

Solution Overview

Surveillance

Dell EMC Surveillance Validation Matrix

EMC VNX, EMC VNXe, and Dell EMC Isilon

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This document shows how we partner with leading Surveillance providers to configure various Dell EMC arrays, clusters, and cloud storage offerings to easily implement onto an Dell EMC storage system.

See the [Surveillance Solutions Partner Validations](#) web page for links to the Partner Sizing and Configuration guides.

- [Validation testing](#) 2
- [Functional testing](#) 2
- [Body-worn and VMS verifications](#) 3
- [VMS Validations](#) 3
- [Dell EMC storage systems tested](#) 4
- [Dell EMC servers tested](#) 6
- [EVT testing](#) 8



Validation testing

Validation testing determines the performance baseline, including bandwidth specifications and failure and recovery scenarios, for Video Management Software (VMS) providers when using Dell EMC storage systems. Various test scenarios are performed that replicate typical production environment activities related to several different system component failures and normal break fix best practices.

You can use the results presented in this document to determine what specific version of the ISV software, Dell EMC storage platform, model numbers, and Dell EMC storage operating environment have been validated. These results are based on tests that were conducted by the Dell EMC Surveillance Lab team in collaboration with the respective ISV.

Dell EMC arrays and clusters

Dell EMC storage arrays are ideal for storing video and audio data. Dell EMC offers the following storage options for video and audio data:

- EMC VNX
- EMC VNX-VSS
- EMC VNXe
- Dell EMC Isilon

Storage protocols

The network protocols used in validation testing include:

- FC
- iSCSI
- SMB2 (CIFS)
- NFS

Functional testing

Functional testing differs from validation testing in that functional testing verifies that a VMS is compatible with Dell EMC storage systems. For video management applications the Functional test verifies compatibility for write, read, archive retention policies, and stable connectivity.

This type of testing does not include failure and recovery scenarios and performance benchmarking. Functional testing does not establish sizing guidelines but it may include the results from a single server baseline test.

Body-worn and VMS verifications

The following table shows the VMS and Body camera providers that have partnered with Dell EMC for Functional testing.

Table 1 Functional testing

Partner	Verification Test type	Isilon	VNX	CloudArray Isilon	CloudArray ECS
Axon Commander	Body Camera	X	X	-	-
DutyVue	Body Camera	X	X	X	X
Edesix	Body Camera	X	X	X	X
IndigoVisionFL	Body Camera	X	X	X	X
LenSec	VMS	X	-	-	-
NUUO	VMS	-	X	-	-
Reveal	Body Camera	X	X	X	X
VIEVU	Body Camera	X	X	X	X

VMS Validations

The following table shows the VMS providers that have partnered with Dell EMC for Validation testing. Tier 1 indicates that the array can be used for primary storage for the surveillance workload. Tier 2 indicates that the array can be use as a secondary storage platform.

Table 2 VMS Validation testing with VNX and Isilon

VMS	Isilon			VNX			Servers
	Tier 1	Tier 2	Protocol	Tier 1	Tier 2	VMware Datastore	
Aimetis	X	-	CIFS	X	-	iSCSI	-
Avigilon	X	-	CIFS	-	-	-	-
Bosch	-	-	-	X	-	iSCSI	-
Cisco	-	-	-	X	-	iSCSI	-
Digifort	-	-	-	X	-	iSCSI	-
FLIR (formerly DvTel)	X	X	CIFS	X	-	iSCSI	-
Genetec	X	-	CIFS	X	-	iSCSI	X
Godrej IQ Vision	-	X	CIFS	X	X	iSCSI	-

Table 2 VMS Validation testing with VNX and Isilon (continued)

VMS	Isilon			VNX			Servers
	Tier 1	Tier 2	Protocol	Tier 1	Tier 2	VMware Datastore	
Honeywell	X	-	CIFS	-	-	iSCSI	-
IndigoVision	X	-	CIFS	-	-	-	-
ISS	X	-	CIFS	X	-	iSCSI	-
LENSEC	X	-	CIFS	-	-	-	-
Milestone	-	X	CIFS	X	X	iSCSI	X
Gognify (formerly NICE)	X	-	CIFS	X	-	iSCSI	X
Surveillus	X	-	NFS	X	-	iSCSI	-
Synectics	X	-	CIFS	X	-	iSCSI	-
Verint	X	-	CIFS	X	-	iSCSI	X

Dell EMC storage systems tested

The following table shows the VMS, Isilon OneFS, and VNX firmware versions that have been included in validation testing.

Table 3 VMS and Dell EMC storage system versions tested

VMS	Versions	NAS release	SAN firmware	VMware
Aimetis	6.12.3.0	7.1.0.0	OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
	6.14.5.1	7.2.0.1 8.0	—	ESXi 6.0
Avigilon	5.8.2.14	8.0.0.2	—	ESXi 6.0
Bosch	3.0	—	OE5.32.000.5.x OE5.33.006.3.x	ESXi 5.5
Cisco	6.7	—	OE5.33.000.5.x	ESXi 5.5
Digifort	7.1.0.0	—	OE 3.1.3.7141854	ESXi 6.0
FLIR (formerly DvTel)	6.2	6.5.4.4	—	—
Genetec	5.2	7.2.0.0 7.2.0.1	OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5

Table 3 VMS and Dell EMC storage system versions tested (continued)

VMS	Versions	NAS release	SAN firmware	VMware
	5.3	7.2.0.0 7.2.0.1	OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
	5.4	7.2.0.0 7.2.0.1	OE5.32.000.5.x OE5.33.000.5.x	ESXi 6.0 ESXi 6.5
	5.6	8.2	4.2.0.9392909	ESXi 6.5
Godrej IQ Vision	2014	—	3.1.3.5754151 OE5.32.000.5.x OE5.33.000.5.x	ESXi 6.0
	2016	—	4.2.0.9392909	ESXi 6.5
Honeywell	600.1	7.2.1	—	ESXi 5.5 ESXi 6.0
IndigoVision	13.1	8.0	—	—
ISS	8.3	7.2.0.0	OE5.31.000.5.x OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
LENSEC	2.3.0.1	7.1.1.1	—	—
Milestone	2013 R2	7.0 7.1.1.1	3.0.1.4029529 OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
	2014	7.0 7.1.1.1 7.2.0.1 7.2.1.0	3.0.1.4029529 3.1.3.5754151 OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
	2016	8.0.0.2 8.0.1	3.1.2.5754151	ESXi 6.0
	2017	8.0.1.1	4.2.0.9392909	ESXi 6.5
NUUO	2.1.0.63	—	OE5.33.000.5.x	—
Gognify (formerly Nice)	2.7up2	7.1.0.1 7.2.0.0	OE5.32.000.5.x OE5.33.000.5.x	ESXi 5.5
	3.1	7.2.1.1	—	ESXi 6.0
	4.2	8.0.1.1	SCV2080	ESXi 6.0
Surveillus	5.8.25	6.5.0.0 7.1.0.0	—	ESXi 5.x
Synectics	1.17.0.16	7.2.1	OE5.33.008.5.119	ESXi 6.0

Table 3 VMS and Dell EMC storage system versions tested (continued)

VMS	Versions	NAS release	SAN firmware	VMware
Verint	6.4	7.1.0.0	OE5.32.000.5.x	ESXi 5.x
		7.1.1.1	OE5.33.000.5.x	
	6.4.1591	7.2.1.1	3.1.3.7141854	ESXi 6.0
	6.4.3.2811	8.0.0.2	4.2.0.9392909	ESXi 6.0

Dell EMC servers tested

The following table shows the VMS and server versions that have been included in Validation testing.

Virtualization options (Virt):

- E - VMware ESXi
- B - Bare metal
- H - Microsoft Hypervisor

Table 4 VMS and Dell EMC servers tested

VMS	Version	Server	Virt	Processor	Bios	Memory	Drives	RAID	NIC
Genetec	5.6	R730xd	—	Xeon E5-2650 V4	2.4.3	256 GB	16 x 10 TB	10	10 GbE
			—	Xeon E5-2650 V4	2.4.3	256 GB	8 x 4 TB	5	10 GbE
		R630	—	Xeon E5-2650 V4	2.3.4	256 GB	5 x 1 TB	6	10 GbE
		R430	—	Xeon E5-2650 V4	2.3.5	256 GB	1 x 400 GB SSD	1	10 GbE
Milestone	2017	R730xd	—	Xeon E5-2650 V4	2.4.3	256 GB	16 x 10 TB	6	10 GbE
			—	Xeon E5-2650 V4	2.4.3	256 GB	16 x 4 TB	6	10 GbE
			—	Xeon E5-2650 V4	2.4.3	256 GB	8 x 4 TB	6	10 GbE
		R630	—	Xeon E5-2650 V4	2.3.4	256 GB	5 x 1 TB	6	10 GbE
		R530	—	Xeon E5-2650 V4	2.4.2	256 GB	6 x 6 TB	6	10 GbE
		R430	—	Xeon E5-2650 V4	2.3.5	256 GB	1 x 400 GB SSD	1	10 GbE
Gognify	4.2	R730xd	—	Xeon E5-2650 V4	2.4.3	256 GB	16 x 4 TB	6	10 GbE
			—	Xeon E5-2650 V4	2.4.3	256 GB	15 x 10 TB	6	10 GbE
			—	Xeon E5-2650 V4	2.4.3	256 GB	14 x 10 TB	6	10 GbE
		R530	—	Xeon E5-2650 V4	2.4.2	256 GB	6 x 6 TB	6	10 GbE
		R430	—	Xeon E5-2650 V4	2.3.5	256 GB	1 x 400 GB SSD	1	10 GbE
Verint	6.4.3.2811	R730xd	—	Xeon E5-2650 V4	2.4.3	256 GB	16 x 4 TB	6	10 GbE

Table 4 VMS and Dell EMC servers tested (continued)

VMS	Version	Server	Virt	Processor	Bios	Memory	Drives	RAID	NIC
		R630	—	Xeon E5-2650 V4	2.3.4	256 GB	14 x 10 TB	6	10 GbE

EVT testing

The following table shows the VMS that have been tested with Dell EMC Efficient Video Transport (EVT). Systems that are larger than 10 total agents might require a dedicated EVT Manager server.

Table 5 EVT Manager with Agent

Partner	VMS	Version	Server/Service					
			Control		Record		Review	
Aimetis*	Symphony	6.14.6.2	N/A	N/A	Symphony Server	No	Symphony Client	No
Genetec	Security Center	5.4	Directory Server	No	Archiver	No	Security Desk	Yes
IQ Vision	Ultimate	2014	Management Server	No	Recording Server	No	Prime View	Yes
Honeywell	Digital Video Manager	600.1	Database Server	No	Camera Server	Yes	DVM Console Client	Yes
IndigoVision	Control Center	13.1	Control Center	Yes	Network Video Recorder (NVR)	Yes	Control Center Client	Yes
Milestone	XProtect	2016	Management Server	No	Camera Server	No	Smart Client	Yes
Gognify	NiceVision Net	3.1	Application Management Server (AMS)	No	SVR	Yes	Control Center	Yes
Synectics*	Digital Recording System	V1.17.0.16	N/A	N/A	Digital Recording System PSN3	No	Synergy 3	No
Verint	Nextiva	6.4.1591	Master	No	Recorder	No	Review	Yes

* A dedicated EVT Manager server is required.

Table 6 EVT Agent only

Partner	VMS	Version	Server/Service					
			Control		Record		Review	
Aimetis*	Symphony	6.14.6.2	N/A	Yes	Symphony Server	Yes	Symphony Client	Yes
Genetec	Security Center	5.4	Directory Server	Yes	Archiver	Yes	Security Desk	Yes
IQ Vision	Ultimate	2014	Management Server	Yes	Recording Server	Yes	Prime View	Yes
Honeywell	Digital Video Manager	600.1	Database Server	Yes	Camera Server	Yes	DVM Console Client	Yes
IndigoVision	Control Center	13.1	Control Center	Yes	Network Video Recorder (NVR)	Yes	Control Center Client	Yes
Milestone	XProtect	2016	Management Server	Yes	Camera Server	Yes	Smart Client	Yes

Table 6 EVT Agent only (continued)

Partner	VMS	Version	Server/Service					
			Control		Record		Review	
Gognify	NiceVision Net	3.1	Application Management Server (AMS)	N/A	SVR	Yes	Control Center	Yes
Synectics*	Digital Recording System	V1.17.0.16	N/A	N/A	Digital Recording System PSN3	Yes	Synergy 3	Yes
Verint	Nextiva	6.4.1591	Master	No	Recorder	Yes	Review	Yes

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