

## Case study

# City of Sparks

## Nevada City virtualizes desktops with HP Velocity on HP Thin Clients



### Industry

Government

### Objective

Upgrade aging desktop infrastructure to lower IT costs, increase city employee productivity

### Approach

Virtualize desktops with HP Thin clients running HP Velocity, VMware View, and best-of-breed HP servers, storage, and networking

### IT matters

- Accelerate network performance with HP Velocity
- Improve the user experience for remote desktop and virtualized applications
- Mitigate effects of packet loss, network latency, Wi-Fi congestion

### Business matters

- Deliver high-quality city government services to citizens
- Improve city employee desktop user experience and productivity with accelerated network performance with HP Velocity
- Deliver reliable, low-maintenance desktop infrastructure cost effectively with HP Thin Clients and HP Velocity software



**“HP Velocity on HP Thin Clients enables our Virtual Desktop Infrastructure (VDI) to deliver fast, crisp network performance that increases employee productivity at lower cost to city taxpayers.”**

– Steve Davidek, IT manager, Sparks, Nevada



Sparks is a city of 92,000 residents west of Reno, Nev. Its 450 full time and 300 part-time employees provide every type of government service from fire protection to business licensing. Like many cities, Sparks found itself hit hard during a recession. Without sufficient funding to replace an aging fleet of PCs or hire additional IT staff to maintain them, the City looked for other options. Sparks chose to virtualize its desktop infrastructure with VMware software and HP Thin Clients, and gained the benefits of data centralization and low-maintenance client devices. The city relies on HP Velocity software, built into HP Thin Clients, to accelerate network performance for a productivity-enhancing employee experience.

When a Sparks firefighter logs in to enter an incident report, or a court clerk moves from desk to desk during the course of a workday, or a building inspector logs into the Geographic Information System (GIS) to check the city infrastructure, he or she wants fast, crisp, and reliable access to their technology tools. “We leverage technology so the citizens of Sparks get the best results from the dollars spent,” says Steve Davidek, Sparks IT manager.

## Meeting the challenge of aging PCs, shrinking budgets

Davidek has served as a Sparks technology expert for 30 years working with numerous HP solutions. In the midst of recession, Sparks reduced its full time workers about 40 percent and, to increase IT efficiency, piloted a virtual desktop solution - HP Thin Clients, virtualized with VMware View and optimized with HP Velocity - starting with 25 court employees. The court employees liked that they only had to log in once and their virtual desktops would follow them as they moved among court and office locations throughout the day. Davidek also knew the solution was extremely secure, with no data or applications residing on the thin clients themselves.

The successful pilot prompted Sparks to implement virtual desktops throughout city government—285 virtual machines in all, with HP Thin Clients at more than a dozen sites. Among City Hall employees, the finance manager especially appreciates being able to access her virtual desktop from home. Building inspectors run graphics-intensive GIS software to view the city down to the level of manhole covers as well as the systems underneath.

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For desktop virtualization Sparks has a full end-to-end solution that includes servers, storage, networking and thin clients from HP. “Because of our experience with HP, we knew we would get an integrated best-of-breed solution that would last,” Davidek says. Sparks worked with Summit Partners of Las Vegas, Nev., an HP Partner and full service IT consulting firm, to develop and implement the solution.

## HP Velocity accelerates network performance

Unfortunately, one of the biggest drawbacks to a VDI solution is the reliance on network quality for delivering a solid desktop experience. The user experience is often degraded by network conditions such as packet loss, latency, and WiFi congestion. These network issues often result in slow user interface responsiveness, slow file transfers, and poor quality video and audio. The user experience is further degraded when users work remotely, connecting across longer distance, as well as through WiFi and 3G/4G networks.

To provide an optimal experience in a virtualized environment, HP Thin Clients comes pre-installed with HP Velocity, a software solution that improves the user experience for remote desktop and virtualized applications by addressing common network bottlenecks such as packet loss, network latency, and Wi-Fi congestion. HP Velocity delivers LAN-like quality on WAN, Wi-Fi, and 3G/4G networks.

**“Activating HP Velocity is easy. It’s already pre-installed in HP Thin Clients. You simply add an agent to the virtual machine master copy for replication to all the virtual machines.”**

– Steve Davidek, IT manager, Sparks, Nevada

At Sparks, the most dramatic improvements experienced with HP Velocity occurred at the city’s five fire stations. Unlike other offices equipped with fiber networks, the fire stations were situated throughout the city and used slower, leased T1 lines. Since a firefighter might be assigned to any one of the five stations, virtual desktops provided convenience: a worker could log on at any station to access his or her desktop. However, a connection over the T1 lines was slow; entering all the data required for incident reports took an excessive amount of time, and network latency and delays were frustrating.

The solution was simple: HP Velocity, built in to HP Thin Clients. Davidek described the software as surprisingly simple to activate.

## Customer at a glance

### Application

Virtual Desktop Infrastructure

### Hardware

- HP t510 Flexible Thin Client
- HP t410 All-in-One Smart Zero Client
- HP ProLiant BL460c Gen7 Server
- HP StoreVirtual Storage
- HP 3PAR StoreServ Storage
- HP Networking Switches

### Software

- HP Velocity

### HP services

- HP 3-yr Care Pack

“Activating HP Velocity is easy. It’s already pre-installed in HP Thin Clients. You simply add an agent to the virtual machine master copy for replication to all the virtual machines,” Davidek says. “We were shocked at how much better the networks performed. HP Velocity cleaned up everybody’s connections.”

Generally speaking, network performance can be especially problematic when users work remotely, connecting across unmanaged networks not controlled by IT. However, even Sparks employees using the city’s fiber lines noticed improvement, especially those using graphics-intensive GIS applications. HP Velocity delivers clearer voice, higher video frame rates, more fluid mouse and keyboard interaction, and faster data transfers.

## Quality service to Sparks’ citizens

Sparks started its desktop virtualization journey during a time of critical technical needs coupled with financial and budgetary limitations. The HP Thin Clients with the HP Velocity solution enabled the city to avoid burdensome IT hardware costs and to provide an optimal user experience without needing to upgrade its existing network infrastructure. HP Thin clients with HP Velocity software is exceptionally cost effective, Davidek says, with a typical five-to-six year refresh cycle. Sparks

is also able to manage the virtual environment without hiring additional IT maintenance technicians to meet growing service and support needs.

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The greatest benefit of all is the ability to deliver prompt, efficient city services. “The bottom line is, when a city employee sits at his or her desktop, it works,” Davidek says. “City workers have high-performance access to the tools and resources they need to serve the citizens of Sparks.”

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