

EonServ 7000

Milestone Verified Solution

White Paper

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Abstract:

Infortrend EonServ 7000 is a high performance enterprise solution, with a hardware design that adopts one or two Intel E5 8-core processor(s) to handle great amounts of I/O and file transfers even under high workloads.

This document provides solution guide and test results for EonServ 7000 with MileStone's XProtect Corporate, a VMS (video management software) surveillance system.



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Preface

The purpose of this white paper is to provide surveillance bundle solution constructed by EonServ 7000 and Milestone VMS. Cooperated with Milestone, EonServ 7000 has been proven as the verified solution. Test topology and performance results are shown that EonServ 7000 is suitable for surveillance demands. Infortrend continues to develop the best storage solutions to meet the requirements and expectations of our customers, and provides support with releases of online hardware and software updates from time to time. Visit our official website to check the latest news and customer support system for the latest firmware and software. In case of problems encountered when using our products, contact our technical support.

Audience

This document is intended for Infortrend customers, partners, and employees using EonServ 7000 storage servers with Milestone software.

What's in This Document

This document contains the following topics:

- **Executive Summary:** Provides brief summary of this white paper.
- **Verified Products:** Introduces EonServ 7000 and verified Milestone software.
- **Test Scenarios:** Describes test scopes and topology.
- **Performance Results:** Shows outputs of different scenarios.

What You Should Know Before Reading

This document expects that you are familiar with basic server, storage, and networking concepts and configurations.

Executive Summary

This report shows the performance results of verification tests performed on Infortrend's EonServ 7000 series. The storage server solution provides long term recording and/or database archiving with MileStone's XProtect Corporate, a VMS (video management software) surveillance system.

XProtect Corporate is designed for large-scale and high-security installations. It is built with innovative technology designed to ensure end-to-end protection of video integrity and boost the overall performance of your system with hardware accelerated video decoding. In addition to central management of all servers, cameras and users in a multi-site set-up, XProtect Corporate includes an integrated video wall for operators demanding supreme situational awareness of any event. The software supports failover recording servers, making it the perfect choice for mission-critical installations that require continued access to live and uninterrupted video recordings.

The Milestone Verification Process is intended to verify the general functionality and compatibility of the partner's solution/product with the Milestone XProtect® VMS. The technical setup, configuration, testing and operations are done by Infortrend.

XProtect® Corporate

XProtect Corporate is IP video management software (VMS) designed for large-scale and high-security installations.

In addition to central management of all servers, cameras and users in a multi-site setup, XProtect Corporate includes an integrated video wall for operators demanding supreme situational awareness of any event.

Running on the industry's best performing recording engine with a recording rate of minimum 3.1 Gbit/s, XProtect Corporate is ideal for installations with 24/7 operation requirements, such as airports and casinos.

Three ways to access your video



Milestone
Mobile



XProtect®
Web Client



XProtect®
Smart Client



✓
Unrestricted
number of
cameras



✓
Central
Management



✓
Multi
server/site

Verified Products

Listed products are verified for use with the XProtect product line.

- **EonServ 7000 series**

EonServ 7016GT1 / EonServ 7016GT2

Front-View



Back-View



Model	EonServ 7016GT1	EonServ 7016GT2
Processor	1 x Intel® Xeon® E5-2620v4	2 x Intel® Xeon® E5-2620v4
Memory	32GB DDR4	64GB DDR4
Network	2 x 10GbE	2 x 10GbE
OS	Microsoft Windows Server 2016	Microsoft Windows Server 2016

- **Milestone XProtect Corporate 2018 R2**

- **Milestone XProtect Smart Client 2018 R2**

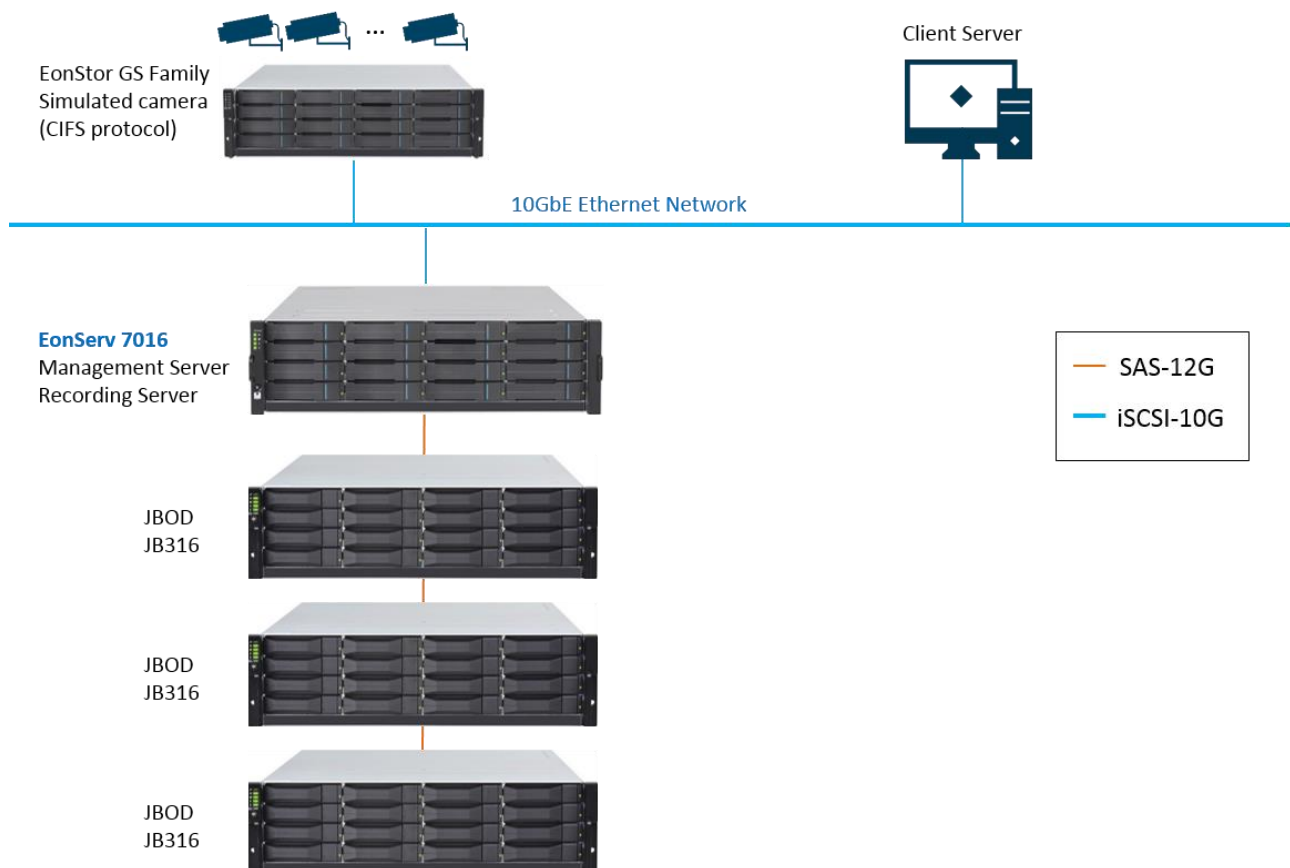
**Performance of the solution may vary if different XProtect products and/or system components not listed in the tests details are included.*

Test Scenarios

All simulated video streams used in this test were configured at 30 frames per second (FPS). All video streams were configured to use the H.264 video codec. The image resolutions used in this test included the following:

- ✓ 1920x1080 (2.1 Megapixel / 1080p / 4.4 Mbit/s)
- ✓ 2048x1536 (3.2 Megapixel / 3MP / 6.6 Mbit/s)
- ✓ 2592x1944 (5 Megapixel / 5MP / 10.6Mbit/s)

Topology





Test Scenarios

Scenario 1 – Recording with Client Playback

The data load used in the benchmark test scenario included the following parameters:

- H.264 video codec
- 30 frames per second
- 100% recording
- Live database: 64 x 7200 RPM 10 TB NL-SAS drives (16 drives/RAID 6)

Scenario 2 – Recording (Motion Detection Enabled) with Client Playback

The data load used in the benchmark test scenario included the following parameters:

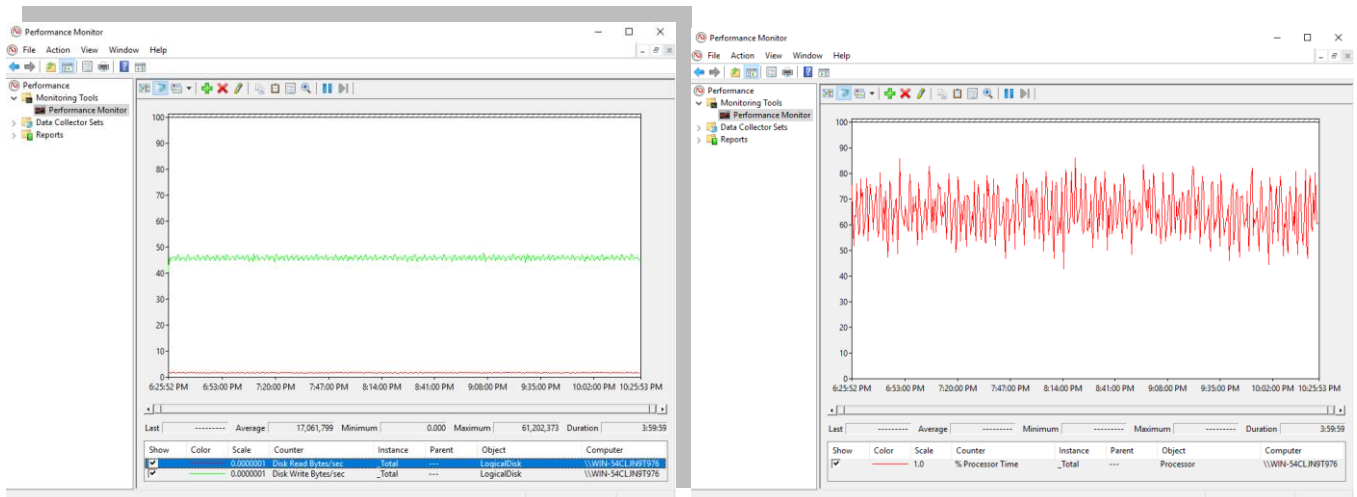
- H.264 video codec
- 30 frames per second
- 100% recording
- Motion detection sensitivity – default (33)
- Motion detection threshold – default (2000)
- Motion detection resolution – default (12%)
- Live database: 64 x 7200 RPM 10 TB NL-SAS drives (16 drives/RAID 6)

Performance Results

● Scenario 1

Model	Image Resolution	Number of Cameras	CPU %	Avg. Disk I/O (MBPS)	Number of Playback	Read Latency (ms)	Motion Detection
EonServ 7016GT1	1080P	480	21%	326	25	2.1	Disable
	3MP	360	40%	376	25	2.5	Disable
	5MP	270	31%	440	12	9.0	Disable
EonServ 7016GT2	1080P	680	65%	454	25	1.1	Disable
	3MP	570	63%	580	25	2.2	Disable
	5MP	360	56%	581	12	1.0	Disable

EonServ 7016GT2 – 1080P with motion detection disabled



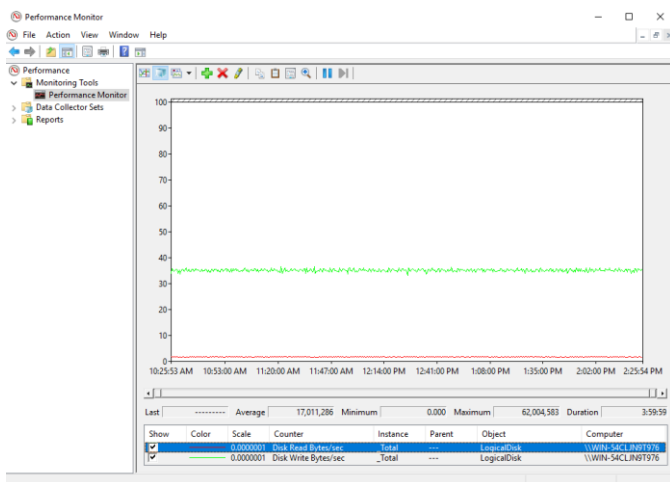
Disk Read/Write (Bytes/sec)

% Processor Time

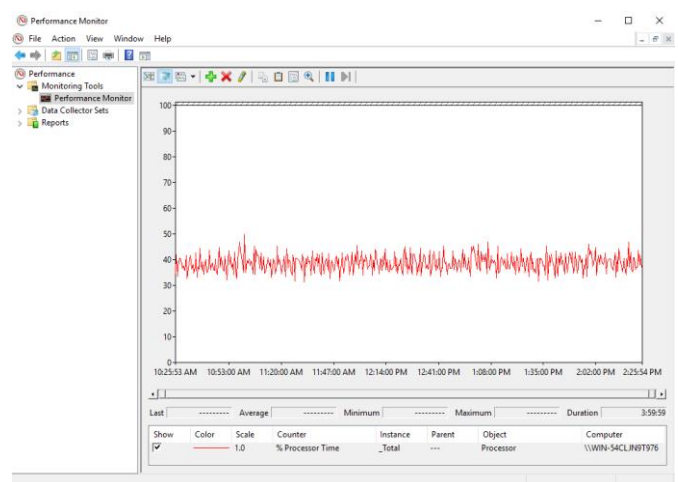
● Scenario 2

Model	Image Resolution	Number of Cameras	CPU %	Avg. Disk I/O (MBPS)	Number of Playback	Read Latency (ms)	Motion Detection
EonServ 7016GT1	1080P	300	40%	209	25	1.4	Enable
	3MP	210	43%	229	25	1.5	Enable
	5MP	180	49%	300	12	6.0	Enable
EonServ 7016GT2	1080P	520	39%	351	25	6.6	Enable
	3MP	420	56%	434	25	8.2	Enable
	5MP	300	49%	468	12	1.1	Enable

EonServ 7016GT2 – 1080P with motion detection enabled



Disk Read/Write (Bytes/sec)



% Processor Time

Conclusion

EonServ 7000 with Milestone XProtect Corporate is a surveillance bundle solution that provides high performance with the selected hard drive configurations. As the test result, EonServ 7016GT1 supports a large number of cameras depending on the resolution set in Scenario 1: 480 with 1080p/360 with 3MP/270 with 5MP. On the other hand, EonServ 7016GT2 supports a maximum 680/570/360 cameras with 1080p/3MP/5MP resolution in Scenario 1.

Installers, designers, and operators of surveillance systems who use these proposed solutions can say that they can totally rely on their system when it comes to speed, performance, and quality of recording and archiving videos. Clients who want reliable value and performance for their surveillance system can check out our best practices outlined in this document to help design their own system that exceeds the benchmark limitations, which also followed by Milestone Server and Storage Calculator. For more details about Infortrend's products, services, and success stories, visit us at www.infortrend.com or contact our representatives near you.

Appendix

Company Profile

➤ About Infortrend Technology Inc.

Founded in 1993, Infortrend Technology (Public TPE: 2495) is the leading provider of high-performance networked storage solutions that focus on quality, reliability, choice, and value.

Fully dedicated in providing high quality storage solutions, Infortrend's strong foundation includes R&D people of tough technology background and passion for innovation. Our expertise covers all aspects in storage systems: hardware, firmware, software, and system integration. To ensure excellence, we design and manufacture our products in-house.

Our storage solutions are widely deployed on a variety of demanding applications by multiple clients across commercial and industrial markets. Our core brands include Eonstor DS, EonStor GS, EonStor GSa, EonStor GSc, EonStor GSi, EonStor GSe, EonStor GSe Pro, and EonServ product families.

➤ 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.

Related Links

1. [EonServ 7000 Product Links](#)
2. [EonServ 7000 User Guide](#)