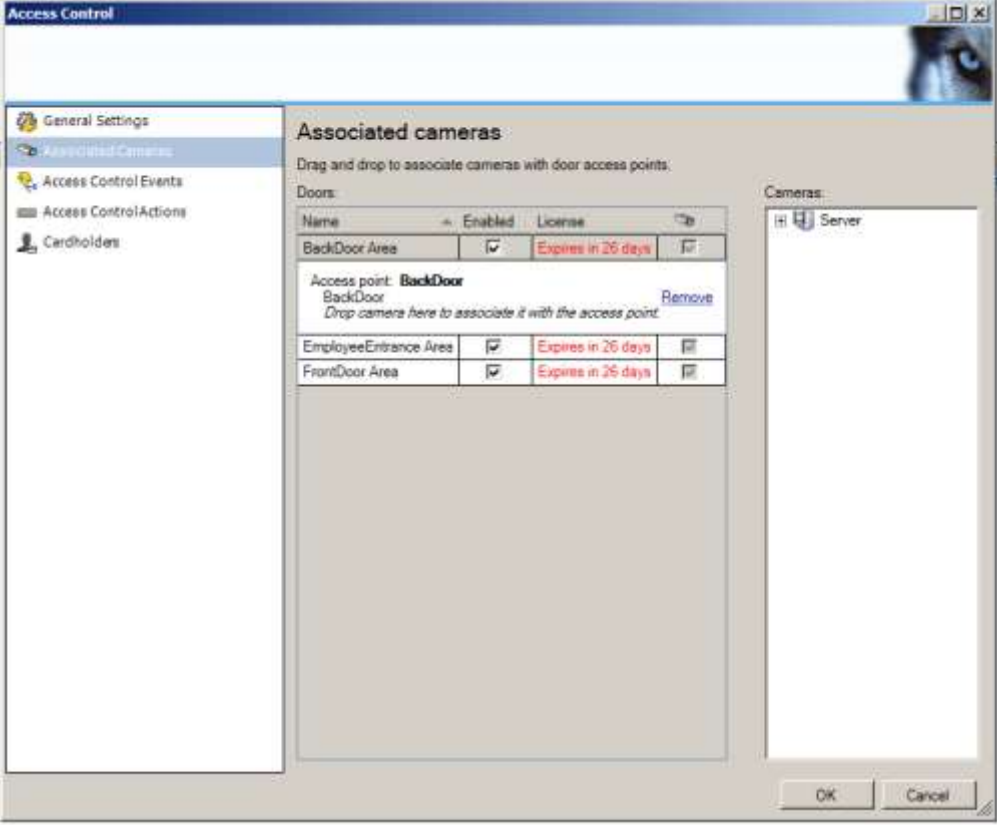
002		<p>Select the branch entry under the "Access Control" entry.</p>	
-----	--	--	--



003		<p>Right-click on the entry, and select Properties.</p>	
-----	--	---	--



Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
004		<p>The window below shows Milestone’s General Setting for the interface.</p> 	

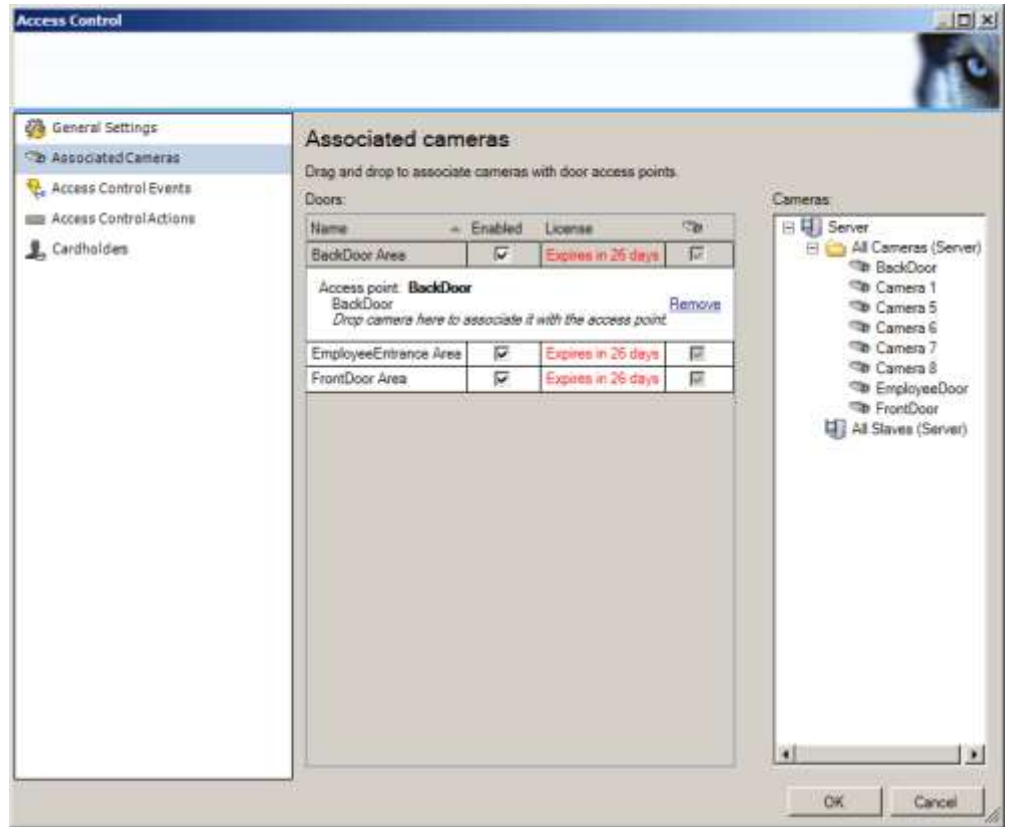
Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
005		<p>The windows below shows how to associate cameras with PowerNet readers imported from the Access Control system.</p> 	

Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
-------------	--------------------	-------------	-------------------------------

006

Associating a camera to a specific door is done by:

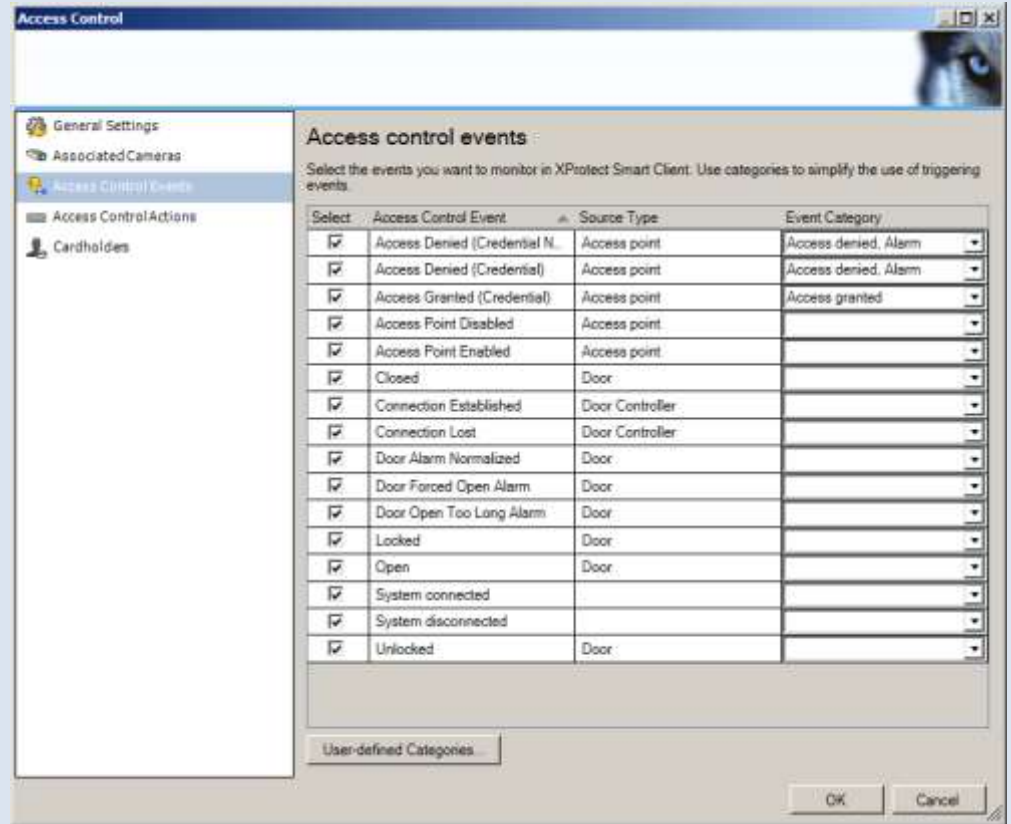
- Expanding the list of cameras on the tree list.
- Select the camera of interest, and drag it onto the door entry in the middle of the window.



Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
-------------	--------------------	-------------	-------------------------------

007

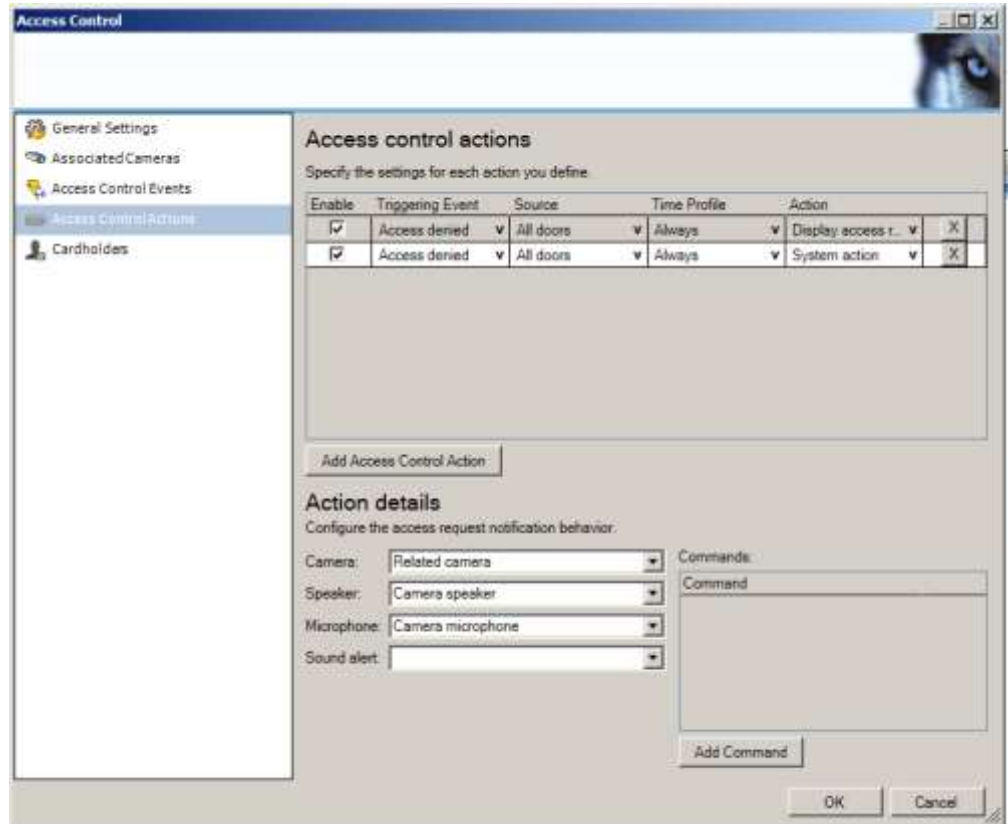
The window below shows the associated ISONAS Access Control events (right column) with XP-Access events (left column).



Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
-------------	--------------------	-------------	-------------------------------

008

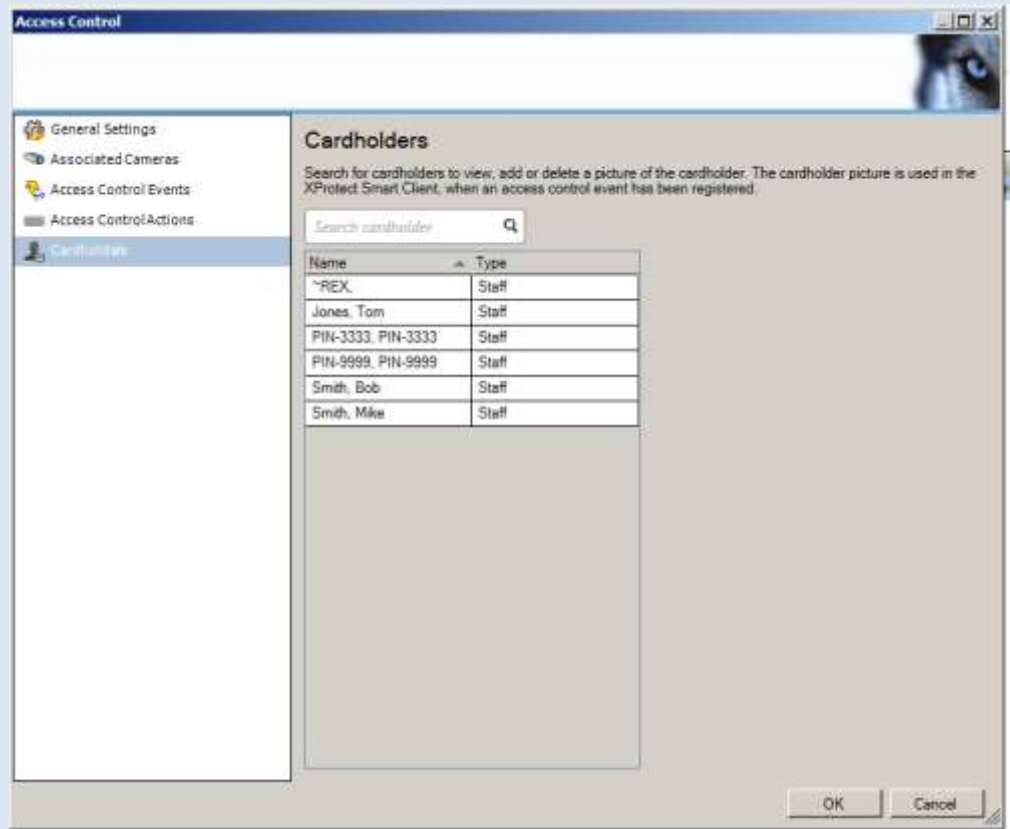
The window below shows how to assign Access Control actions (to occur when certain events occur).



Note: There can be a delay in the Milestone system making the Cardholders available. This delay can sometimes takes up to three (3) minutes.

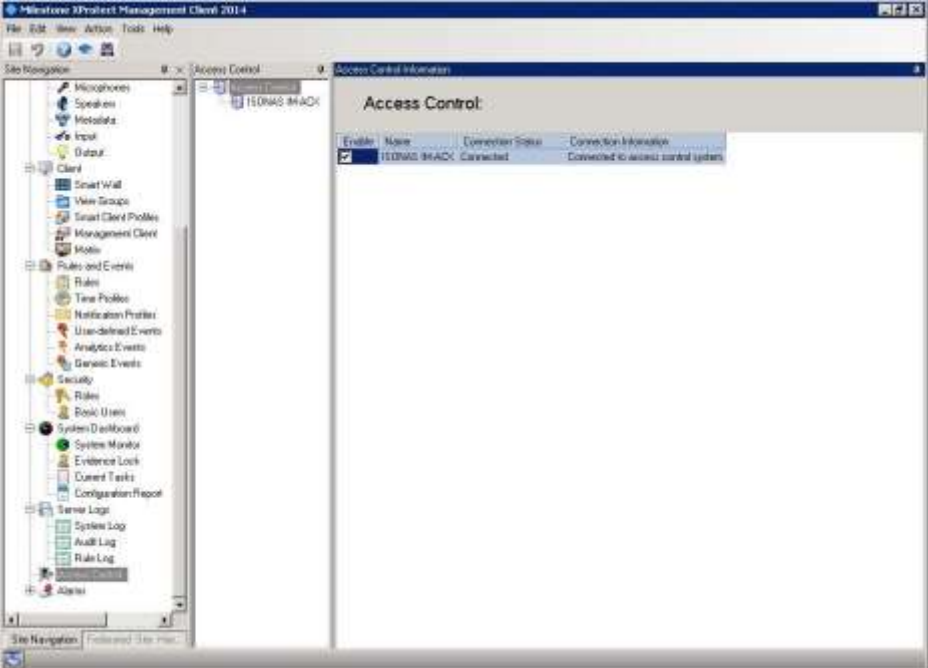
Step Number	Mark when Complete	Description	(XProtect Mgmt -- Enterprise)
-------------	--------------------	-------------	-------------------------------

009		The window below is used to review the ISONAS Cardholders (automatically imported from ISONAS). (Note that the images are automatically also imported when the cardholders themselves are imported. This step allows imported images to be overridden if necessary.)	
-----	--	--	--



6.6.2. XProtect Corporate Management Application

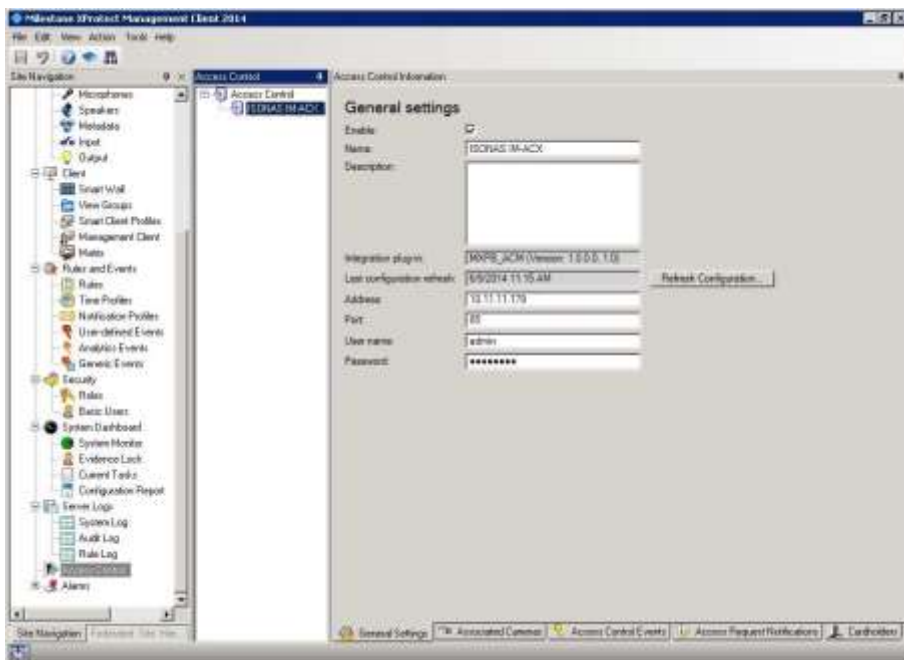
The XProtect Management Application provides the configuration options for the interface with the Access Control system.

Step Number	Mark when Complete	Description (XProtect Mgmt -- Corporate)
001		<p>Select the "Access Control" entry listed in the management application's system tree.</p>  <p>Right Click on the entry, and select Properties.</p>

Step Number	Mark when Complete	Description	(XProtect Mgmt -- Corporate)
-------------	--------------------	-------------	------------------------------

002

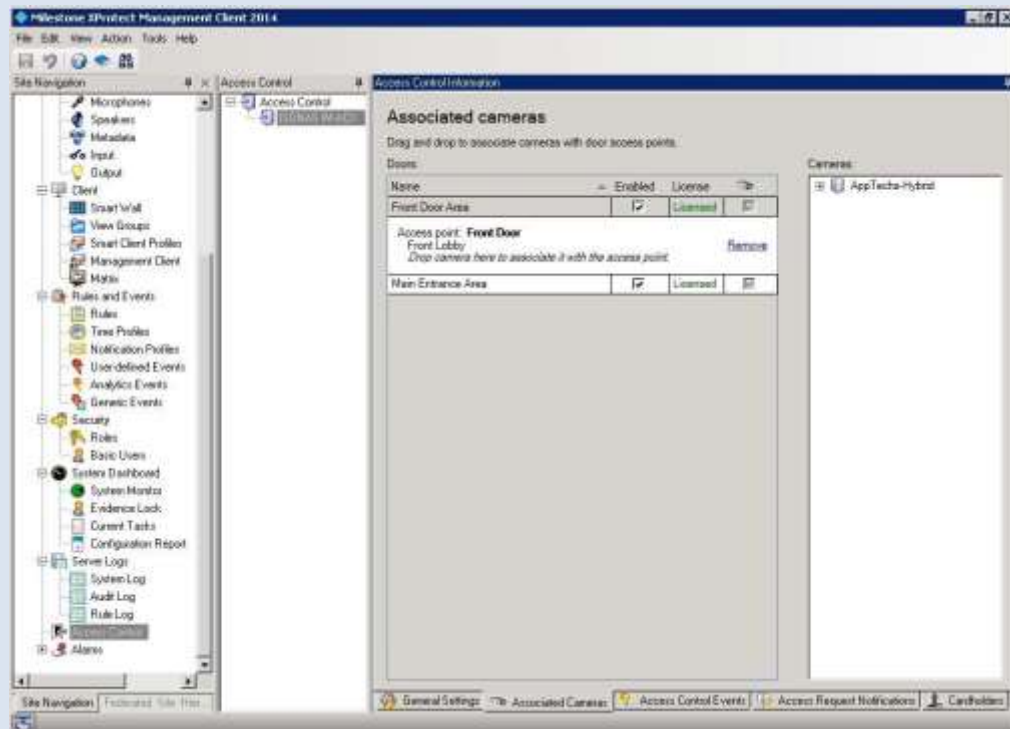
The window below shows Milestone's General Setting for the interface.



Step Number	Mark when Complete	Description	(XProtect Mgmt -- Corporate)
-------------	--------------------	-------------	------------------------------

003

The windows below show is used to associate cameras with PowerNets readers imported from the Access Control system.



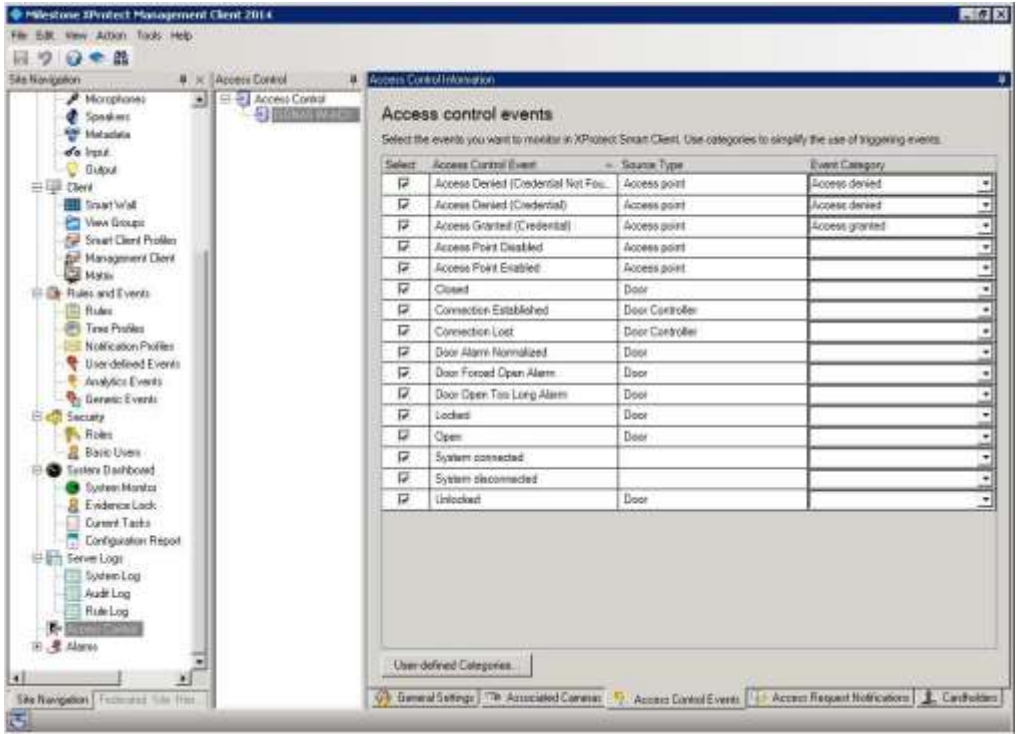
Associating a camera to a specific door is done by:

- Expanding the list of cameras on the tree list.
- Select the camera of interest, and drag it onto the door entry in the middle of the window.

Step Number	Mark when Complete	Description	(XProtect Mgmt -- Corporate)
-------------	--------------------	-------------	------------------------------

004			
------------	--	--	--

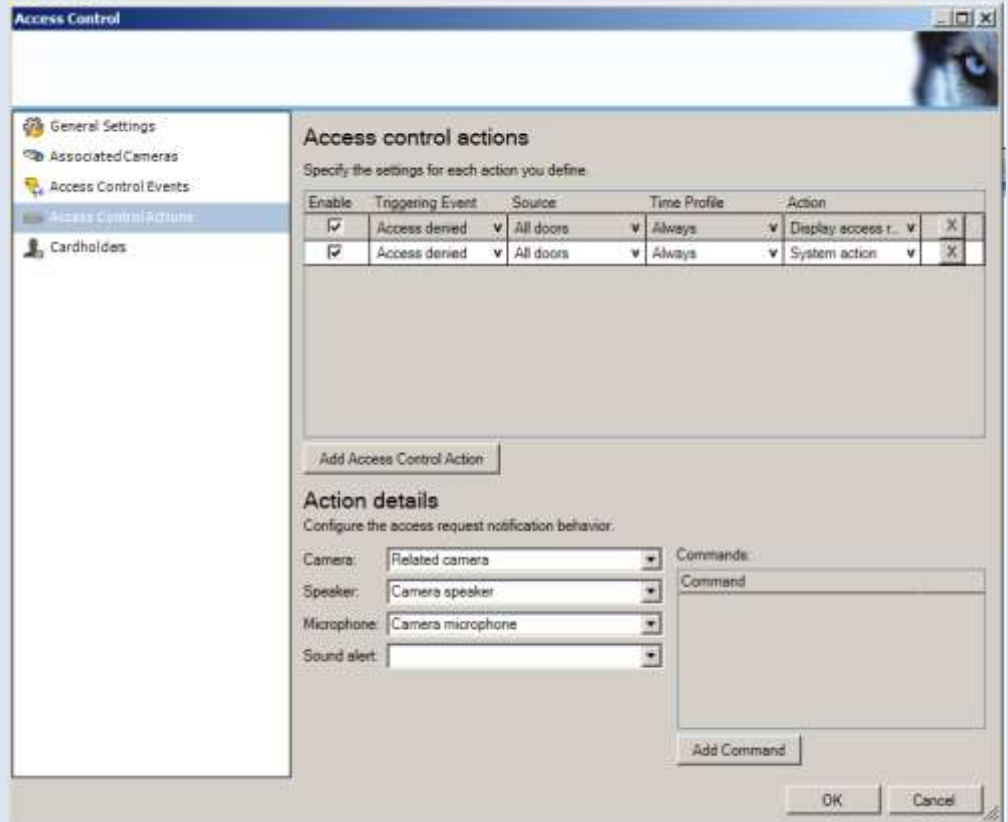
The window below shows the association of ISONAS Access Control events (right column) with XP-Access events (left column).



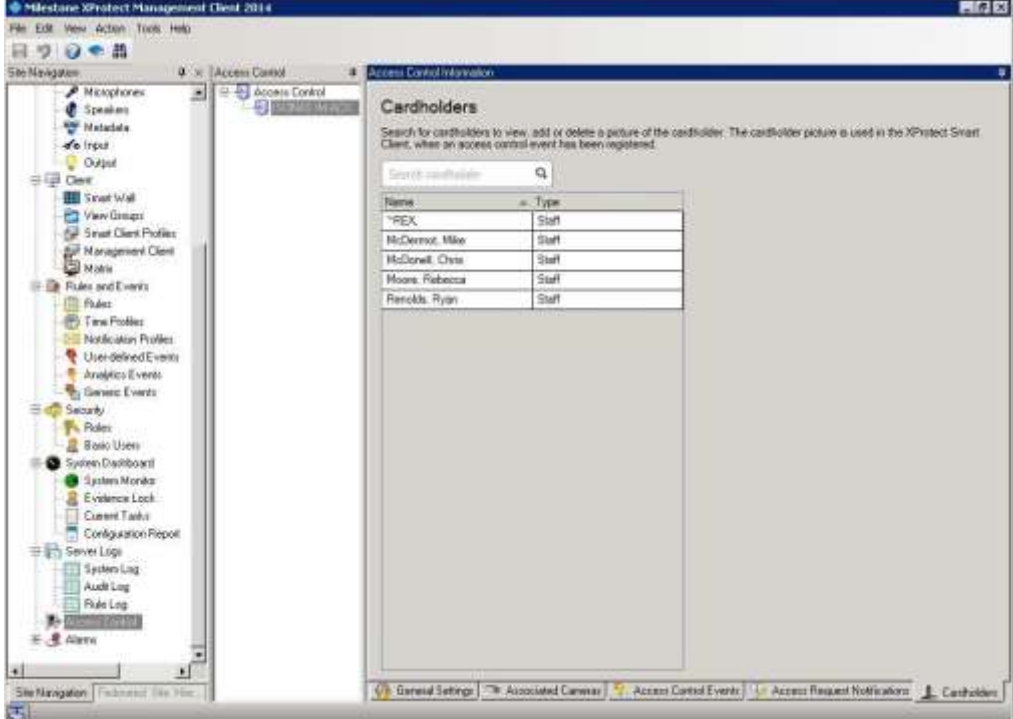
Step Number	Mark when Complete	Description	(XProtect Mgmt -- Corporate)
-------------	--------------------	-------------	------------------------------

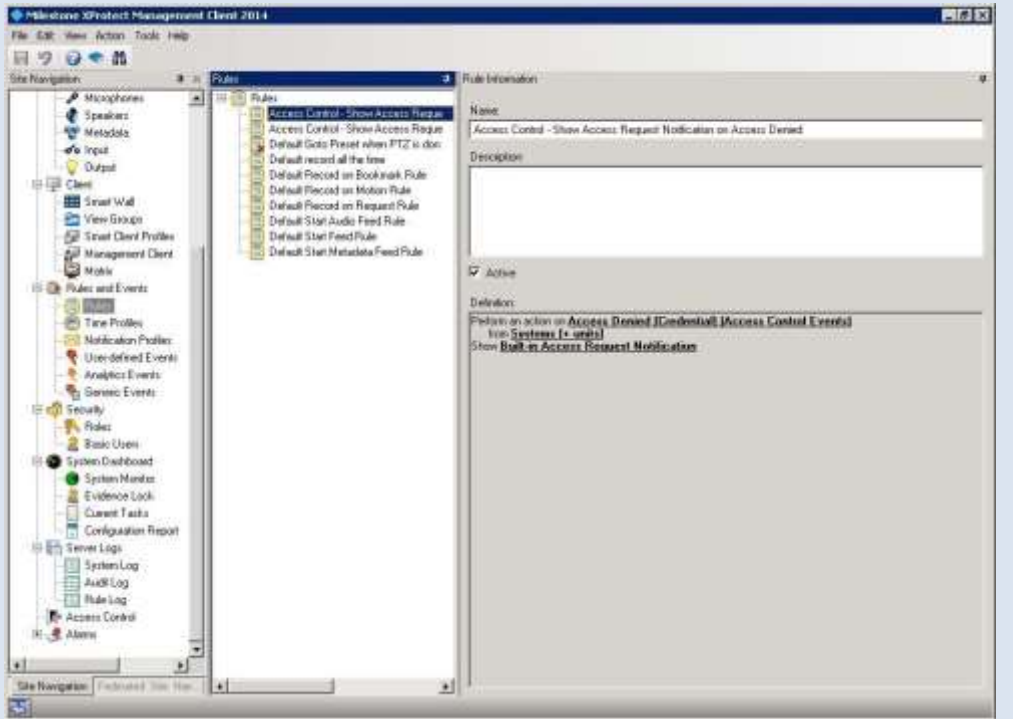
005

The window below is used to assign Access Control actions (to occur when certain events occur).



Step Number	Mark when Complete	Description	(XProtect Mgmt -- Corporate)
-------------	--------------------	-------------	------------------------------

006		<p>The window below is used to review the ISONAS Cardholders (automatically imported from ISONAS). (Note that the images are automatically also imported when the cardholders themselves are imported. This step allows imported images to be overridden if necessary.)</p>  <table border="1" data-bbox="885 556 1193 1039"> <thead> <tr> <th>Name</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>*REX</td> <td>Staff</td> </tr> <tr> <td>McDonnell, Mike</td> <td>Staff</td> </tr> <tr> <td>McDonnell, Chris</td> <td>Staff</td> </tr> <tr> <td>Moore, Rebecca</td> <td>Staff</td> </tr> <tr> <td>Rencolds, Ryan</td> <td>Staff</td> </tr> </tbody> </table>	Name	Type	*REX	Staff	McDonnell, Mike	Staff	McDonnell, Chris	Staff	Moore, Rebecca	Staff	Rencolds, Ryan	Staff	
Name	Type														
*REX	Staff														
McDonnell, Mike	Staff														
McDonnell, Chris	Staff														
Moore, Rebecca	Staff														
Rencolds, Ryan	Staff														

007		<p>This window is where the XProtect rules engine can be configured to respond to events from the Access Control System.</p>  <p>Rule Information</p> <p>Name: Access Control - Show Access Request Notification on Access Denied</p> <p>Description:</p> <p><input checked="" type="checkbox"/> Active</p> <p>Definition: Perform an action on Access Denied (Credential) (Access Control Events) with System (Events) Show Built-in Access Request Notification</p>	
-----	--	---	--

7. Operations

7.1. Start up

Once all subsystems are configured, insure the following, in this order;

1. IM-ACX is running
2. ISONAS PANRServ (Notification and Request Service) is running
3. Milestone XProtect is running
4. XProtect Event Server is running

7.2. Recovery

If the system becomes disabled or appears to be “locked up”, there are basic procedures to restart the various subsystems.

The link between IM-ACX and ISONAS is fairly fault-tolerant, and restarts of either IM-ACX or PANRServ are generally not required.

In such cases, restart the services in the following order:

1. Insure that ISONAS PANRServ (Notification and Request Service) is running
2. **Stop** XProtect Event Server service
3. **Stop** IM-ACX (Desktop application or Windows Service)
4. **Start** IM-ACX (Desktop application or Windows Service)
5. **Start** XProtect Event Server service

The XProtect Event Server may require a couple minutes to fully recover. As such, any previously-opened instances of the Smart Client will need to switch off and back onto the desired view in order to refresh the XP-Access data and/or map icons. If that does not properly restore the data within the view, then perform a logout and re-login.

8. Example Smart Client Views

8.1. Access Denied

The screenshot displays the Milestone XProtect Smart Client interface. The top navigation bar includes 'Live', 'Playback', 'Sequence Explorer', 'Alarm Manager', and 'Access Control'. The main window is divided into three sections:

- Event Log:** A table listing access events. The selected event is 'Access Denied (Credential)' at 3/12/2014 2:16:22 PM, occurring at the 'Main Entrance' for user 'Moore, Rebecca'.
- Video Feed:** A live camera view of the 'Office Entrance' at 2:16:36.962 PM, showing a person standing near a door.
- Event Details Panel:** A pop-up window titled 'Access Denied (Credential)' providing details for the selected event:
 - Time:** 3/12/2014 2:16:22 PM
 - Location:** Main Entrance
 - User:** Moore, Rebecca
 - Role:** Staff
 - Valid from:** 3/12/2014
 - Valid to:** Not set
 - Card number:** 0000

8.2. Notification / Alert

The screenshot shows a notification window titled 'Notifications - Milestone XProtect'. The notification details are:

- Event Type:** Access Request - Main Entrance
- Time:** 1:04:42 PM
- Event Description:** Access Denied (Credential Not Found)
- Location:** Office Entrance
- Status:** Recording

Below the notification text is a video feed showing a person at the entrance. At the bottom of the window, there is a 'Close request' button and a status indicator 'Closed, Locked'.

9. Startup Command Line Options

The application can be started with a variety of options. Command line options are as follows:

IM-ACX.exe [/OPTIONS] [[LocalServerPort] MilestoneHostIPAddress MilestoneHostPort]

Where options are:

/A Alarm Reminders mode

/M3 shows all messages. /M2, /M1, /M0 shows least messages (overridden by ini file once saved)

/i:optionalIniName - if no path then current working directory

/L:optionalLicenseFile – defaults to current working directory - do not specify path

LocalServerPort = the local server's listening port

MilestoneHostIPAddress = recipientIP_Name

MilestoneHostPort = recipientIP_Port

Samples of typical options include:

- IM-ACX /i:myIniFile.ini
- IM-ACX /i:myIniFile.ini /L:myLicenseFileName.lic

10. Legal

10.1. Trademarks

IM-ACX™ and the ISONAS logo are trademarks of ISONAS.

All other trademarks mentioned in this document belong to their respective owners.

10.2. Licenses and Copyrights

Refer to the Installer for the full text of the software License, Copyright and Warranty details.

10.3. Surveillance Privacy

Always use discretion when installing video and / or surveillance equipment especially when there is perceived privacy, or an expectation of privacy. Inquire regarding federal, state and / or local regulation applicable to the lawful installation of video and / or audio recording or surveillance equipment. Party consent may be required.

For Additional Information:

ISONAS, Inc
4750 Walnut Street, Suite 110, Boulder, Colorado 80301 USA
Tel: 800-581-0083 (toll-free) or 303-567-6516 (CO)
Fax: 303-567-6991

Web: www.isonas.com
E-mail: sales@isonas.com