Hewlett Packard Enterprise

Case Study

LADBS teams with HPE to transform the way they serve the LA development business

HPE ConvergedSystem 242-HC StoreVirtual appliance streamlines remote offices

Objective
Evaluate and deploy state-of-the-art systems in support of 11 remote offices

Approach
Implement HPE ConvergedSystem 242-HC StoreVirtual appliances in remote offices

IT Matters
- Prevents overheating and downtime due to 2U footprint and minimal power usage
- Saves significant maintenance and travel time costs through remote management
- Ensures business continuity with multi-site disaster recovery and replication functionality
- Leverages IT productivity and allows more time for infrastructure design/build

Business Matters
- Increases revenues significantly through business continuity (e.g. saves $240,000 in previously lost revenue due to overheating outages in Van Nuys office, plus savings from other remote offices)
- Promotes high employee and customer satisfaction with system reliability and responsiveness
- Saves significant costs when compared with additional servers required to achieve same performance
- Reduces maintenance time by 50%, saving $2,200 monthly

The Los Angeles Department of Building and Safety managed over $6.8 billion in construction valuation in 2015. Known for its dedication to providing superior support to builders, LADBS teamed with its long-term solutions provider, Hewlett Packard Enterprise (HPE), to transform to a hybrid infrastructure by leveraging hyper-converged systems. As a result, its critical remote offices can now handle the requirements of rapid building growth, and are posting increased City revenue.

In 1850, shortly after the quaint Mexican town of Los Angeles became part of the new state of California, life was simpler—as one would expect in a town of only 1,610 residents. The City of Angels now boasts an estimated population pushing four million and it's the job of the Los Angeles Department of Building and Safety (LADBS) to "Advise, Guide, and Assist" developers and builders with construction in the City. It's a big responsibility because construction is the lifeblood of the City, it drives the tax base and creates jobs. And the construction business is booming.

"Spending on new development, remodels and room additions is expected to reach nearly $7 billion by the end of the fiscal year—the highest it's been in three decades due to the recovering economy," says Giovani Dacumos, department superintendent, LADBS. "LADBS maintains a long-standing relationship with Hewlett Packard Enterprise to ensure our department is always innovative, and that our customer service delivery is premier, highly available and secure. A great deal of City revenue depends on it."

The Department of Building and Safety manages a digital engineering process with 300 engineers and 400 inspectors who oversee building activities such as processing 140,000 permits and performing 500,000 inspections annually. To service this enormous amount of activity, the Department maintains a headquarters location with their primary data center and 11 remote locations throughout the area. Reliable access to the systems for everyone involved in the building process is a priority for the Department. In 2013, The Department of Building and Safety hired HPE to design and build a new state-of-the-art data center for its primary location. As a direct result, all unplanned outages were eliminated, system reliability was improved, and the building process in the City was enhanced. For the remote locations, state-of-the-art data center facilities were not an option, these sites are outfitted with minimal data closets.

HPE hyper-converged system streamlines strategic remote offices

The next challenge was providing a solution to ensure expedient and reliable services for its 11 area offices. Although HPE has been the "go-to" solutions provider for LADBS, a savvy manager never lets a company rest on its laurels. Dacumos and his IT staff evaluated three major technology vendors alongside HPE, narrowing it down to two, and then running a parallel Proof-of-Concept (POC) with the finalists. "We left no stone unturned," admits Dacumos. "The need for growth capacity and performance response is critical and we need to be sure our solutions not only perform for today's needs, but also for tomorrow's. We demand the best, and then stringently test it, before we make it ours."

The major requirements needed for the remote offices were a dramatically reduced footprint and heat output, reduced maintenance travel time, reduced maintenance and contract costs, simplified system management to leverage IT productivity, and finally, increased performance and business availability. After a thorough live testing with the POC, LADBS chose to implement HPE ConvergedSystem 242-HC StoreVirtual appliances in each of the three largest remote offices. The LADBS staff are pleased with the immediate performance and management benefits, not to mention cost savings.

"The HPE ConvergedSystem 242-HC StoreVirtual appliance comes pre-configured with servers, storage, networking and VMware vSphere, and we were able to deploy them ourselves in no time, with only some initial instruction from HPE," recalls Ian Applegate, systems programmer, LADBS. "Its footprint is only 2U, which solves our space issues by replacing two plus racks of equipment, with four times the compute power in 95% less space."

Enjoying a really cool solution

Anyone visiting Los Angeles during a heat-wave, knows just how hot it can get. The remote offices don't have properly cooled computer rooms and the previous equipment would typically overheat and crash several times per year. Restoring the system was like a lesson in first aid, with portable air conditioners being brought in and run for hours, until the servers regained consciousness. With travel time and system recovery, as much as a day was lost, resulting in the loss in City revenue, as well as lost time and money for Los Angeles developers.

For example, per Applegate, the Van Nuys office, which is the second largest Construction Services Center and generates approximately 30% of the Department's planning and permit fees, suffered two outages last year due to overheating. A one day outage from server room overheating cost the Department $120,000 in lost revenue. Since the HPE hyper-converged system has such a small footprint and is so energy efficient, it simply doesn't overheat. Applegate calculates the energy efficiency will save about $240,000 this year from the Van Nuys office alone.

"We've been through several heat waves since the installation of our HPE hyper-converged system with complete business continuity," confirms Jing Reyes, director of systems, LADBS. "The small footprint and reduced power consumption means they just don't overheat. It's literally a very cool solution. In addition, we don't have to travel to manage and maintain the

"Our business is dynamic and our industry is highly competitive. Hewlett Packard Enterprise (HPE) is helping us transform the Department with an innovative converged hybrid infrastructure that maximizes our performance, cost, and flexibility. We pride ourselves on utilizing cutting-edge HPE technology to drive and expand our economic development. HPE is our visionary counterpart in the technology world, and we continue to make a very productive and successful team."

– Giovani Dacumos, department superintendent, Los Angeles Department of Building and Safety

HPE ConvergedSystem 242-HC StoreVirtual appliances because they are easily accessed remotely from the HPE OneView for VMware vCenter management console. Previously, if we had a technical problem, it might take two hours in LA traffic plus service time to get it running again. Now we open HPE OneView for vCenter from any office we want."

Applegate, often one of the experts called to travel and oversee critical maintenance, concurs. "It's been four months since deployment, and we haven't had to travel for maintenance once," he says. "We haven't had anything go wrong and have 100% uptime and complete business continuity. We're seeing a 50% reduction in maintenance time, which saves us $2,200 monthly. The inherent reliability and remote management also reduces the requirements on our expert staff time, so we can focus on more critical IT projects, such as infrastructure design and build."

HPE Proactive Care Advanced service helps the City of Los Angeles make the most of their HPE hyper-converged system. In addition to an assigned HPE account support manager, the City's IT staff has direct access to expert assistance, best practice advice, and critical incident management, if needed.

Inherent disaster security and rapid provisioning with HPE StoreVirtual VSA

The HPE ConvergedSystem 242-HC StoreVirtual appliance employs software-centric storage and can be managed on-site or remotely, using HPE OneView for vCenter. "It only takes a few simple-to-learn clicks to provision storage for a remote appliance, so we can get new customer services up and running as soon as they are ready," continues Applegate. "With our prior storage platform, provisioning it would take about three hours (plus travel time) whereas it's just a minute or two with HPE OneView for vCenter on the ConvergedSystem 242-HC StoreVirtual system. It's like HPE gave us a magic wand."

The HPE hyper-converged appliance also provides built-in disaster recovery for the LADBS remote offices by leveraging the system's inherent ability to replicate data to each other, at no additional cost.

"Disaster recovery is very key to our continuity strategy, because we know firsthand the destructive power of local earthquakes," emphasizes Reyes. "If we have a failure at any of the remote sites, we can point to another and keep running, with current data.

Case study
LADBS

Industry
City Government

Customer at a glance

Application
The HPE ConvergedSystem 242-HC StoreVirtual appliance support nearly $7 billion in Los Angeles development at remote area offices for the Los Angeles Department of Building and Safety

Hardware
- HPE ConvergedSystem 242-HC StoreVirtual appliance

Software
- HPE OneView for VMware vCenter

HPE services
- HPE Proactive Care Advanced service

In the event of earthquake damage, rebuilding and repair is a city priority, and LADBS must be up and running to help manage building safety and recovery."

Performance increase supports full application functionality

"HPE and Intel® work very closely on constant technology, performance and power efficiency improvements", says Darrell Stewart, Public Sector manager, Intel. "Our Intel E52600 family of processors bring an amazing amount of performance, IO and memory capabilities. With our robust thermal profiles and Intel's Smart Cache, up to 25M of capability in conjunction with 1866 DDR3 memory footprint, we offer performance capabilities second to none."

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>
> – Giovani Dacumos, department superintendent, Los Angeles Department of Building and Safety

The HPE ConvergedSystem 242-HC StoreVirtual appliance comes with a 10GB network connection. However, Reyes and Applegate have a 1GB network limitation at the remote offices. On implementation, they connected it at 1GB and were pleasantly surprised, that even at one tenth of the bandwidth available, they were seeing significantly higher performance than the prior system. In order to better communicate the benefits received by this higher performance, Applegate offers a parable of a good day at work: "Prior to the HPE ConvergedSystem 242-HC StoreVirtual, we often had employee complaints of the system hanging and being very slow between screens," he recounts. "After we hooked it up, I had my first day ever at work with not a single complaint call. We estimate we're getting a 30% performance boost using only a 1GB connect capacity. Once we get the network infrastructure (which is independently supported by another department) to support the inherent 10GB connection, I won't know what to do with it."

"Put another way," adds Reyes, "It would take an additional three servers, at a significantly greater cost, to get the same performance that we get from our HPE hyper-converged system. And all this power fits into a 2U footprint with all the storage needed to manage a multi-site disaster recovery capability. One of the greatest immediate business benefits achieved, is the fact the HPE ConvergedSystem 242-HC StoreVirtual supports the same LADBS application functionality as the data center. We no longer have to run a truncated version of our customer services. This means the public can conveniently get full service all over the City. An equally important benefit is that our remote employees aren't frustrated by slow systems, and the public gets a speedy response."

In closing, Dacumos comments on the reputation LADBS painstakingly earned as a technology innovator in the City of Angels, and how results are everything, especially when combined with vision.

"Our business is dynamic and our industry is highly competitive. HPE provides us with an IT infrastructure that is just as dynamic, cost-effective and innovative. We pride ourselves on utilizing cutting edge technology to transform the way the City does business, and how we leverage that technology to help drive its economic development. HPE is our visionary counterpart in the technology world, and we continue to make a very productive and successful team."

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