

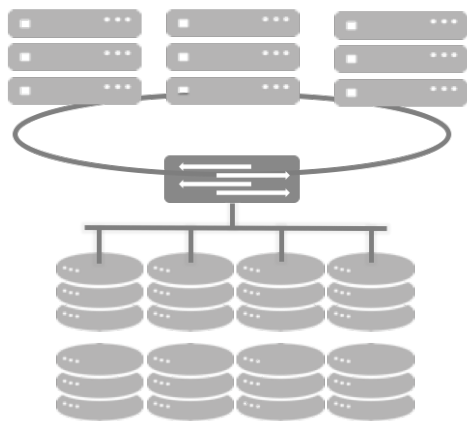
### INTRODUCTION

Facial recognition is a game-changer for government agencies concerned with safety, improvement of mass-transit security and citizen privacy. IBM Spectrum Scale is an ideal platform for this type of big data analytics where integration with social media, geo-location and other real-time feeds deliver unprecedented accuracy and agility.

### CHALLENGE

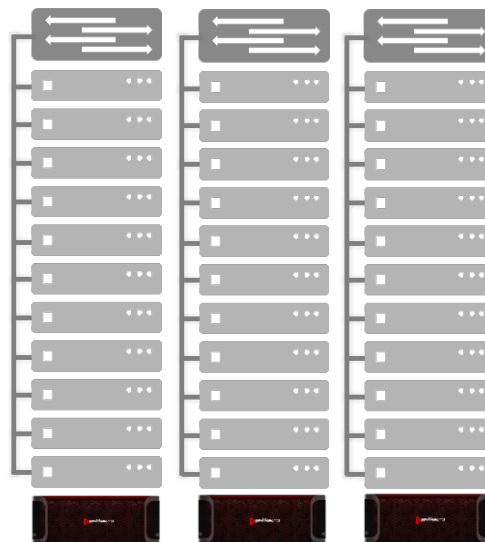
Traditional SAN shared storage cannot take full advantage of NVMe SSDs. While scale-up SAN arrays now offer NVMe SSDs and NVMe-oF network interfaces, to achieve 150GB/sec of read bandwidth requires at least 80RU of space and as much as 14TB of DRAM at exorbitant costs. Given the customer throughput and footprint (performance density) requirements, the task was considered “impossible”.

#### AS BUILT (TYPICAL SAN)



- Throughput requirements occupy 80RU
- 14TB of DRAM for caching
- Millions of dollars to deploy or upgrade

#### DISAGGREGATED STORAGE



- World's Fastest Spectrum Scale Deployment
- 4RU footprint per array
- 1/10<sup>th</sup> the acquisition cost of alternative



### COMPOSED BY PAVILION

Aligned with a strategic partner having all necessary clearance, Pavilion Data delivered its NVMe-oF storage platform with RDMA-over-Infiniband for integration with Spectrum Scale. Since the system has processing power on each of its 20 storage controllers, not only was it able to achieve 120GB/sec of read performance and 90GB/sec of write performance at 40 microseconds of latency from host, across fabric and through the array to shared RAID-6 volumes, but the need for dedicated NSD servers was also eliminated. Pavilion was able to deliver in 4U, what a SAN alternative could almost do in 80U. Furthermore, the customer was delighted to learn about swarm recovery to rebuild a failed drive at a rate of 1TB/5 minutes

### SUMMARY

In this environment, the goal was to achieve the highest throughput ever for a single shared namespace with Spectrum Scale and more than 500 servers. The customer summed it up best by saying, “Pavilion Data made the impossible, possible.”