

# DNF Security SSO NAS Enhances Bank's IP Video Storage System to accommodate 1000 cameras

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## Overview

### The Problem

The bank required a storage solution for a 1000 cameras that are streaming and writing 24/7 with computation capacities capable to run video analytics software for detection, tracking and recognition.

### The Solution

An architecture capable of not just supporting the storage requirements but also the computation capacity was devised using DNF Security's innovative SSO™ NAS (Network Attached Storage).

### The Benefit

The bank was immediately able to support their video-recorded data and was able to scale out storage without compromising on performance. The solution provided simplified management while providing access to the cloud via cloud connect services for long-term data retention.

The finance industry requires a very secure environment to be productive. Considering a bank's range of services, it's very important that not just the building but the district surrounding it is monitored. This in turn, requires an extensive surveillance system comprising of cameras ranging from hundreds to thousands.

One of DNF Security's clients presented a similar challenge. Their surveillance system comprised of a total of 1000 cameras. They required not just surveillance but detailed video analytics:

1. Detection.
2. Tracking.
3. Recognition.

This meant that the client needed enough computation capacity to not just effectively store and manage recorded data but also process and analyze it.

Breaking down the system of a 1000 cameras: a single IP-camera with Full-HD definition (1920x1080), basic H.264 codec, frequency of 25 fps and high frame activity results in an average traffic volume of 6.86 Mbit/s in this configuration.

Besides the volume, the storage capacity with 30 days depth, 1000 streams and 24/7 writing will amount to 2.1 PB (2119.67 TB) approximately. And this was the challenge for the client.

The generated data simply cannot be stored in a single server or boxed solution. That's because it will fail to deliver the coveted reliability.

## DNF Security Storage Solution

### Architecture

DNF Security's solution for the challenge was architecture with a configuration of 2.1 PB via 180 drives of 12TB each. As the drives wouldn't fit into a standard server platform, the system was arranged in drive enclosures (JBODs).

The devised solution comprised of two socket 1U server and three 4U 60 HDD JBODs with cascade connection.

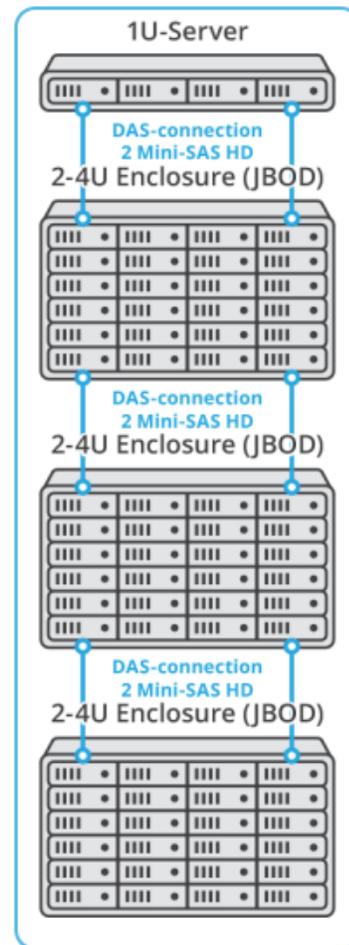
For RAID integration with third parity disks, the capacity was structured as follows:

3 RAID 7.3 groups comprised of 60 drives each: drives of usable volume, 3 drives for checksums and 3 drives as hot spares.

### Storage Network

The storage solution that was used is SSO™ (Super Scale Out) NAS Appliance. The appliance is a high performance and high density software defined storage technology. It is very suitable for the needs of CCTV and video analytics. Another option that could have been used for this challenge would have been DNF Security's TSO™ (Twin Scale Out) NAS appliance. The parallel dual controllers within the appliance ensure high availability for the data.

With SSO™ NAS appliance, the client can scale out as much as they wanted facilitating them to address the continuously growing volume of recorded data.



*“Video surveillance data comprises of a huge volume. In order to optimize the cost and the efficiency of the storage solution, cloud archiving is the best choice for long term data retention while on-premises infrastructure remains the best option for hot data”*

*“The larger the system, the more important simplified management is. Using a single interface to access data generated by a 1000 cameras enhances productivity and ensures optimal security”*

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The appliance was able to sustain the client requirements of processing 1000 parallel video streams while ensuring full data integrity and uninterrupted operation of CCTV systems.

With the acquisition of DNF Security's solution, the client gained more than just a solution to their problem. With DNF Security's solution, the client also gained:

- Multi-gigabyte volumes of cache memory.
- High Performance Interface.
- Cache protection against power failure.
- Simplified scalability without limits.
- Fault Tolerance on data writing.
- Support of performance intensive analytical software.

## DNF Security: Your video surveillance solution partner

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January 2018

DNF Security is a leading manufacturer of dependable, mission-critical video surveillance solutions. Each DNF Security video solution is designed to handle the most complex video surveillance and physical security environments.

The company offers a comprehensive range of products that provide enhanced storage protection, redundancy, high availability, and superior scalability in each cost-effective configuration. Our video hardware platforms take the guesswork out of video surveillance.

Headquartered in the heart of the Silicon Valley, DNF has provided small businesses and enterprises worldwide with innovative storage and server solutions. We offer a comprehensive range of video surveillance solutions including intelligent digital or hybrid video management systems, video management engines, mobile surveillance systems, viewing workstations, and scalable IP storage. By using open-platform architecture on all our systems, we ensure high performance and compatibility with leading IP and mega pixel cameras, and video management software.

With a growing nationwide customer base, DNF Security simplifies the unique security video management needs of small to medium enterprises (SME), law enforcement agencies, gaming, municipalities, and government agencies.

Let's talk. We can figure out what the best next step is for you:

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For more information, visit [DNFSecurity.com](http://DNFSecurity.com)

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