

Case Study

# ACCELERATING MUNICIPAL SERVICES WITH REDUXIO



**Industry:** State & Local Government | **Location:** United States | **Use Cases:** Virtualization, Backoffice

## KEY HIGHLIGHTS

### Challenges

- Storage in remote sites is not highly available.
- Existing data protection relies solely on backup to tape, requiring time consuming administration.

### Solution

- Implemented high availability for vSphere environments using the Reduxio HX550.
- Complemented tape restores with [BackDating™](#) data recovery to any second.

### Benefits

#### 2X Faster File Access

Faster Microsoft Office file access with flash-based storage.



#### 20 Mins Total Setup Time



Initial setup including ESXi connectivity took less than 20 minutes.

#### <1ms Average Latency



Flash-first architecture and deduped cache provides consistent low latency.



## CUSTOMER PROFILE



Over 130,000 residents



4th safest city with population of >100,000 in America



700 employees

## About City of Thousand Oaks

Located in the Ventura County, California, just 35 miles northwest from Downtown Los Angeles, the City of Thousand Oaks is a thriving planned community with over 130,000 residents. Nestled against the Santa Monica Mountains, the city has over 15,000 acres of natural publicly owned open space located within its boundaries. Named after the many oak trees that grow in the area, the city and its surrounding parks is not only home to an abundance of native animals such as mountain lions, coyotes and deers, but also home for large corporate headquarters and regional offices in the biotechnology, electronics, automotive, aerospace, telecommunications, healthcare and financing sectors.

The IT environment of the city is operated out of three core sites and multiple satellite locations. The city hall serves as the primary site with over 700 users. The Municipal Services Center is used primarily for vehicle maintenance, street operations and as a logistics center. The third site is located in the Hill Canyon Wastewater Treatment Plant (HCTP). Treating an average of 8.5 million gallons of wastewater per day, the facility employs over 50 engineers and administrative employees. Multiple VMware ESXi servers are deployed across the sites with close to 50 VMs running Linux and Windows Server and provide a range of infrastructure services, directory services, file, print and collaboration servers.

## Challenges

The systems in city hall site were virtualized on a VMware ESXi cluster, and consolidated on a traditional SAN system. A backup application was implemented to back up data to tape. The VMware ESXi servers in the other two sites were implemented with direct-attached disks. However, these environments did not meet their new availability, capacity and recoverability requirements.

**“Distributing our IT services across the different sites is key to delivering fast and reliable work environment for all our employees, no matter their location. Our inability to provide the same level of service to our remote sites made us search for alternatives.”**

*Dustin Hurshman, IT Analyst III, City of Thousand Oaks*

One obvious choice was to buy another traditional SAN system similar to the existing one. However, the experience with the system at the primary site was not good. Looking ahead, the team looked for newer technologies to improve efficiency and simplify data recovery, and decided to evaluate Reduxio.

**“When we compared the existing platform we purchased for the city hall site a few years ago against the Reduxio HX550, the choice was clear. Our existing system was lacking always-on global data reduction and data protection, so the HX550 surpassed it in every category.”**

*Dustin Hurshman, IT Analyst III, City of Thousand Oaks*

## Faster, Simpler

The city hall IT department decided to implement a Reduxio HX550 system in the Hill Canyon Wastewater Treatment Plant. Installing a system in a remote environment with limited IT resources was a concern. Surprisingly, the system was installed and configured in 20 minutes. The ESXi cluster was quickly connected to the system, and Linux and Windows VMs were migrated within minutes of installation.

SuSE Enterprise Linux 11 VMs are used for local Novell eDirectory services, file and print and email services. Windows Server 2012 VMs are used for workstation imaging and deliveries and running a Novell Zenworks satellite server as well. The Xirrus wireless network management software is also hosted on this platform.

Over 50 users in the facility use the system for various backoffice applications. In addition, during the processing

of wastewater, many photos and videos are created for validation and long-term tracking. This media is stored in the system, enabling quick storage and retrieval.

**“Since we introduced Reduxio, our users observed higher performance for their applications and significant reduction in response times.”**

*Dustin Hurshman, IT Analyst III, City of Thousand Oaks*



## SOLUTION COMPONENTS

### Reduxio Products

- Reduxio [HX550](#) storage system
- Reduxio [StorApp](#) for VMware vSphere

### Environment

- VMware® ESXi clusters
- SuSE Linux Enterprise Server 11
- SuSE Novell eDirectory
- SuSE Novell Zenworks endpoint management
- Windows Server 2012 R2, SQL Server
- Microsoft Office
- HPE GroupWise® collaboration suite
- SEP sesam backup servers
- Xirrus wireless network management