



The City of Plano Saves Taxpayers \$3.5M by Moving to Nutanix

Nutanix Enterprise Cloud Simplifies IT Management, Speeds Deployments, and Saves \$3.5M of Taxpayer Dollars Over Five Years.

BUSINESS BENEFITS

The City of Plano was experiencing outages on its aging legacy datacenter infrastructure. By migrating to Nutanix Enterprise Cloud OS on Dell EMC XC, they improved uptime, and reduced the time it takes to manage the environment and deploy new projects. All city services and applications are running more reliably on Nutanix, enabling the IT team to provide better service to the citizens of Plano and focus on strategic assignments.

“Nutanix Enterprise Cloud is enabling us to serve our citizens in a more efficient way and it makes our IT team more productive.”

– Chris Edwards, CISSP, Enterprise Architect,
City of Plano, Texas

INDUSTRY

City Government

NUTANIX SOLUTION

- Nutanix Enterprise Cloud Platform on Dell EMC XC
- File Services powered by Nutanix Files

Applications

- Microsoft SQL Server, Exchange, and SharePoint, JD Edwards EnterpriseOne, PeopleSoft, police car and body cam video, emergency services, Unified Communications and messaging apps, etc.

BENEFITS

- Increased uptime of city emergency services
- Saved \$3.5 million of taxpayer dollars over five years
- Shortened new project deployment times from weeks to days
- Drove additional tax payer value by enabling the sharing of datacenter space with other public agencies

CHALLENGE

The City of Plano's 70-member IT team is responsible for supporting all of the applications and services used by the City's ~3,000 employees. "Working for a city IT department is a lot different from the private sector," explained Chris Edwards, Enterprise Architect for the City of Plano. "We support a large collection of different business units, including our police and fire departments, public safety communications, park and recreation, public libraries, and other teams. Each have their own unique requirements and needs to serve their customers."

Before moving to Nutanix, the IT team was managing 200+ physical servers, a Hyper-V deployment with approximately 100 VMs, and various storage appliances and networks. "We were spending far too much time maintaining the disparate servers, storage appliances, and networks," said Edwards. "We also didn't have a true disaster recovery site—it was more of a cold site with space to deploy gear, but no gear there meaning long waits to procure hardware in the event of a disaster. In addition to updating our legacy systems, we also needed to improve the reliability and availability of our city's vital services and ensure we had a clear path to the continuity of operations in a disaster situation."

Searching for a Better Solution

The City of Plano decided to move from its legacy datacenter infrastructure environment to a hyperconverged infrastructure (HCI) based solution in 2017. "Several vendors submitted proposals for the new environment, but Nutanix was clearly the best fit for our needs," Edwards noted. "Not only did they have the most experience in the market, they wrote the 'Nutanix Bible', which is the industry's most comprehensive guide on hyperconverged infrastructure. When we looked at Gartner's Magic Quadrant and saw that Nutanix was listed as a leader for HCI along with researching the competition in this area the decision to move to Nutanix was very easy."

SOLUTION

The City of Plano migrated to Nutanix Enterprise Cloud software on Dell EMC XC servers in 2017. "We have already consolidated over 90% of our servers onto Nutanix, but there are still a few lurking out there that need to be moved," admitted Edwards. "We now have two primary datacenters in Plano, and are using AWS as a tertiary disaster recovery target in the cloud." Workloads running on Nutanix now include Microsoft SQL Server, Exchange, and SharePoint, JD Edwards EnterpriseOne, PeopleSoft, police car and body cam video, emergency services applications, as well as Skype for Business Unified Communications and messaging apps."

CUSTOMER OUTCOME

Improving Uptime for Emergency Services

"When you're hosting critical applications, like our city's emergency services, you need to strive for five 9's of availability," explained Edwards. "There were a lot more outages and interruptions to service than should have been tolerable with the physical servers and different storage solutions we had place. By moving to Nutanix, we've seen a vast improvement in service uptime. And it's not just the ongoing improved reliability of our daily operations, the Nutanix upgrades are non-disruptive as well. The lack of outages has enabled our police and fire departments to respond faster to city emergencies and know that the critical applications they use to do their jobs will be available when they need them the most."

Implementing a Hot DR Site

The City of Plano is also using Nutanix to build a true DR site, replicating all applications and data between its two primary datacenters. “The security of having a live DR site is a huge bonus for us,” said Amy Alexander, Service Delivery Manager. “With Nutanix, our recovery point objective (RPO) is now just one hour. When you’re responsible for managing emergency services for the entire county, having a hot backup site is essential for ensuring public safety. When this project is 100% completed, we’ll all sleep a lot better.”

Simplifying Management and Scaling Quickly

“With Prism Central, we can see our entire environment in just one screen,” said Alexander. “That visibility simplifies management and speeds troubleshooting. We used to split our time between maintaining our existing systems and implementing new projects at roughly 70/30. Now it’s the opposite. Nutanix is enabling us to focus on providing better services to our citizens, rather than maintaining hardware like we used to do.”

Nutanix also provides the ability to scale the environment quickly and easily. “With Prism Central, we can see the runways for storage, RAM, and everything else on one screen,” explained Alexander. “It gives us the ability to plan for success, rather than just reacting to failures. Being able to expand capacity in a matter of minutes breaks down the barriers to project management, and helps us get new projects done faster. We recently had to upgrade our PeopleSoft environment to comply with some new tax laws. It would have taken months to acquire all of the necessary hardware for the upgrade with our old systems. With Nutanix, we were able to spin up the entire new environment in just a few days.”

Serving Files with Better Performance Using Nutanix Files

The City of Plano is leveraging Nutanix Files (formerly Acropolis File Services (AFS)) to serve its home directories shares, departmental shares, and police video data. It enables the city to centralize data protection and eliminate the requirement for third-party file servers and storage solutions. “We moved all of our departmental end-user shares to Files in order to get rid of our physical Windows servers and all of the Windows licensing,” explained Edwards. “When we’re done migrating, we will have approximately 300TB running on Files. Since there’s no additional servers to maintain, it’s much easier to manage and it has high availability built in.”

Building Separate Clusters for Compliance

“As a public agency, we have to comply with numerous industry regulations for our various departments, including Criminal Justice Information Services (CJIS), HIPAA for our fire department and emergency medical services (EMS), and PCI-DSS for our utility services, libraries, parks, and courts where our citizens can use credit cards to pay their bills,” explained Edwards. “There are also several new regulations coming down the pipe, including one where the FBI will require physically separate disks for all CJIS data, not just separate logical LUNs. When we built our Nutanix environment, we created separate clusters to facilitate future compliance. We now have a public safety cluster for CJIS workloads, an enterprise applications cluster for everything else, and a mirror of both clusters at our DR site. By doing this, we’ll be ready if—and when—the requirement for physically separating virtual environments comes into regulation.”

Saving More than \$3.5M over Five Years

Before making its purchase decision, the City of Plano conducted an extensive TCO study comparing the cost of its current storage arrays, networks, physical servers, and associated maintenance with moving to the Nutanix Enterprise Cloud platform. “The cost of buying Nutanix on Dell EMC hardware upfront with five years of maintenance resulted in a savings of approximately \$3.5 million over five years,” reported Edwards. “And by consolidating all physical servers onto Nutanix, we were able to reduce our datacenter footprint from 44 racks to just four, resulting in additional savings on power and cooling costs going forward. The total cost of ownership is a ‘big deal’ for our management team and our citizens, because taxpayer dollars are funding all of our IT infrastructure projects.”

NEXT STEPS

With the extra data center efficiencies obtained by moving to Nutanix, the City of Plano is now able to collaborate with other public agencies in Collin County, Texas. “We heard that one of our local agencies was getting ready to spend a lot of money retrofitting one of their building for DR,” Edwards shared. “But since we had all of this freed-up datacenter space—and they had a giant fiber network spanning the entire county—we were able to strike a deal through the Texas Interlocal Cooperation Act that was beneficial to both of us. They are now planning to move all of their DR hardware into our datacenter. They’ll continue to manage their own infrastructure, but we will pay for the electricity and cooling. In exchange for that, we will be using some of their strands of fiber as well as their existing fiber pathways to pull our own private fiber network to increase connectivity between our two data centers improving DR and interconnecting our City facilities to serve our end users while further reducing recurring costs. We are now in talks with several other agencies to provide similar services through interlocal agreements. It is great to be able to help other agencies in our county, which saves all taxpayers money by reducing redundant expenditures, and waste between agencies. It also keeps a steady line of communication between agencies to share information and help each other out to make us all more efficient.”

“Nutanix Enterprise Cloud is enabling us to serve our citizens in a more efficient way and it makes our IT team more productive. Before Nutanix, our end users were surprised when things worked—now they’re surprised if they fail!” concluded Edwards.



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