



Milestone Certified Solution



HIKVISION[®]



DS-A82024D Hybrid SAN
Date certified : 2018-10-01

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About Hikvision

Hikvision is the world's leading provider of innovative security products and solutions. Featuring the industry's strongest R&D workforce, Hikvision advances core technologies of audio and video encoding, video image processing, and related data storage, as well as forward-looking technologies such as cloud computing, big data, and deep learning. In addition to the video surveillance industry, Hikvision extends its reach to smart home tech, industrial automation, and automotive electronics industries to achieve its long-term vision. Always creating value for its customers, Hikvision operates 38 regional subsidiaries all over the world to achieve a truly global presence. For more information, please visit us at www.hikvision.com.

About Milestone Systems

Milestone Systems is a global leader in providing open platform IP video surveillance software. Milestone has provided easy-to-use, powerful video management software in more than 200,000 installations, worldwide.

Milestone XProtect® provides open architecture products that are compatible with more IP cameras, encoders, and digital video recorders than any other manufacturer. Because Milestone provides an open platform, you can integrate today's best business solutions and expand what's possible with future innovations. Visit www.milestonesys.com for more.

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Executive Summary

The DS-A82 series is a dual controller-structure Hybrid SAN(Storage Area Network). Hikvision Hybrid SAN product creates a network with access to data storage servers, and it integrates Hikvision's unique video direct streaming technology as well as supports IPSAN/FCSAN. This flexible, cost-effective solution features ONVIF-support to third-party cameras, support for RTSP, and SIP protocols, and extended data retention. With no recording server needed, Hikvision's Hybrid SAN systems truly make applications simple, flexible, and budget-friendly

Certified Products

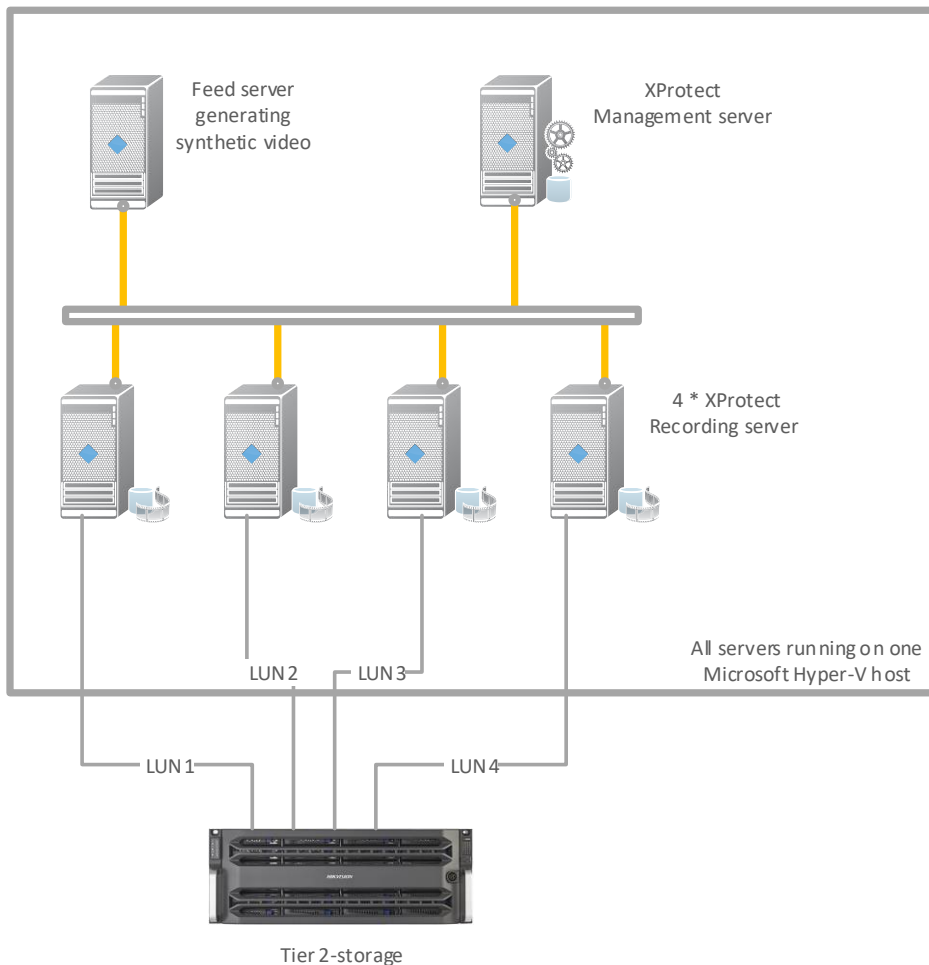
- Product Hikvision DS-A82024D
- Milestone XProtect Corporate 2018 R2
- Milestone XProtect Smart Client 2018 R2

Performance of the solution may vary if different XProtect products and/or system components not listed in the tests details are included.

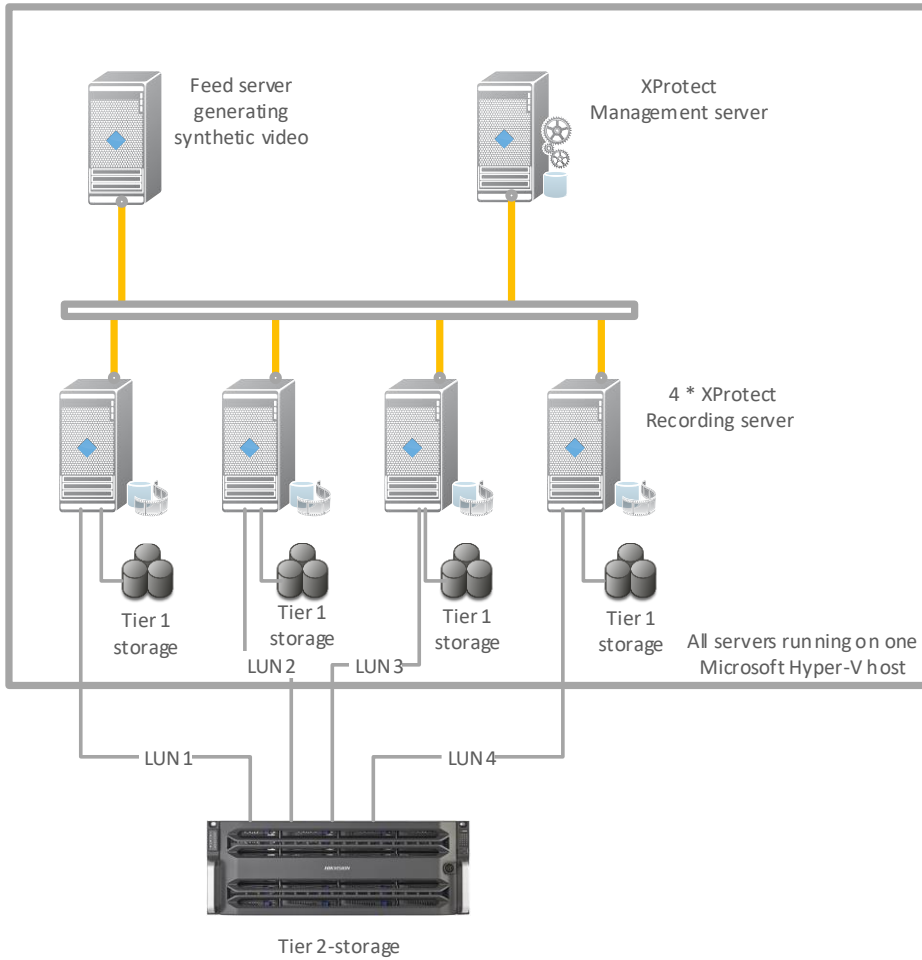
Test Setup

The Hikvision DS-A81024D were configured with one storage array divided into 4 equal sized LUNs. Each LUN were shared as an iSCSI Target connected from the Hyper-V host and internally mounted by the 4 VMs running the recording servers.

Two different setups were tested



The DS-A82024D used as a tier-1 storage (Milestone XProtect Corporate records directly to the storage)



The DS-A82024D used as a tier-2 storage (Milestone XProtect Corporate records directly to local storage on the server, thereafter will the video be archived to the tier-2 storage)

Performance Results

Storage setup	Cameras	Resolution	Framerate	Camera BW (Mbit/s)	Recorded Video BW (Mbytes/s)	Storage Write Latency (ms)	Frame Loss (%)	Video file (*)
T1	200	1920x1080	11	4	108	130	0,7	1
T1	400	1920x1080	5	2	98	160	0,4	1
T1 + T2	300	1920x1080	11	4	162	134	0,1	1
T1 + T2	400	1920x1080	12	2	96	140	0,0	2

(*) Video file 1 contained random video (White Noise) video file 2 contained recorded video from a train station

For certification of storage products, Milestone use these thresholds :

- Write latency to storage should be less than 200 ms on average
- Frame loss should be less than 1 % on average.

Conclusion

The Hikvision Hybrid SAN / IPSAN DS-A82024D is well suited for use as video storage in a Milestone XProtect system, especially used as a tier-2 storage for longer retention times.