



FDNY Operations Center CASE STUDY

FDNY OPERATIONS CENTER

Customers rely on ClearCube for solutions to mission-critical desktop problems – the need for High Availability, High Security, and Improved Interoperability.

The Fire Department of the City of New York (FDNY) is the largest and busiest Fire Department in the United States with 1,734,479 total calls in 2016, according to the 2016 National Run Report.

The Problem

After many hard years recovering and rebuilding after 9/11, the New York City Fire Department Operations Center (FDOC) needed more response capacity and a new backup / failover facility.

There were several lessons to be learned from their existing facility which was crowded (with over 180 stations), noisy, and stress-filled in an already stressful situation room where security is always a concern. FDNY needed a high availability desktop platform for the new systems at the second site but they did not want to repeat any previous mistakes. The new location had to be outfitted to be “active” and ready to receive calls that were directed its way gradually or instantly if activity spiked suddenly with an incident.

While designing the new center and the infrastructure needed for the Staten Island Back-up Operations Center, early on they established one big priority problem to solve. Their previous boxed PCs were notorious for being a single point of failure for their mission critical Computer Aided Dispatch application. This time they needed a new High Availability desktop platform. They and their prime consultant chose Clearcube as the best solution available in the market for their use case.

The Solution Constructing a Smart Failover Facility.

The ClearCube installed solution consisted of just under 100 R Series Blade PCs and Quad Monitor Zero Clients brokered by Sentral Management console.

The Blade PCs were rack mounted and placed in a secure managed datacenter location leaving no unsecured data at the edge. The target of five nines (99.999%) uptime was delivered by designating a number of active Blade PCs which were backed up with a reserve pool of stand-by active blades ready to take over automatically if any problems happened to occur. Since this technology was all based on standard Intel-Windows PC based technology, no new skills or costly training projects were needed and no new staff was required because all the Blade PCs were in the datacenter, not at the edge. Supported by Sentral Software's suite of system wide management capabilities and intelligent rules engine, this platform gave FDNY the most dense and efficient platform available for their centralized desktops.



ClearCube Technology Solution

- 96 Blade PCs (plus a small “active hot-spare” pool)
- 96 Dual Display Zero Clients
- ClearCube Sentral Management software
- Built-in redundancy
- Sophisticated chassis technology with advanced failure analysis features and automated “proactive” health monitors
- Library of “self-healing” routines
- Flexible common language scripting rules engine
- Deployed in less than 1 week
- Tested and in production in under 3 weeks

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The Result

Highly Intelligent Overflow and Failover Location

The operations center houses secure phone lines, ClearCube Blade PCs, and Zero Clients, as well as state-of the art video walls where commanders view live video and other data like GIS vehicle and apparatus-location information. Delivering feeds from 50 different data sources concurrently, the modular blade chassis removes single points of failure from the desktop hardware. With "hot-sparing" and Sentral management software, the FDOC enjoys 99.999% uptime and availability for their CAD application.

New Capability Improves Emergency Response for the Whole Region.

ClearCube facilitated combining multiple divisions of the same agency to aggregate resources to create a more efficient and economical alternative model that is resistant to threats from insiders and outsiders.

From this Operations Center, FDOC, oversees the bureau of operations for fire and EMS. After losing 21 chiefs in 9/11 in the field, FDOC now prefers that senior fire commanders manage multiple, large-scale incidents across the city and monitor operations at its 198 engine and 143 ladder companies from a single, centralized, remote location.

We are proud to have participated in facilitating this centralized data infrastructure that makes sharing of information with other agencies possible. This new capability allows FDNY to improve their interoperability and communications with other city agencies including the Police Department, Office of Emergency Management Operations, Homeland Security and Department of Transportation. Now, in some cases the major multi-agencies events are managed from the new FDOC command centers.

We have helped the leaders of this organization get the most value for their taxpayer dollar and done everything that is technically possible to provide preventative processes, self-healing routines, spare active resources and all the software, hardware and process faculties to seamlessly switch portions of, or all of, the alarm and dispatch capabilities to the failover facility as required by the situation. FDNY is ready.

Other satisfied e911, Emergency Operations, and Command and Control center customers include:



For over 16 years ClearCube has been designing products, processes and systems to solve difficult computing performance problems. Specializing in high-security environments for all types of organizations who create value for their customers and stakeholders, up-to and including, protecting lives and property. We create a range of powerful rack-mounted blade PCs and workstations with many flavors of zero clients. Many of our zero client models are specially designed for highly-sensitive, controlled security environments and satisfy the entire spectrum of user types and tough use case requirements.