

DEEP PERCEPTION



PerceptEdge User Manual Version 1.2 - 2025-May-09



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PerceptEdge Milestone Appliance Installation Guide - Version 1.2 2025-May-09



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Initial Setup

Milestone XProtect Initial Configuration

The PerceptEdge AI Appliances support all versions of Milestone XProtect that are 2022R1 or newer. The VideoOS Processing Server plugin must be installed on all systems running the Milestone XProtect Management Client used to configure analytics.

Software Packages

Required - Install the AI Bridge Video Processing Server Plugin on the system running the Milestone XProtect Management Client that will be used to configure the VMS instance for use with the PerceptEdge Appliance.

https://storage.googleapis.com/deepperception_public/milestone_components/VideoOS.Proces_singServer.Plugin.Admin.Installer.exe

Recommended – Install the PerceptEdge Search Agent on all systems running the Milestone XProtect Smart Client

https://storage.googleapis.com/deepperception_public/milestone_components/PerceptEdge%2 0Milestone%20XProtect%20Search%20Agent%20Installer.exe

Optional – If SSL is enabled on the VMS instance a PFX certificate file will need to be generated for the appliance. The following PowerShell script can be run on the system with access to sign with the VMS Root Certificate.

https://storage.googleapis.com/deepperception_public/milestone_components/Create_SSL_DP __Appliance.ps1

For more information on SSL and certificates see: <u>https://doc.milestonesys.com/latest/en-US/portal/htm/chapter-page-certificates-guide.htm</u>

Create Basic User

In order to connect the PerceptEdge Appliance, a new Basic User must be created using the Milestone XProtect Management Client. Make sure to uncheck "Force Basic User to change password on next login".



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Once the Basic User has been created, add them to the Administrator Role.



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Enable Analytics Events

In the XProtect Management Client, select Tools \rightarrow Options and then navigate to the Analytics Event Tab. Enable Analytics by checking the box.

Options					×
External IDP	Audio Messages	Privacy settings	Access Control Settings	Analytics Events	Customer Dashboard -
Analytics ev	ents				
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Security					
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All netv	work addresses				
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	Import				



By default analytics events have a 1 day retention period. Adjust as needed from the Alarms and Events tab.

ccess Control Settings	Analytics Events	Customer Dashboard	Alarms and Events	Generic Events		-
Alarm settings						
Keep closed alarms fo	c.			1	day	(s)
Keep all other alarms	for:			30	day	(s)
Log settings						
Enable verbose lo	igging					
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System Events				0	~	
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▷ Hardware Events				0	~	
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Analytics Events			[1	~	
Access Control Ev	ents			0		
Transaction event	s			1		
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Enable Metadata Search

To enable Metadata Search in the XProtect Smart Client, navigate to the Metadata Use \rightarrow Metadata Search settings in the XProtect Management Client and enable the desired options.

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Milestone XProtect Management C	Dient 2025 B1		-	0	X
Ele View Action Maintenance To	ole liele				
	and thep				
Site Navigation	- A X Metadata Search	a Mishibity in XPotent Smart Client	_	-	
E: D WIN11-NUC13 - (25.1h)	E Search Categories				-
Basics	Location	To enable the visibility of a search category or a search filter in XProtect Smart Client, select the corresponding check box.			
License Information	1 People	Note: This setting applies only to Milestone metadata search categories and search filters. The visibility of other Milestone search categories and search filters are not affected	L I		
Site Information	- K Vehicles				
B Servers		✓ People			
Recording Servers					
Processing Servers		V Age			
Devices		L Face			
-SR Cameras		Gender			
- Microphones		Height			
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Matrix					
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System Dashboard					
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The current PerceptEdge Appliances support the following options with more coming with future updates.

- People
 - Age
 - Gender
- Vehicles
 - Color
 - Vehicle Type

PerceptEdge Appliance Setup

The PerceptEdge appliance will arrive set to DHCP and will easily connect to your local network. Locate the IP address of the PerceptEdge appliance on your network. Alternatively connect a keyboard, mouse and monitor to the appliance and configure through the local browser interface.

During the initial setup of the PerceptEdge appliance, you will be prompted to create an admin account through the UI.

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After creating the administrator account you will be prompted to confirm or modify the network settings for the appliance. If you have SSL enabled on your Milestone XProtect VMS instance, it is strongly recommended you configure the appliance to use a static IP address since the SSL certificates will reference both the hostname and IP address of the appliance.



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	Search Domain *			
	deepperception.net			
	Prov.			
	Select the proxy type from the dropdown below.			
	None 0			
	myproxy.example.com			
	Port* 8123			
	Username *			
	Password *			
	password &			
	UNS Server			
	No Proxy Addresses * 152.10.30.4, 253.11.0/16			
	Confirm Network)		
	Complete	j		

Changing network settings will trigger a reboot of the appliance. Once you are happy with the setting, click "Confirm Network" and then "Complete" to exit the initial setup.

Connection to Milestone XProtect

Enter the connection URL plus information for the Basic User created above. If the VMS instance has TLS enabled, use "https" in the connection URL plus upload the PFX file.



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→ C ▲ Not Secure 192.168.10.120	settings/vms/milestone		∞ ☆ ¤ ⊉ @
		Cameras Events Configuration	G (
Settings Manage your platform settings here.			
General	Milestone VMS Connection	Reset VMS Selection	
VMS Integration	Connection URL *		
Network	The URL to connect the Milestone AI Bridge to the Milesto	ie VMS.	
	http://win11-nuc13.deepperception.net		
	User Information		
	The username and password below come from the accour Username *	t created in the Milestone Managment Client.	
	aibridge		
	Password • 🗞 Confirm passwor	d • Ø	
	TLS Configuration		
	If the Milestone VMS is setup with TLS connectivity, enable	TLS here in order to properly connect. If the VMS is not setup with TLS, this can be ignored.	
		E) Save	

Upon clicking save, the PerceptEdge appliance will reboot and initiate the connection to the Milestone VMS instance with the provided credentials. To monitor the connection status, log back in and navigate to the VMS Integration page.



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DEEP PERCEPTION	Cameras Events Configuration	G
Settings Manage your platform settings here.		My Ac Setting Profile
General	Milestone VMS Connection Reset VMS Selection	Logout
Hardware VMS Integration Network	Processing Server Name: Deep Perception Al Bridge (dccf480e)	
	Connection URL *	
	The URL to connect the Milestone AI Bridge to the Milestone VMS.	
	http://win11-nuc13.deepperception.net	
	User Information	
	The username and password below come from the account created in the Milestone Managment Client.	
	Username *	
	albridge	
	Password * 🖄 Confirm password * 🖄	
	Passwords do not match	
	TLS Configuration	
	If the Milestone VMS is setup with TLS connectivity, enable TLS here in order to properly connect. If the VMS is not setup with TLS, this can be ignored.	

Once the connection completes, navigate to the Cameras page to continue the setup process.

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EEP PERCEPTION ameras meras available to enhance with AI.	Cameras Events Configuration	
 AXIS M1075-L Box Camera (192.168.10.11) AXIS M3216-LVE Dome Camera (192.168.10.1 Car 1 Office 1 Office 1 Office 2 Office 3 Office 4 VIVOTEK IB9380-H (192.168.10.12) - Camera 1 	Camera Name: Office 1 Camera Status: • Not Processing IP Address: Uth: trsp:/f92.168.10.120:855.4/77aaddc5-16/e-4e85-b243-3e4a98e164c1/28dc44c3- 079e-4c94-8ec9-60383451eb40 Type: direct Type: direct Provided by: Milestone	
	** Camera Analytics This toggle can be used to turn onjoff all analytics for this camera. Disabling analytics will turn off any e Image: The state of the	vent triggers for this camera, but the camera trigger and event data will not be deleted.



Camera Setup

Deep Perception offers a variety of PerceptEdge Appliances that support 8, 16 or 24 active analytics channels. You may activate up to the number of supported channels for your particular appliance model.

The camera(s) need to be enabled in both the PerceptEdge UI and in the XProtect Management Client following the procedure below.

PerceptEdge UI

From the Cameras View, enable analytics on the desired camera(s)

→ C ▲ Not Secure 192.168.10.120/cameras/77aaddc5-1	6fe-4e85-b243-3e4a98e164c1	± ± ±
	Cameras Events Configuration	Ğ
Cameras Cameras available to enhance with Al.		
 AXIS M1075-L Box Camera (192.168.10.11) AXIS M3216-LVE Dome Camera (192.168.10.1 Car 1 	Camera Name: Office 1 Camera Status:	
Office 1	Not Processing IP Address: Urt:rtp://192.168.10.120:8554/77aaddc5-16/e-4e85-b243-3e4a98e164c1/28dc44c3- 079e-4c94-8ee3-e60383451eb40 Twne:rifect	
 Office 2 Office 3 Office 4 		
VIVOTEK IB9380-H (192.168.10.12) - Camera 1	Provided by: Milestone	
	** Camera Analytics This toggle can be used to turn on/off all analytics for this camera. Disabling analytics will turn off any e Analytics Enabled ** Refresh Snapshot	vent triggers for this camera, but the camera trigger and event data will not be deleted.
	Get a new snapshot from the camera stream Refreah Snapshot	

Milestone XProtect Management Client

First verify the Processing Server Plugin is properly installed by navigating to the Processing Servers menu item. You should see an entry for the connected appliance. If you do not see the Processing Server entry under navigation, please make sure the Processing Server Plugin listed above is installed and reload the Management Client.



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MILESTONE2 - (24.2c) Servers	Patra Canada	
Basics Deep Perception Al Bridge (dcc14		
El License Information	Hostmane:	
Uservers	132.166.10.120	
	Server name:	
Processing Servers	Livesp herception wit analysis (picar4ove)	
Devices	Server description:	
- To Cameras	Deep Perception, nr. A Bioge	
Microphones		
- Speakers - Statute Metadata	Megatered applications:	
- do Input	Name	
- Output	Life Cooling Metadata	
- Yew Groups	Object Detection	· · · · · · · · · · · · · · · · · · ·
- 🛃 Smart Client Profiles	Decipancy	
Matrix		Unregister Unselect
Rules	Showing details about Processing server (select allong appscations above to see details about these)	
- Time Profiles		
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Over-detined Events Analytics Events	DEEP PERCEPTION Home solutions multistries alog About os	
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Next for each camera that you plan on using with the PerceptEdge AI Appliance, navigate to the Processing Server tab and check the box for "Deep Perception AI Bridge" under app subscriptions.

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File View Action Maintenance Tools Help							
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Site Navigation - 4 >	Recording Server		→ ∓ F	Properties			↓ ₹
HILESTONE2 - (24.2c)	Filter your devices		~	Processing settings			
E License Information	Hide disabled devices		_	Video stream: Video stream 1			
R Site Information	the second servers			Video socari 1			
🕀 🚺 Servers	HILESTONE2			And a building		for a state	Basedates
Recording Servers	AXIS M10/5-L Box Camera (192, 168, 10, 11)			App subscriptions	Type	Pormat	Description
Processing Servers	AXIS M3216-LVE Dome Camera (192.168.10.10) - Camera 1			🚊 🕑 LineCrossing			
Devices	Gar 1 [metadata-onvif_analytics] Stable ERC T200 (levelbast)			Ine_crossed	Event	analytics_event	Object crossed line
- Cameras	Stable PS_1000 (localhost) Stable PPS_1300 (localhost)			metadata	Metadata	onvif analytics	Person and Vehicle metadata
- P Microphones	Gamma StableFPS_T800 (localhost)			Object Detection			
Speakers	StableFPS_T800 (localhost) StableFPS_T800 (localhost)			object_detected	Event	analytics_event	Object detected in the stream
of Incut	III III VIVOTEK IB9380-H (192.168.10.12)			e occupancy	Event	analytics_event	Detect occupancy crossed thresholds
- Q Output				E Time In Area	Event	peopletice quest	Datast time in seas or leitaring
e 🐺 Client				time_in_area	Event	analytics_event	Detett time in area or loitering
- View Groups							
Smart Client Profiles							
B Bules and Events							
Rules							
Time Profiles							
Notification Profiles							
Analytics Events							
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This process will automatically configure the metadata VPS driver and add the necessary events to the VMS instance.

Analytics Configuration

Object Detection

Sends an event when an object is detected.

Required

- Event Name
- Object Type (1 or more must be selected)
- Event Enabled must be toggled on for events to trigger

Optional

- Zone Filter
 - Include Area object must be within the zone for the event to trigger
 - Exclude Area(s) allows a portion of a zone to be carved out to prevent triggers
 - Additional manipulation points can be created by clicking the white "+" on the line segments





Occupancy

Sends an alert with the count of objects is less than or greater than a specified number for a set time interval.

Required

- Event Name
- Object Type (1 or more must be selected)
- Occupancy Settings including greater/less than, count and duration
- Event Enabled must be toggled on for events to trigger

Optional

- Zone Filter
 - \circ Include Area object must be within the zone for the event to trigger
 - Exclude Area(s) allows a portion of a zone to be carved out to prevent triggers
 - Additional manipulation points can be created by clicking the white "+" on the line segments



Line Crossing

Sends an event when an object crosses a line segment with the object of specifying the direction.



Required

- Event Name
- Object Type (1 or more must be selected)
- Line Segment
- Event Enabled must be toggled on for events to trigger

Optional

• Line Crossing Direction



Time in Area

Sends an event when an object is detected for longer than a set time period.

Required

- Event Name
- Object Type (1 or more must be selected)
- Event Enabled must be toggled on for events to trigger
- Time period in seconds to trigger the event

Optional

- Zone Filter
 - Include Area object must be within the zone for the event to trigger
 - Exclude Area(s) allows a portion of a zone to be carved out to prevent triggers



 Additional manipulation points can be created by clicking the white "+" on the line segments



Metadata

Metadata is configured on a per camera basis. Person and vehicle metadata options may be enabled at the same time.





Additional Options

Settings Menu

The settings menu can be used to view information about the PerceptEdge Appliance in addition to modifying the VMS Integration and Network Settings after the initial setup.



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DEEP PERCEPTION	Cameras Events Configuration	G
		My Ac
Settings		Settin
nanage your platform settings ner		Profile
		Admin
General	General Settings	Save Save
Hardware	Manage general settings of the application here.	El Save
VMS Integration	Stop Processing	
Network	By clicking this button, you will stop all of your streams from being processed.	
	Stop Processing	
	Restart Processing	
	By setting this to enabled, the system will relaunch any enabled triggers if there is a system issue, such as a power outage.	
	in utsabled, you will need to manually click the start Processing button to restart your event drygers.	
	Enablieu 🗸	
	By clicking this button, you will start all triggers that are set as enabled.	
	Restart All Services	
	Restart All Services Click the button below to restart all the application services.	
	Restart All Services Click the button below to restart all the application services. Restart	
	Restart All Services Click the button below to restart all the application services. Restart	
	Restart All Services Click the button below to restart all the application services. Restart	
	Restart All Services Click the button below to restart all the application services. Restart	

Admin Page

The Admin Page can be used to create new users in addition to modifying the user settings including passwords and permissions.



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← → ♂ ▲ Not Secure 192.168.10.120/admin		* ¤ ¤ © :
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and the second s		
	New User P. X	
	Password * & Confirm password * &	
	Active Superuser	
	Cancel Save	



Milestone XProtect Smart Client Integration

Live View

Bounding Boxes will be displayed in the Live View for all cameras that have Metadata enabled.



PerceptEdge Event Search

When the PerceptEdge Search Agent is installed, advanced event drill down search is supported.

The PerceptEdge Search Agent enables filtering of events by the following:

- Event Type
 - Object Detection
 - Line Crossing
 - Occupancy
 - Time in Area
- Time of Day allows search between the same time window on multiple days
- Triggering Object Type
 - Person
 - Vehicle





Without the search agent, the standard event search functionality is still available.

Metadata Search

The built in Metadata Search functionality can be used to search for people and vehicles including support for filtering.



Vehicles



People





Appendix

Architecture Diagram





Milestone Verified

Confirmation of Compatibility
Partner : Deep Perception
Product Type : Analytics (General)
Partner Product : PerceptEdge v1.0
Integration Method : AI Bridge / Search Agent
Milestone XProtect® version verified with : XProtect Professional+ 2025 R1
Milestone XProtect® version supported (*) : All newer with encryption
Date of Verification : 2025-05-09



Summary of Verification Documentation

Partner provided a remote desktop session to Milestone where the Partner Product proved to be compatible with XProtect[®] version applied.

The Partner Product's compatibility is verified by Milestone Engineers. Partner provided Milestone with the following for the verification process:

- Architecture diagram showing the data flow
- Screenshots
- Additional Documents such as user and administrator manuals

Conclusion

Milestone confirms to have reviewed the verification documentation and on the date of such review, and to the best of our knowledge, the Product is compatible with the Milestone XProtect version applied in the testing environment. For information on the testing environment and the verification documentation please contact our Partner.

About Milestone Verification

Milestone Verification is intended to verify the compatibility of the partner's specific product, based on the documentation submitted, with a current Milestone XProtect[®] video management software (VMS).

Milestone provides guidance, tools, and suggested methods for the verification. The verification setup, configuration, testing, and operations are conducted by the partner, and the test result is verified by Milestone.

Milestone does not warrant our partners' products nor functionalities. Milestone only verifies compatibility with the Milestone XProtect version applied in verification tests. Milestone does not verify product compatibility for installations not comparable with the testing environment.

(*) Product tested outside of the verification by partner and found compatible with these products. Larger defined as more advanced (Essential+ < Express+ < Professional+ < Expert < Corporate)