StorMagic

SOLUTION BRIEF

StorMagic ARQvault

VIDEO SURVEILLANCE SOLUTION OVERVIEW

Surveillance video is used to keep an eye on and control things. How do you keep an eye on and control your video?

SURVEILLANCE VIDEO USE IS PREVALENT AND POWERFUL

The use of video surveillance systems is growing at significant rates, with 10%+ annual growth rates expected over the next few years. Surveillance is no longer just a tool "in case something bad happens," but a tool for insight and analysis for organizations of all types, from retail to commercial, public and private. But with opportunity comes challenges. More and more cameras in more and more sites with higher and higher quality creates an explosion of video data. Ideally, you want to record continuously, which creates even more video. And evolving retention, compliance, and legal requirements mean you need to retain video for longer periods of time, if not forever.

To utilize and manage video many organizations implement a video management system, or VMS. Any VMS solution should address the many facets of video use and management, including:

- Support for thousands of cameras, camera standards, and continuous recording
- Scalable and flexible viewing and video wall implementations for operator ease and insight
- Ability to retain video for long periods of time, securely, with the ability to meet any retention, compliance, and legal requirements
- Simple and intuitive search using metadata and other markers to get what is needed quickly
- Systems that are reliable, available, and easy to manage
- Systems that help provide analysis and identify new opportunities through metadata and content tagging
- Control or reduction of costs while adding functionality

OPTIMIZED FOR VIDEO

StorMagic ARQvault Video Surveillance solutions lets you capture video anywhere, store it forever, find it fast, and reduce storage costs by at least 50% versus other solutions. ARQvault Video Surveillance solutions consists of ARQvault, the first Active Intelligent Repository, and either the ARQvault VMS or VMS Connectors module.

The ARQvault Video Surveillance solution with VMS module (ARQvault VMS) supports thousands of cameras and includes full-featured live viewing and video walls. There are many unique and important features of ARQvault that make it ideal for a powerful video surveillance solution:

1. **ARQvault is a collection of vaults creating a federated repository**
   ARQvault software combines different and distributed storage resources into an integrated system shared across the network. Vaults consist of a server, storage, and ARQvault software.

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2. **ARQvault is active**
   Secondary storage, such as LTO tape libraries and Sony optical systems, cloud storage, and even offline storage are all an active part of the repository. ARQvault knows where all video is and can actively seek, find, and retrieve any video in real time.

3. **ARQvault is intelligent**
   ARQvault uses policies to automatically move video to different storage tiers and creates low-resolution proxies of high-resolution video for fast search, playback, and viewing. The use of metadata and customizable fields, and integration with analytics packages, provides for rich data analysis and discovery of new relationships and business assets.

GATHER ANYWHERE

With support for any ONVIF or RTSP-enabled IP camera, more than 6,000 certified cameras, and the ability to ingest from other VMS systems, you can capture video from just about anywhere. ARQvault VMS automatically detects any supported IP camera on the network and then easily adds it to the surveillance management system. ARQvault VMS provides complete architectural flexibility with no vendor lock-in. It uses industry standards and works with new or existing servers and storage – x86 or ARM servers and all storage types: HDD, Flash, NAS, SAN, LTO digital tape, Sony ODA Optical, and cloud. It easily scales from one to thousands of sites in any location and you can add additional cameras, sites, vaults, servers, and storage at any time.

If you already have a system for video management, you can get all the benefits of ARQvault and keep your front-end using the ARQvault VMS Connectors module. ARQvault integrates easily with Milestone, Exacq, and Qognify systems and overcomes the single-tiered limitations of many VMS systems so you can afford much longer-term retention. Plus, you will be able to manage all your captured video within a single management console.

Live View and Video Wall

A full-featured, scalable video wall is included in the ARQvault VMS module. Capable of supporting thousands of monitors with multiple layouts, the video wall is highly customizable. Users can access the system using an intuitive, easy to use, drag and drop interface. Numerous settings provide controls for cameras, layout

Fig 01: Multiple windows on single Live View screen

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configurations, creating and utilizing patrols, camera pooling, and multi-camera video playback. Screen pops and actions can be generated easily from programmable and analytics-based alerts and triggers.

STORE FOREVER

The value of a video is unknown until it is needed, and when it is needed it is valuable. Store video forever (if you want to) with ARQvault's secure, easy to manage, automated tiering. You can record 24x7x365, capture everything, and never miss an important piece of video. Because of the cost-effective storage architecture of ARQvault, you can keep all full high-resolution video from megapixel cameras. Large files and heavy streams are handled with ease, letting you store more high resolution for less cost.

ARQvault's active intelligent automated tiering optimizes performance and reduces costs across your implementation. You decide, through policies, what video gets moved to lower cost storage tiers and when. You have complete control over what tier your video starts on, how long it stays there, and when to move high-res video to slower, more cost-effective tiers.

ARQvault can automatically create a low-resolution version of high-res video that takes less than 10% of the original file's space while retaining fully intact high-resolution originals. These low-resolution proxies have great clarity and can be used to review video and identify segments for export. This means faster search and smoother playback without straining the network. Videos moved to optical or tape are not "archived and forgotten" – they remain an active part of the repository and can be retrieved when needed exactly as any other file on disk.

This policy-based automatic tiering has a big impact on reducing the costs to store video. Storage is usually the largest expense in any video surveillance solution and ARQvault can save 50% in storage costs alone. The efficient (and effective) use of optical and tape as an active part of the solution is a huge benefit, as tape is typically 10% of the cost of spinning disk. And with the simplified, automated processes, operating costs are reduced too, as there is no need to manually move video from storage type to storage type. Video is automatically redistributed to its optimal place based on policies and preferences. Investments in existing storage are utilized as ARQvault's distributed client/server architecture transforms current storage resources into a centrally managed, multi-tiered, federated repository providing effective use and management of all storage.

ARQvault provides three levels of access security at the vault, storage, and file levels. It integrates with Active Directory or local authentication and there is a complete audit trail. You will know the who, what, when, and where about your video and its use from initial ingest until final removal. ARQvault makes sure your video remains unaltered using a digital fingerprint (SHA-256) and provides a full chain-of-custody to ensure that the video being used is the same as when it was originally written. You will know who has accessed a video, when it was migrated to different tiers of storage, and can see a history of both. As additional users need access there is no need to manually add them – users and groups from Active Directory are automatically recognized and can be used to set permissions and accessibility into the ARQvault video management system.

Easy to Use, Easy to Manage

The system can utilize multiple recording servers for more cameras and expanded recording capabilities, all managed through one interface. You can create camera pools within ARQvault VMS based on any criteria, such as camera location. Grouping cameras based on location makes live viewing an incident from multiple angles much easier. Camera pools can also be used during search so that only video from that group is shown in the results.

The Live View app for ARQvault has multiple different layout configurations for viewing live video streams. You can view up to 36 cameras

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Fig 02: ARQvault Video Surveillance solutions architecture

on a single monitor (6x6) if desired or customize the layout for how you want to view your cameras per monitor. Patrols can be set so that groups of cameras are cycled through during the live view and layouts and patrols can be saved and used by all. Multiple live viewing windows can be open at the same time and layouts and patrols can be placed on different live view windows so that you maximize the number of cameras to view at once. You can also use multiple windows to view just one camera each so that you have the largest display possible. No third-party applications are needed to control cameras. During live view, ARQvault can directly control mechanical and digital PTZ cameras. ARQvault VMS provides digital PTZ even for non-PTZ cameras.

You can create multiple segment clips from a video for streamlined export. For example, instead of having to export 5 hours of video, a user can select multiple clips from within a video, reducing the export to only the video content of interest. These clipped segments are exported while still maintaining a full chain-of-custody and video can always be exported in original format or another format for specific needs.

Video can be shared within your organization and with external entities via a web link. The web link is secure and has configurable sharing limitations. A user can set an expiration on the link, maximum amount of viewing times, and designate who can use the link to view. This gives easy, secure access to video assets to anyone authorized inside or outside your organization – no more copying to portable media.

Multiple sites can be operated and managed from one central location or from multiple locations. This single-pane-of-glass operation reduces complexity and simplifies day-to-day management. Specific and/or bulk actions are easy to implement for things such as changing permissions, changing metadata, and exporting. There is complete control through policy settings on when and where to backup, migrate, replicate, and purge video from across all vaults and tiers. Effective use of these policies will prevent runaway storage issues.

FIND FAST

The ability to find your video quickly and use it effectively are the hallmarks of ARQvault. ARQvault intelligent search provides fast results no matter where your video is located or its age.

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ARQvault intelligent search offers numerous search categories including where video is stored, file attributes, access level, and any metadata that has been applied. ARQvault sends a parallel search request to all vaults to provide the fastest path to your video. You even get quick results over slow or congested networks using ARQvault's low-resolution proxy files.

Multiple search categories are available to refine results. You can search only certain camera pools or use thumbnail or timeline searching to hone-in on areas of interest. Thumbnail searching makes it easy to locate the segment you need through a timeline of thumbnail images every 5 minutes. Timeline searching marks areas of interest in a video with annotations such as date/time logged, username, title, description, and color indicator and becomes searchable for later use.

Rich Metadata

The use and inclusion of metadata throughout the ARQvault Video Surveillance solution is key to providing powerful analysis. From applying at ingest, to its use in tiering decisions, to integration with third-party analytics packages, metadata makes searches much richer and more robust. It also allows non-security professionals to search and find what they need easily. With ARQvault, you can search metadata as well as video content and can apply metadata at both file and timeline levels.

ARQvault comes preloaded with canned metadata fields and there are unlimited user definable fields. All video is indexed at capture to provide content for future search and use. Metadata entries can be text boxes, a drop-down list of choices, number fields, checkboxes, and date values. These metadata values keep videos easily searchable when you need to find a specific video. Metadata also provides powerful new ways to use video assets. Videos can be aggregated into searchable groups using metadata and new insights may be gleaned through common attributes. Advanced reporting and audit capabilities are provided along with integration with third-party analytics packages, such as license plate recognition and facial recognition.

Always Available

All the video optimization and search capabilities are useless if video is not available. With ARQvault, video is always there. ARQvault is a distributed architecture with no single point of failure. You can store, move, and retrieve videos to and from any vault, anywhere, whether at the same site, to or from any other vault in the network, or to or from the StorMagic cloud or any other cloud.

Resiliency is built in, as ARQvault continues to operate if any component fails, so video is always safe and available. If a failure occurs while storing, ARQvault automatically finds an alternate

Fig 03: Surveillance video search

Fig 04: Media Viewer

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path and location and keeps writing. If a failure occurs when accessing, ARQvault automatically finds an alternate copy and keeps reading.

CONCLUSION

Video surveillance keeps growing, camera technology is evolving, and use cases are expanding. That is good news. To take advantage of these changes, video surveillance solutions must be easy to use and manage, reliable, secure, and available, and provide powerful search capabilities, all while not breaking the budget. ARQvault Video Surveillance solutions meet these criteria. ARQvault lets you capture video anywhere, store it forever, and find it fast, with storage costs 50% less than other solutions.

MORE INFORMATION

There are additional resources available covering ARQvault capabilities and features on the **StorMagic website**. Explore the **ARQvault solution brief** and **data sheet** and the **ARQvault for Video Surveillance data sheet**.

Test ARQvault VMS in your environment free of charge. Simply download our fully functioning **free trial from the website**.

If you have questions, or you would like a demo of ARQvault VMS contact the StorMagic team at **sales@stormagic.com**.

ALL STORMAGIC PRODUCTS ARE:

FLEXIBLE, ROBUST, AND SIMPLE TO USE

HOW IS ARQvault VIDEO SURVEILLANCE FLEXIBLE?

- You can INGEST from just about ANY CAMERA
- You can use ANY SERVER and ANY STORAGE
- You can STORE FOREVER, ANYWHERE

HOW IS ARQvault VIDEO SURVEILLANCE ROBUST?

- It uses AUTOMATED TIERING
- It features INTELLIGENT SEARCH using RICH METADATA
- It is SECURE

HOW IS ARQvault VIDEO SURVEILLANCE SIMPLE?

- It is EASY TO MANAGE
- It is ALWAYS AVAILABLE
- It EXPANDS EASILY

StorMagic
Unit 4, Eastgate
Office Centre
Eastgate Road
Bristol
BS5 6XX
United Kingdom

+44 (0) 117 952 7396
sales@stormagic.com

www.stormagic.com

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