EonServ 5000

Milestone Verified Solution

White Paper

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Abstract:

The EonServ 5000 are entry level enterprise solutions especially designed for light workloads, as their hardware designs adopt Intel E3 4-core processors to assist IT personnel efficiently manage all kinds of light workloads

This document provides solution guide and test results for EonServ 5000 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 5000 and Milestone VMS. Cooperated with Milestone, EonServ 5000 has been proven as the verified solution. Test topology and performance results are shown that EonServ 5000 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 5000 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 5000 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 5000 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 5000 series**

EonServ 5016

Front-View   **Back-View**

Model	EonServ 5016
Processor	1 x Intel® Xeon® E3-1225v3
Memory	32GB DDR3
Network	2 x 10GbE
OS	Microsoft Windows Server 2016

- **Milestone XProtect Corporate 2019 R1**
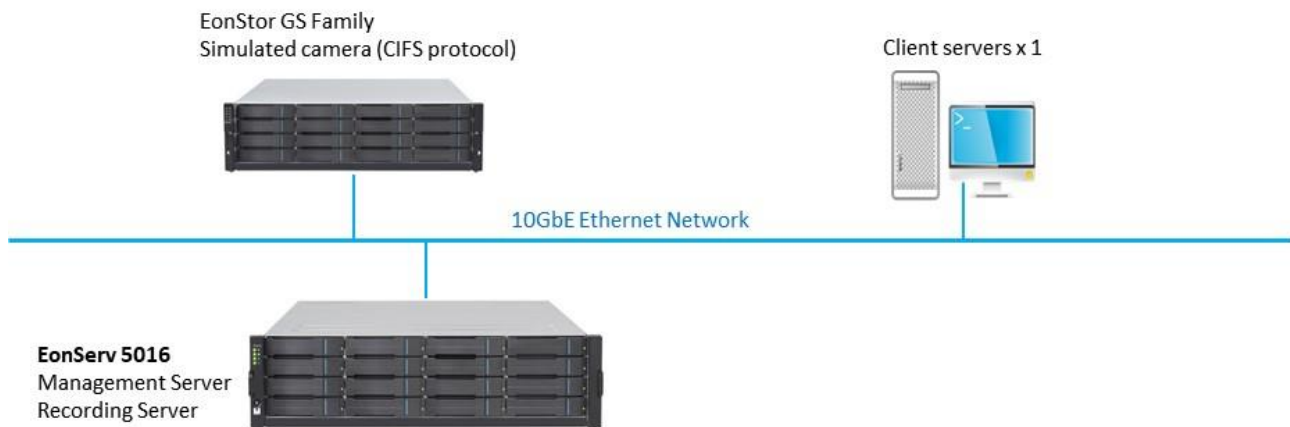
- **Milestone XProtect Smart Client 2019 R1**

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)**

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: 16 x 7200 RPM 10 TB SATA drives (16 drives/RAID 5)

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

The data load used in the benchmark test scenario included the following parameters:
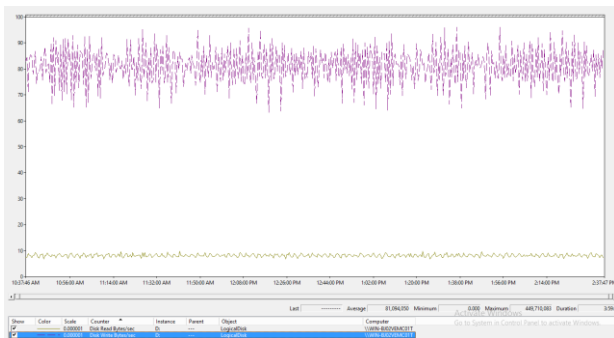
- H.264 video codec
- 30 frames per second
- 100% recording
- Motion detection sensitivity – default (33)
- Motion detection threshold – default (2000)
- Motion detection resolution – default (12%)
- Live database: 16 x 7200 RPM 10 TB SATA drives (16 drives/RAID 5)
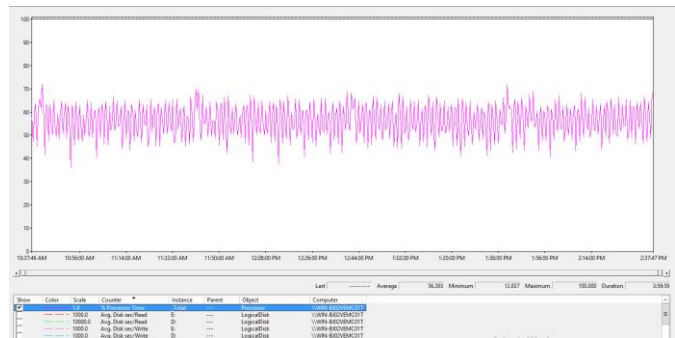
Performance Results

● **Scenario 1**

Model	Image Resolution	Number of Cameras	CPU %	Avg. Disk I/O (MBPS)	Number of Playback	Read Latency (ms)	Motion Detection
EonServ 5016	1080P	210	56%	151	25	2.5	Disable
	3MP	150	54%	167	25	3.3	Disable

EonServ 5016 – 1080P with motion detection disabled

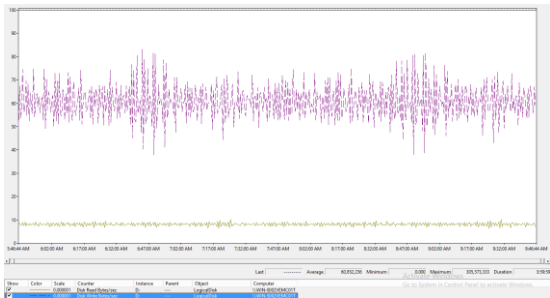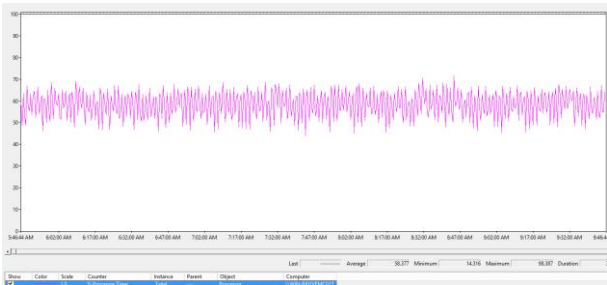*Disk Read/Write (Bytes/sec)*

% 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 5016	1080P	180	58%	132	25	3.3	Enable
	3MP	150	65%	167	25	2.5	Enable

EonServ 5016 – 1080P with motion detection enabled

Disk Read/Write (Bytes/sec)

% Processor Time

Conclusion

EonServ 5000 with Milestone XProtect Corporate is a surveillance bundle solution that provides high performance with the selected hard drive configurations. As the test result, EonServ 5016 supports a large number of cameras depending on the resolution set in Scenario 1: 210 with 1080p/150 with 3MP.

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 Link

EonServ 5000 Product Links