Microsoft

Overview

Customer: City of Henderson
Customer website:
www.cityofhenderson.com
Customer size: 1,855 full-time and 1,076 part-time employees
Country or region: United States
Industry: Government—local

Customer profile

The City of Henderson, Nevada, is the second-largest city in that US state. With a population of 270,800 people, it is part of the Las Vegas metropolitan area.

Business situation

The city's IT staff had virtualized the city's datacenter but wanted to design a self-service portal to speed the process of requisitioning, approving, and provisioning servers.

Solution

The city created a Microsoft private cloud and used Gridpro Request Management for Windows Azure Pack to set up an easy-to-use portal that employees use to request servers.

Benefits

- Reduce two-week server-build process to one day
- Accelerate IT projects
- Gain additional scalability with hybrid cloud
- Make better use of hardware and staff

City maximizes IT budget with private cloud and self-service server provisioning tool

"With Gridpro Request Management for Windows Azure Pack, we've reduced a two-week server-build process to one day or less ... Our staff is no longer involved in low-level tasks."

Nikolaus Rotzinger, Systems Engineer III, IT Department, City of Henderson

After a six-year recession, the City of Henderson, Nevada, has become proficient at doing more with less. Its IT department gained efficiencies by deploying a Microsoft private cloud and using Gridpro Request Management for Windows Azure Pack to create a self-service portal for server requests. The city has reduced server delivery times from two weeks to one day, compressing project timelines and making better use of hardware and staff. The city will gain even more scalability and flexibility by using Microsoft Azure.

gridpro

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Do more with less

From 2000 to 2006, the Las Vegas Valley in Nevada was one of the fastest growing areas in the United States. People were flooding into the area, and housing starts were among the highest in the nation. But when a six-year recession began in 2007, Las Vegas and nearby Henderson, the two biggest cities in the state, were two of the hardest hit US cities.

In the last few years, the City of Henderson, Nevada, began to grow again. The city's IT department—which only has about 70 staffers to support 1,855 full-time and more than 1,000 part-time city employees—has experienced flat or decreasing budgets and staffing levels for the last 10 years. However, during the recession, city services of all kinds were expected to carry on and even improve. City departments modernized their operations with technology and increased their use of citizen e-services (web-based services). Because of the city's growing dependence on technology, its server count mushroomed from 50 to 500 over a 10-year period, but there were no additional IT staffers hired to provision or manage those servers.

"We are constantly trying to recover time in our department," says Nikolaus Rotzinger, Systems Engineer III in the City of Henderson IT department. Rotzinger's team virtualized the city's servers using the Hyper-V technology in the Windows Server 2008 R2 and Windows Server 2012 R2 operating systems and consolidated 400 physical servers down to 400 virtual machines on 100 physical hosts. Still, the process of requesting and provisioning virtual machines took a long time.

"The whole server approval process was manual and took up to two weeks," Rotzinger says. "Once we got approval, we'd need about four hours to build the server, also using a manual process. We had to be able to do more with less,

because we're given more responsibilities every day."

Adds Marco Arnhold, Systems Engineer III in the City of Henderson IT department, "We decided to automate anything repetitive and encourage city employees to use self-service portals wherever possible. We were always behind and wanted to be more proactive."

Adopt private cloud computing

To automate IT processes and relieve its limited IT resource pool, the City of Henderson set up a private cloud environment, whereby its virtualized compute, storage, and network resources were configured into shared pools that could be dynamically and automatically configured on demand.

To accomplish this, the IT staff deployed and used Microsoft System Center 2012 R2. System Center 2012 R2 consists of a suite of management tools for automating common datacenter tasks. One of these tools is System Center 2012 R2 Service Manager, which provides industry best practices–based workflows for incident and problem resolution, change control, and asset life-cycle management. Service Manager is used to connect other System Center components to orchestrate IT services.

The city IT staff also deployed Windows Azure Pack, which gave it the ability to create a self-service portal for provisioning and managing virtual machines, websites, and other infrastructure resources. By using the Windows Azure Pack Management Portal, IT organizations can control how they offer IT services to internal customers and provide those customers with a rich self-service user experience for provisioning and managing resources.

Rotzinger and Arnhold looked at the powerful tool set before them and realized that they had a few remaining needs to address. "We wanted more customization

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> Nikolaus Rotzinger, Systems Engineer III, IT Department, City of Henderson

options in Windows Azure Pack without having to write and maintain custom code," Rotzinger says. "There were also some things we wanted to change about the standard Service Manager interface."

Establish instant server provisioning portal

The City of Henderson turned to its Microsoft contacts, who introduced Rotzinger and Arnhold to Gridpro, a member of the Microsoft Partner Network and Microsoft Enterprise Cloud Alliance. Gridpro specializes in implementing and extending System Center and Windows Azure Pack.

Gridpro had a product that perfectly met the city's needs: Gridpro Request Management for Windows Azure Pack. From within Windows Azure Pack, this product makes it easy for IT employees to submit, track, and update IT incidents and requests that are managed by Service Manager. "Once we added the Gridpro solution, we had everything we needed in terms of process automation, without having to customize anything," Rotzinger says.

Gridpro Request Management enhances the standard Service Manager portal and also enhances Windows Azure Pack by making it possible to create not only virtual machines and websites but also, in the city's case, custom approval forms. Once virtual machines, websites, and other resources are created, IT staff use the Gridpro solution to track change management on those resources.

Reduce two-week process to one day

Today, when an application developer in the city's IT organization wants a server, he logs on to the Windows Azure Pack Portal and uses the Gridpro Request Management enhancements to submit his request. A dynamic form prompts him for all the information that is needed to build the server: server function, administrator names and contact information, CPU and RAM

resources, the type of update schedule required, and other necessary data. Previously, it took a great deal of time for the IT team to chase down this information.

Once the form is completed, Service Manager sends an email to the requester's supervisor with a link to submit approval. The supervisor's email address is automatically pulled from the city's Active Directory Domain Services. When the supervisor approves the server request online, Service Manager begins the server-build process, orchestrating other System Center 2012 R2 components such as Virtual Machine Manager and Orchestrator to perform specific tasks.

"With Gridpro Request Management for Windows Azure Pack, we've reduced a two-week server-build process to one day or less, depending on how quickly the approval is made," Rotzinger says. "Our staff is no longer involved in low-level tasks."

Accelerate IT projects

This dramatic speedup means that city employees who are developing new e-services for citizens, rolling out mobile technologies for field employees, and working to create any number of other technology-based services can deliver them faster. "Employees love the new process," Rotzinger says. "It's far more convenient for them, and they don't have to wait two weeks for a server anymore. Projects and applications are no longer being slowed down by the server-build process."

Adds Arnhold, "Instead of getting bogged down in repetitive tasks and struggling to keep up with demands, we can be proactive and look forward. We're spending more time evaluating new products, and we're deploying new products sooner. Anything that our employees can do for themselves frees our infrastructure team to focus on more important tasks. Plus, standardizing and automating tasks like server builds

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Marco Arnhold, Systems Engineer III, IT Department, City of Henderson

brings consistency and minimizes mistakes."

Gain additional scalability, flexibility with hybrid cloud
Soon, the city plans to extend its private cloud with Microsoft Azure Government, a public government-community cloud that offers hyperscale compute, storage, networking, and identity management services with world-class security.

"As public clouds mature, they become very cost-effective options for us," Arnhold says. "They give us tremendous scalability and flexibility advantages. We don't have to keep physical infrastructure on hand for temporary workloads such as testing. Running a server on-premises might cost us [U.S.]$60 a month, while running an Azure Virtual Machine might cost us just $20 a month."

Adds Rotzinger, "We also appreciate that the Windows Azure Pack interface looks the same as the Azure interface. So if we move to Azure with a hybrid-cloud model, our employees will already be familiar with the look and feel—there will be no learning curve."

In addition, the city is evaluating Azure as a disaster recovery site, considering using Azure Site Recovery to replicate its on-premises workloads to the cloud for protection. Rotzinger and Arnhold also want to put public-facing workloads, such as its website, in Azure. "Instead of hosting these environments on-premises and creating and maintaining firewalls and security rules, we can just put them in Azure and let Microsoft worry about all that," Rotzinger says.

Make better use of resources
As of June 2015, the City of Henderson has 600 virtual machines running on 100 physical hosts, and the IT staff may be able to achieve even higher consolidation ratios as servers become more powerful. But growth is inevitable—the city's data storage

doubles every 18 to 24 months, and Rotzinger expects its server count to double in the next two years.

"With our Microsoft private cloud and automation tools, we will be able to handle our expected growth either without expanding our staff or with very few additions," Arnhold says. "Thanks to our automated environment, we can be more proactive and productive with our existing staff."

For more information

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For more information about Gridpro products and services, visit the website at:
www.gridprosoftware.com

For more information about City of Henderson, visit the website at:
www.cityofhenderson.com

Transform the datacenter

With Windows Server, Microsoft System Center, and Microsoft Azure, customers can take advantage of an enterprise-grade platform across the on-premises datacenter and the cloud. Consistency between the datacenter and the cloud makes it easier to integrate new capabilities. With datacenter innovation and new hybrid options, you can reduce costs, simplify management, and access cloud resources on demand.

For more information about transforming the datacenter, go to:
www.microsoft.com/en-us/server-cloud/cloud-os/modern-data-center.aspx

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Software and Services
- Microsoft Server Product Portfolio
  - Windows Server 2012 R2 Datacenter
  - Microsoft System Center 2012 R2
- Technologies
  - Hyper-V
  - Windows Azure Pack

Hardware
- HP ProLiant BL460 Gen8 and Gen9 blade servers
- HP ProLiant DL380 Gen8 and Gen9 servers

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