

# Dell EMC Safety & Security Validation Matrix

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

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

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## 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.

The Dell EMC Safety & Security Lab team conducts tests in collaboration with the respective ISVs to determine the validated results.

### 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:

- Dell EMC Isilon
- Dell EMC Unity
- Dell EMC SC series
- Dell EMC ECS Object Storage

### Storage protocols

#### NAS storage

Isilon storage cluster tests use SMB except where noted.

#### SAN storage

Unity and SC series storage array tests use iSCSI and FC except where noted.

#### ECS Object Storage

ECS object storage tests use S3.

## 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.

## Current VMS Validations

Major safety and security vendors partner with the Dell EMC Safety & Security Lab to validate security applications with Dell EMC's portfolio of products and solutions.

The following tables show the most current validations with the latest Dell EMC storage solutions.

- Tier 1 indicates that the array can be used for primary storage for the safety and security workload.

- Tier 2 indicates that the array can be used as a secondary storage platform.


## Mission critical

**Table 1** VMS Validation testing with Unity, SC series, ECS and Isilon

VMS	NAS storage	SAN storage		Object storage	vSAN		Servers
	Isilon	Unity	SC	ECS via GeoDrive	With Isilon	With ECS via GeoDrive	
Airship	Tier 1	—	—	—	—	—	—
Avigilon	Tier 1, 2	—	—	—	—	—	—
FLIR	—	Tier 1	—	—	—	—	—
Genetec	Tier 1	Tier 1	Tier 1	Tier 1	—	X	X
Godrej IQ Vision	Tier 2	Tier 1, 2	—	—	—	—	—
Honeywell	Tier 1	—	—	—	—	—	—
ISS	Tier 1	Tier 1	—	—	—	—	—
Milestone	Tier 2	Tier 1, 2	Tier 2	Tier 2	—	X	X
Panasonic	Tier 1	—	—	—	—	—	—
Pelco	Tier 1	—	—	—	—	—	—
Qognify VisionHub	Tier 1	Tier 1	—	—	—	—	X
Qognify Cayuga	Tier 1	—	—	—	—	—	—
S-1 Corporation	Tier 1	—	—	—	—	—	—
Synectics	Tier 1	Tier 1	—	—	—	—	—
Verint	Tier 1	Tier 1	—	Tier 1	—	—	X

## Non-mission critical

Installations that include noncritical cameras where some video frame loss is acceptable during storage recovery activities, such as disk rebuilds and controller outages that are required for maintenance upgrades or failures.

 **Note:** For mission critical safety and security video applications, Dell EMC recommends Unity, Isilon, or ECS with GeoDrive.

**Table 2** VMS Validation testing with SC series and ME4

VMS	SC	ME4
Genetec	Tier 1	Tier 1
Milestone	Tier 1, 2	—

## Dell EMC storage systems tested

The following table shows the various VMS versions, NAS releases, SAN firmware versions, and ECS releases that have been included in validation testing.

**Table 3** VMS and Dell EMC storage system versions tested

VMS	VMS Versions	NAS		SAN		ECS		VMware
		Release	Tier	Firmware	Tier	Release	GeoDrive	
Aimetic	6.12.3.0	7.1.0.0	1	OE5.32.000.5.x	1	—	—	ESXi 5.5
				OE5.33.000.5.x				
	6.14.5.1	7.2.0.1	1	—	—	—	—	ESXi 6.0
	8.0							
Airship	5.4.1.290	8.1.1.1	1	—	—	—	—	ESXi 6.5
Avigilon	5.8.2.14	8.0.0.2	1	—	—	—	—	ESXi 6.0
	6.8	8.0.1.2		—	—	—	—	ESXi 6.5
	6.10	8.0.1.2		—	—	—	—	ESXi 6.5
	6.12	8.1.1.1	2	—	—	—	—	ESXi 6.5
	6.14.8.26	8.1.2	1	—	—	—	—	ESXi 6.5
Bosch	3.0	—	—	OE5.32.000.5.x	1	—	—	ESXi 5.5
				OE5.33.006.3.x				
Cisco	6.7	—	—	OE5.33.000.5.x	1	—	—	ESXi 5.5
Digifort	7.1.0.0	—	—	OE 3.1.3.7141854	1	—	—	ESXi 6.0
FLIR	6.2	6.5.4.4	1	OE5.32.000.5.x	1	—	—	ESXi 6.0
	8.0.X.61XX	—	—	4.5.0.0.5.096	1	—	—	ESXi 6.5
Genetec	5.2	7.2.0.0	1	OE5.32.000.5.x	1	—	—	ESXi 5.5
		7.2.0.1		OE5.33.000.5.x				
	5.3	7.2.0.0	1	OE5.32.000.5.x	1	—	—	ESXi 5.5
		7.2.0.1		OE5.33.000.5.x				
	5.4	7.2.0.0	1	OE5.32.000.5.x	1	—	—	ESXi 6.0 ESXi 6.5
		7.2.0.1		OE5.33.000.5.x				
	5.6	8.0.0.2	1	4.2.0.9392909	1	—	—	ESXi 6.5
	5.7	8.1	1	4.3.1.1525703027	1	3.2	1.2.2.1	ESXi 6.5
				4.2.3.9670635				
				4.2.1.9535982				
7.2.30.21								
	8.1.1.1							

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

VMS	VMS Versions	NAS		SAN		ECS		VMware	
		Release	Tier	Firmware	Tier	Release	GeoDrive		
				7.2.31.3					
				GT275R005-04					
Godrej IQ Vision	2014	—	—	3.1.3.5754151	1, 2	—	—	ESXi 6.0	
				OE5.32.000.5.x					
				OE5.33.000.5.x					
	2016	—	—	4.2.0.9392909	1, 2	—	—	ESXi 6.5	
Honeywell	600.1	7.2.1	1	—	—	—	—	ESXi 5.5 ESXi 6.0	
	700.1	8.1.1.1	1	4.4.1.1539309879	—	—	—	ESXi 6.5	
IndigoVision	13.1	8.0	1	—	—	—	—	—	
Infinova	17.02.09.08	8.0.1.1	1	—	—	—	—	—	
ISS	8.3	7.2.0.0	1	OE5.31.000.5.x	1	—	—	ESXi 5.5	
				OE5.32.000.5.x					
				OE5.33.000.5.x					
LENSEC	2.3.0.1	7.1.1.1	—	—	—	—	—	—	
Milestone	2013 R2	7.0	2	3.0.1.4029529	1, 2	—	—	ESXi 5.5	
				OE5.32.000.5.x					
				7.1.1.1					OE5.33.000.5.x
	2014	7.0	2	3.0.1.4029529	1, 2	—	—	ESXi 5.5	
				7.1.1.1					3.1.3.5754151
				7.2.0.1					OE5.32.000.5.x
				7.2.1.0					OE5.33.000.5.x
	2016	8.0.0.2	2	3.1.2.5754151	1, 2	—	—	ESXi 6.0	
		8.0.1							
	2017	8.0.1.1	2	4.2.0.9392909	1, 2	—	—	ESXi 6.5	
2018	8.1.0	2	4.3.1.1525703027	1, 2	3.2	1.2.2.1	ESXi 6.5		
			4.2.3.9670635						
			7.2.30.21						
NUUO	2.1.0.63	—	—	OE5.33.000.5.x	1	—	—	—	
Panasonic	7.1	8.0.1.2	1	—	—	—	—	—	
Gognify VisionHub	2.7up2	7.1.0.1	1	OE5.32.000.5.x	1	—	—	ESXi 5.5	

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

VMS	VMS Versions	NAS		SAN		ECS		VMware
		Release	Tier	Firmware	Tier	Release	GeoDrive	
		7.2.0.0		OE5.33.000.5.x				
	3.1	7.2.1.1	1	—	—	—	—	ESXi 6.0
	4.2	8.0.1.1	1	SCV2080	1	—	—	ESXi 6.0
	4.4	8.1.1.1	1	4.2.1.9535982	1			ESXi 6.5
				7.2.30.21				
Qognify Cayuga	R13	8.1.1.1	1	—	—	—	—	ESXi 6.5
S-1 Corporation	2.65.0.0	8.0.1.2	1	—	—	—	—	ESXi 6.5
	5.0.9.114	8.1.1.1	1	—	—	—	—	ESXi 6.5
		8.1.2	1	—	—	—	—	ESXi 6.5
Surveillus <sup>a</sup>	5.8.25	6.5.0.0	1	—		—	—	ESXi 5.x
		7.1.0.0						
Synectics	1.17.0.16	7.2.1	1	OE5.33.008.5.119	1	—	—	ESXi 6.0
Verint	6.4	7.1.0.0	1	OE5.32.000.5.x	1	—	—	ESXi 5.x
		7.1.1.1		OE5.33.000.5.x				
	6.4.1591	7.2.1.1	1	3.1.3.7141854	1	—	—	ESXi 6.0
	6.4.3.2811	8.0.0.2	1	4.2.0.9392909	1	—	—	ESXi 6.0
	7.5.1.7623	8.1.0.2	1	4.2.1.9535982	1	3.2	1.2.2.1	ESXi 6.5
		8.1.1.1						

a. Isilon storage clusters are tested using the Network File System (NFS) protocol.

## 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

**Table 4** VMS and Dell EMC servers tested

VMS	Version	Server	Virt	Processor	Memory	Drives	RAID	NIC
Genetec	5.8	R740xd-2	E, B	Xeon Gold 5120	256 GB	26 x 7.4 TB	6	10 GbE
	5.7	R740xd	E, B	Xeon Gold 6126	128 GB	18 x 10 TB	6	10 GbE

**Table 4** VMS and Dell EMC servers tested (continued)

VMS	Version	Server	Virt	Processor	Memory	Drives	RAID	NIC
		R740xd-2	E, B	Xeon Gold 6126	128 GB	26 x 10 TB	6	10 GbE
		R540	E, B	Xeon Gold 6126	96 GB	10 x 10 TB	6	10 GbE
		FC640	E, B	Xeon Gold 6126	256 GB	—	6	10 GbE
	5.6	R730xd	E	Xeon E5-2650 V4	256 GB	16 x 10 TB	10	10 GbE
			E	Xeon E5-2650 V4	256 GB	8 x 4 TB	5	10 GbE
		R630	E	Xeon E5-2650 V4	256 GB	5 x 1 TB	6	10 GbE
		R430	E	Xeon E5-2650 V4	256 GB	1 x 400 GB SSD	1	10 GbE
R740xd	E	Xeon Gold 6126	256 GB	14 x 10 TB	6	10 GbE		
Milestone	2018	R740xd	E, B	Xeon Gold 6126	128 GB	18 x 10 TB	6	10 GbE
		R740xd-2	E, B	Xeon Gold 6126	128 GB	26 x 10 TB	6	10 GbE
		R640	E, B	Xeon Gold 6126	256 GB	960 GB SSD	5, 10	10 GbE
			E, B		256 GB	900 GB		
		R540	E, B	Xeon Silver 4114	96 GB	10 x 10 TB	6	10 GbE
		R440	E, B	Xeon Silver 4114	256 GB	960 GB SSD	5, 10	10 GbE
	E, B		256 GB		900 GB			
	2017	R730xd	E	Xeon E5-2650 V4	256 GB	16 x 10 TB	6	10 GbE
			E	Xeon E5-2650 V4	256 GB	16 x 4 TB	6	10 GbE
			E	Xeon E5-2650 V4	256 GB	8 x 4 TB	6	10 GbE
		R630	E	Xeon E5-2650 V4	256 GB	5 x 1 TB	6	10 GbE
		R530	E	Xeon E5-2650 V4	256 GB	6 x 6 TB	6	10 GbE
		R430	E	Xeon E5-2650 V4	256 GB	1 x 400 GB SSD	1	10 GbE
Qognify	4.2	R730xd	E	Xeon E5-2650 V4	256 GB	16 x 4 TB	6	10 GbE
			E	Xeon E5-2650 V4	256 GB	15 x 10 TB	6	10 GbE
			E	Xeon E5-2650 V4	256 GB	14 x 10 TB	6	10 GbE
		R530	E	Xeon E5-2650 V4	256 GB	6 x 6 TB	6	10 GbE
		R430	E	Xeon E5-2650 V4	256 GB	1 x 400 GB SSD	1	10 GbE
Verint	6.4.3.281 1	R730xd	E	Xeon E5-2650 V4	256 GB	16 x 4 TB	6	10 GbE
		R630	E	Xeon E5-2650 V4	256 GB	14 x 10 TB	6	10 GbE

## 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 5** Functional testing

Partner	Verification Test type	Isilon	SAN	ECS
Axon Commander	Body Camera	X	X	—
Dallmeier	VMS	—	X	—
DutyVue	Body Camera	X	X	X
Edesix	Body Camera	X	X	X
IndigoVisionFL	Body Camera	X	X	X
LenSec	VMS	X	—	—
NUUO	VMS	—	X	—
Reveal	Body Camera	X	X	X
VIEVU	Body Camera	X	X	X



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