



## Equipping Law Enforcement with VDI & Video-Optimized PCoIP Zero Clients

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NETWORK ADMINISTRATOR  
FORT SMITH POLICE DEPARTMENT



Originally an “Old West” military outpost, Fort Smith offers residents a rich history and diverse economy. Forbes magazine recognized the city for low cost of living and high-paying tech jobs. The Fort Smith Police Department, a modern law enforcement agency, provides around-the-clock services for the good of the community.

### AT A GLANCE

#### Situation

- Public safety, law enforcement
- Fort Smith, Arkansas
- 220 employees

#### Challenge

- Maximizing ROI, lowering cost of ownership for desktop solutions
- Leveraging virtualization without increasing complexity
- Ensuring infrastructure scalability and keeping up with increasing demands (e.g., video)

#### Solution

- Virtual desktop infrastructure
- Teradici® PCoIP® Zero Clients
- Teradici PCoIP Hardware Accelerators

#### Results

- **Smooth deployment:** ability to start small and scale, without disrupting services
- **Improved end user support:** faster response times and issue resolution
- **Excellent performance:** employee satisfaction with desktop experience, and subsequently high adoption rates for VDI
- **Scalability:** addition of hardware accelerators and GPUs for boosting video and overall desktop experiences



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**Desktop virtualization seemed like a great idea.** The Fort Smith Police Department wanted to increase infrastructure redundancy and build out a new disaster recovery site. However, like many public organizations, they first had to ensure that any new desktop solutions could address all of the technical and business challenges:

- **Keeping it simple.** With an IT staff that included only two full-time employees and one Officer, the solution had to be carried out in phases and without increasing management complexity going forward.
- **Continuity of services.** Each change had to be introduced without disrupting the delivery of vital services including the city’s 911 call center, infrastructure support for the patrol car laptop computers, and delivery of mission-critical applications required by six criminal investigation units, as well as administrative services employees. The variety of applications ranged from office productivity tools to the department’s Report Management System used to submit and review all incidents.
- **Flexible endpoint options.** Some of the existing endpoints, such as the laptops in patrol cars, had to be retained due to support issues for specialized applications.

**They aimed to start small, but demand for the new zero clients accelerated the VDI deployment.** “At first, the new VDI solution went live with 20 new PColP Zero Clients replacing traditional PCs,” said Jared Barnes, network administrator, Fort Smith Police Department. “From the start, our VDI users were very happy, and now 90 percent of our desktops have been replaced with new zero clients or thin clients. This includes the Fort Smith 911 services, which we host here as well.”

Once introduced, the IT team took advantage of adjustable VMware Horizon View thresholds and PColP settings to customize group policies and further optimize user experiences. “This was my first experience with VDI and PColP Zero Clients, but it was very easy to learn,” said Barnes. “Anyone with a Windows administrator background will be familiar with the template styles, and there is a lot of documentation that explains everything. For our environment, we discovered a lot of options for optimizing – you can get as granular as you want with the PColP protocol.”

While IT enhanced and fine-tuned the VDI environment, end users were taking advantage of the flexibility and power of their new virtual desktops, especially for video. Interviews at the on-site jail are routinely video recorded, and video content is then exported and shared within the department and with the local prosecutors’ offices. Video footage from other sources is also routinely examined when investigating theft, fraud, or vandalism. The increasing reliance on video evidence has made desktop viewing a critical requirement for investigative teams.

“When more employees needed to watch video recordings from their desktops, we introduced another Teradici product on our VDI servers,” said Barnes. “Besides seeing a surprising improvement for video streaming, we’ve seen how the PColP Hardware Accelerator cards improve the overall desktop experience. This solution does a lot for us.”

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Anticipating that video will continue to grow in importance throughout the department, IT plans to pair GPUs with PCoIP Hardware Accelerators. Barnes explained, “Video viewing and related background processing is our biggest processing workload today, and the combination of PCoIP Hardware Accelerators and GPUs will help us keep up with this law enforcement trend.”

**Supporting virtual desktops takes less time – and that means quicker results for the end users.** “Compared to a full desktop deployment, the administration and reliability of PCoIP Zero Clients has been incredible and allowed us to decrease response time on issues and enhance the desktop experience,” said Barnes. “Fixing problems no longer takes a couple days like it used to with traditional PCs. We can address most user issues in less than an hour. Employees definitely like the quick turnaround time. Like most IT organizations, we are pretty strapped for time. VDI makes it possible for us to administer a larger set of desktops in less time. I can’t imagine doing everything we do today if all of the employees had physical desktops. Overall, our whole VDI experience has been great.”

This successful PCoIP Zero Client and VDI deployment represents the beginning for IT. Next, the team plans to introduce the latest updates, add GPUs to the VDI servers, and continue to monitor and optimize infrastructure performance.

“The move to virtual desktops called for some up-front investments, and we will continue to add to the new platforms,” said Barnes. “The gains – the ability to administer a much broader range of users and systems – are well worth the investment.”

#### Products used

PCoIP Zero Clients

PCoIP Hardware Accelerator

#### Virtualization platform

VMware Horizon View

