Snap Surveillance FMx – FAQ

Q: How does Snap differ from competitors?

Snap is unique in its patented approach to automatically mapping a camera network topology – focusing on the camera network as a whole, rather than individual cameras - and presenting that information intuitively to an operator. Snap learns how cameras relate to each other - by watching and analysing video streams.

Snap does not try and replace the operator or to automatically "understand" video, but instead focuses on using our understanding of camera relationships to help improve the operator's performance and their ability to quickly and effectively review video footage within large camera networks.

Q: How does Snap allow tracking in a crowded scene such as a mall or station?

Firstly, it is important to note that Snap is NOT an automated tracker, and is not seeking to provide a "tag and track" functionality. Our approach is to instead assist the operator in more tracking from camera to camera – in recognition of the fact that a human operator is far more capable at identifying and recognising a subject of interest moving within a busy scene. A human is very good at picking out a subject of interest within video streams when presented with the right camera views, logically arranged – so that's what Snap does.

By comparison, tracking a subject automatically from camera to camera may work in fairly simple scenarios and quiet locations, but is not computationally practical or reliable in most real world situations – especially in large camera networks.

Q: What are considerations to be aware of in determining how well Snap FMx is likely to work at a particular site – in terms of number, type and layout of cameras and in the type of scene being surveilled?

Snap is best utilised with a high proportion of fixed cameras, and with a good camera "density". If there are PTZ cameras then these will preferably have a defined Home position that they are normally set to.
Snap is best used with IP cameras, although analog cameras can be accommodated via encoders. Snap typically adds benefits with higher numbers of cameras at a site to remove reliance on operators memorising the camera layout themselves. During our initial learning process, Snap does not require cameras to all intersect or overlap to create a relationship, but will tolerate some short separation between cameras. However, a camera layout with no overlapping fields of view and with sparse camera topology will not allow effective automated learning, and would therefore more labour intensive manual linking process to complete the installation.

Snap FMx will cater for most scenes indoor and outdoor, and for a wide range of activity within a scene. However initial learning periods will become protracted if the source video is either entirely very low or very high traffic. This can be addressed by setting the system to learn at chosen periods where activity across the network is known to be moderate rather than at the extremes.

Q: What are typical server specifications for a Snap FMx installation? What are the hardware considerations that come with Snap? Is it processor intensive?

For medium to large sites (over 200 cameras), Snap is processor intensive during the initial learning process - which may last a period of days or weeks depending on size and nature of site. After learning is complete however, the ongoing Snap hardware requirement is considerably lower.

The learning server/ hardware specifications depend on a number of factors, including number of channels, how quickly the system needs to be operational, availability of suitable archive data to learn from, ability to task existing site hardware or VM's in the short term for initial learning (for a few days or weeks).

As a general guide, for a site with 250-300 cameras, learning over one week with reasonable archive footage or low resolution live streams, then a typical server recommendation would be an Intel Xeon dual E5-2630V4 CPU, with at least 12GB RAM, 500GB storage, and dual 10Gbit NICs.

For sites with more than 350 cameras in a single grouped network, Snap would generally recommend a multi-server configuration during learning as being more cost effective than a single high end server specification.

As a guide to timing, Snap observes an initial learning duration of approximately two weeks per group of 500 cameras.

Snap also supports trials/ Proof of Concept installations, which would typically be run on a camera group of between 30 and 80 cameras. In that case a suitable specification for learning server would be a PC with new generation Intel quad core i7, 8 GB RAM, at least 250GB storage, and a 64 bit Windows OS.

After learning, regardless of site size, a typical Snap operational system would run on a wide range of servers or PCs, but for example a PC with Intel quad core i7, dedicated GPU, 8 GB RAM, and a 64 bit Windows OS – or a server with an Intel Xeon E5-2620 CPU.

Q: If I want to integrate Snap into this monitoring system that uses a VMS not on the current partner list then what is the process for that to happen and how long will it take?

The integration/ interfacing process depends on the video server architecture for the system and video management software being used.

Snap FMx has currently been integrated with Milestone XProtect, Siemens Siveillance, Avigilon Control Center, Genetec Security Center, FLIR / DVTel Latitude, and Honeywell DVM.

Snap interfaces with the video server to access live and archive video streams. For a new site using an VMS, SMS or PSIM product that Snap is not already tested with, the integration effort and time will depend on how those products allow access to the video servers. Typically a new integration will take Snap around 3 months to validate, assuming access is provided by the vendor to their SDK.

Snap is currently developing a more generic RTSP-based integration approach, which will enable faster turnaround of new integrations with VMS platforms supporting RTSP video stream outputs.

For a PSIM provider or system integrator, Snap can provide the camera network topology in a relational database for use by the PSIM GUI, or provide our own Snap GUI for access within the PSIM interface.

Q: Does Snap provide object recognition?

No. Snap uses image processing as part of our approach to learning camera relationships (how cameras are “linked”), but we don’t rely on object recognition to build our video pursuit UI. This ensures that Snap’s operation is largely independent on the type or volume of traffic in a scene, and is also why our pursuit software operates with low processing overhead across very large camera networks.

Snap can be integrated with other systems and analytics products that offer object recognition – where those systems tend to focus on each image processing at each camera individually and may provide triggers or cues to Snap – and then our software guides the user throughout the camera network.

Q: How is Snap’s software sold/ licensed?

Snap is purchased through our reseller network. In regions where we do not yet have resellers, we welcome introductions from end users to their preferred resellers.

Typically, Snap software licensing fees are paid as an up-front, one-off License Fee (for a perpetual license).

On top of this there is an optional annual payment for ongoing product maintenance and support – with two, three and five year support package options also available. As part of the support services Snap provides level 3 maintenance and support.

The other elements involved in a Snap deployment may be:

- Hardware costs – Snap provides recommendations on hardware requirements, based on review of site configuration and existing capacity. Snap does not sell hardware directly and does not have any proprietary hardware requirements;
- Installation services – Snap will work with resellers to ensure that appropriately trained staff deploy the Snap software. This effort would normally be provided by the reseller or integrator for the site, based on Snap's recommendations.