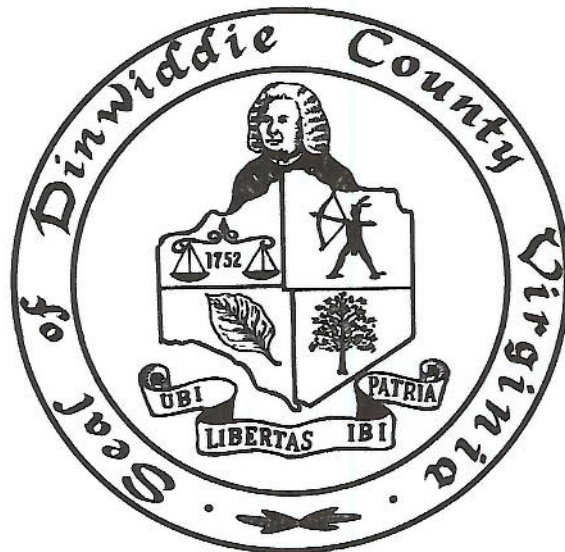


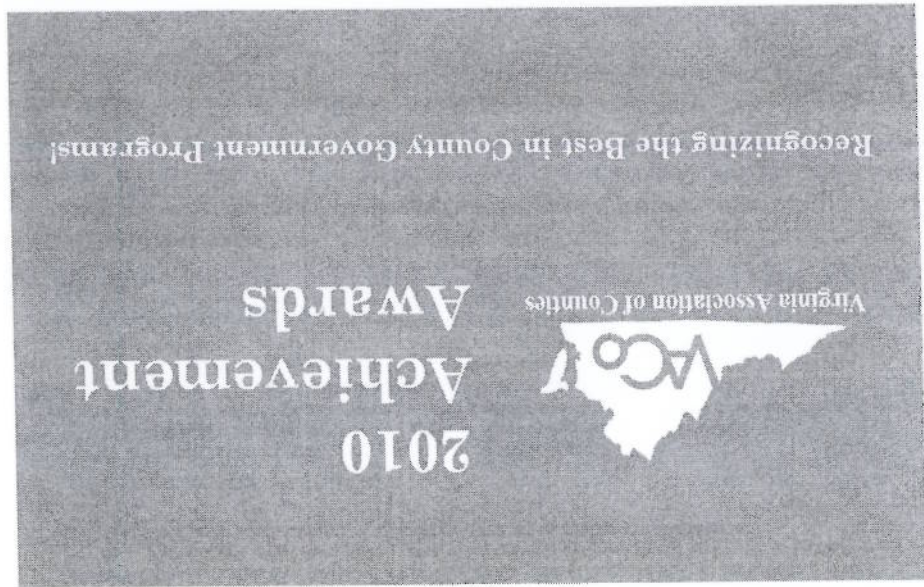


2010

VACO Achievement Award

Submitted by:
Department of Information Technology
Dinwiddie County





ATTN: 2010 Achievement Awards Program
 Virginia Association of Counties
 1207 East Main Street, Suite 300
 Richmond, Va. 23219-3627

address service requested

Call for Entries

2010 VACo Achievement Awards
 Deadline: June 1, 2010

Application Form

All applications must include the following information. Separate applications must be submitted for each eligible program. Deadline: June 1, 2010.

Program Information

Locality COUNTY OF DINWIDDIE
 Program Title 911 REVAMP PROJECT
 Program Category INFORMATION TECHNOLOGY
 Population Category 15,001 - 30,000

Contact Information

Name NORMAN COHEN
 Title DIRECTOR OF INFORMATION TECHNOLOGY
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 Telephone # (804)469-4500 x132 Fax # (804)469-3116
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Signature of county administrator or chief administrative officer

Name W. KEVIN MASSENGILL
 Title County Administrator
 Signature* [Handwritten Signature]

*Entries without this signature will not be accepted.

Dinwiddie County Government, a case for IT virtualization.

OVERVIEW

Dinwiddie County Virginia was faced with several IT challenges: Aging infrastructure, server sprawl, a mission critical 911 CAD server approaching end of life, and silo'd networks. By virtualizing their infrastructure they were able to address all of these issues and turn their environment into one that allows not only a very high server survivability, but centralized server management as well.

The first step was to create a centralized server farm with the ideas of geo-redundancy, High Availability, and Fault Tolerance in mind. They quickly realized that in order to deliver the robust server platform that they needed they would have to virtualize their environment. Virtualization would allow them to physically separate 2 server sets, placing each in a different location, and mirroring them across the fiber backbone.

Using VMware as their virtualization platform, and Datacore's SAN Melody as their SAN server software, Dinwiddie County built two exact virtual servers and connected them to a San Solution comprised of two San Servers which are mirrored by iSCSI over fiber. One server set is located at the administration building, the other at the Public Safety building located at the other end of the campus insuring survivability in case of facility disaster.

Dinwiddie's new virtualized infrastructure has been in operation for several months now, and has proven itself to be very resilient. A recent building outage where the generator failed to start caused one datacenter to go dark. The virtual Machines at that location were automatically moved to the datacenter that was still in operation. Fault Tolerant virtual machines never went offline. Virtual machines configured for High Availability went offline for only a few minutes, then were automatically rebooted at the live data center. Once power was restored, the servers migrated back to their original

host and the SAN re-established its mirror, re-synchronized its data, all while running the virtual machines in a production environment.

Goals

Starting out Dinwiddie had only a few goals: create a very stable recoverable system that allows fault tolerance and high availability but once the project began to take form they realized that their needs were a little more entailed. "Going Green", reducing overall power consumption and cooling requirements by lowering the number of physical servers, and centralized management were two such goals. Another goal was the ability to scale the system to meet future needs. "Scalability becomes an issue when you are talking about totally recreating your infrastructure", said Norman Cohen, IT Director "You have to make sure that you don't buy the first solution that comes along and inadvertently tie yourself to one vendor from that point on, or buy a solution that requires a forklift replacement when you outgrow it."

Challenges

The main challenge was financial. Like most other small counties, Dinwiddie County's capital investment funds were limited to only the most necessary purchases.

Another challenge was migrating to a virtual environment while maintaining a running production environment. "One of the major servers we had to virtualize was our 911 CAD server for emergency dispatch. This is a 24 X 7 operation that cannot be down for any length of time." Said Jim Frashure, Network Admin.

Solutions

Leveraging a DOJ grant for public safety infrastructure improvements, Dinwiddie County was able to meet or exceed all of its technical requirements with little capital outlay from the county.

Dinwiddie Counties IT staff did extensive research into different solutions and vendors before making any decisions. "We had to be sure that every piece fit with every other piece... we did not have the money to start over or replace something bought in error" said Cohen.

Most of the servers were converted from Physical to Virtual servers using VMwares "Converter" Application, while others required a ground up rebuild. A lot of after hours and weekends were required to finish the cut over.

Dinwiddie County built a virtual environment consisting of 2 virtual servers running VMware vSphere 4.0 virtualization platform, 2 mirrored SAN nodes (functioning as a single asset), and a fiber optic backbone.

Results

"The flexibility that we have gained by virtualizing our infrastructure is just tremendous" added Cohen. The fact of the matter is that by virtualizing the servers and storage, Dinwiddie County is able to deliver a true highly available, cost effective, fault tolerant environment that is not possible without virtualization.

A fault-tolerant, mirrored SAN solution is a far cry from where the county was, storage-wise, prior to embracing virtualization. Consisting of only three people, the Dinwiddie County Government IT Department has reduced the number of physical machines from six prior to virtualization to two physical machines running twenty (20) virtual machines now.

SNW Names Dinwiddie County Government as a Finalist for Its Spring 2010 "Best Practices" Awards Program

Dinwiddie County Government Recognized by SNW for Excellence in Storage Technology

DINWIDDIE, Virginia and FORT LAUDERDALE, Florida – April XX, 2010 – DataCore Software, a leading provider of storage virtualization software, today announced that the government of Dinwiddie County in Virginia has been selected by SNW as a Finalist for its Spring 2010 "Best Practices" Awards Program.

SNW's "Best Practices" Awards Program identifies and acknowledges excellence among users of storage IT solutions and approaches. Five Finalists and one Winner in each category will be recognized during an Awards Ceremony taking place at SNW, April 12-15, 2010, at the Rosen Shingle Creek in Orlando, Florida.

DataCore enabled this local government to realize its objective of achieving business continuity – chiefly, attaining high availability and fault tolerance. It was server sprawl that first led this county government to consolidate its physical machines. DataCore has enabled the IT Department at Dinwiddie County to get the most out of VMware vSphere and utilize its more advanced functions – such as VMotion – to provide the high-availability that this customer sought. The overarching objective was to keep their applications running on the new, virtualized IT infrastructure without downtime. This was a particular point of emphasis for the Emergency 911 Center and Sheriff's Office

"Data and storage networking initiatives are more challenging and crucial than ever before and is still one of the most important pillars of the IT infrastructure," said Ellen Daly, senior vice president, events, IDG Enterprise. "The organizations and professionals judged to be Finalists in SNW's Spring 2010 Best Practices' Awards Program have not only met these challenges but are the best of the best when it comes to deploying the most strategic applications and using it to their advantage."

SNW's "Best Practices" Awards Program identifies and acknowledges excellence among users of storage technology in the following categories:

- Best Practices in Green Computing, Energy Efficiency and the Data Center
- Best Practices in Planning, Designing and Building a Next Generation Storage and Server Infrastructure
- Best Practices in Storage Resiliency, Data Protection and Recovery
- Best Practices in Technology Innovation and Promise
- Best Practices in Virtualization and Cloud Computing

Dinwiddie County Government – An SNW Awards Program Finalist for Best Practices in Technology Innovation and Promise

DataCore Software and VMware are delivering an "All Virtualized" IT environment for Dinwiddie County Government in Virginia. The county government deployed DataCore's SANmelody storage virtualization solution to empower VMware vSphere – setting a new level of uptime for critical applications. Now the IT department at Dinwiddie County has a pair of DataCore SANmelody nodes, which are mirrored over the in-place dark fiber between two facilities on the Dinwiddie County Government campus.

A fault-tolerant, mirrored SAN solution is a far cry from where the county was, storage-wise, prior to embracing virtualization. The number of physical machines prior to virtualization was six (6). With the newly virtualized environment, two (2) of physical machines are now running twenty (20) virtual machines. Moreover, DataCore enabled this local government to repurpose resources – rather than buy new.

“The Designation that Dinwiddie County Government has received as a Finalist in the SNW Best Practices Awards Program for Technology Innovation and Promise is truly an honor,” states Norman Cohen, IT Director, Dinwiddie County Government. “This is a testament to the power of collaboration among our IT team, our IT solutions provider Thinking Cap Technologies and the key virtualization solutions that power our all-virtualized IT infrastructure – DataCore Software and VMware.”

SNW’s Spring 2010 "Best Practices" Awards Program is sponsored by Oracle.

About Dinwiddie County Government

Dinwiddie County is a county located in the U.S. state — officially, "Commonwealth" — of Virginia. Heritage, natural resources, location, quality of life and people make Dinwiddie County what others are striving to become. Conveniently located near I-85 and I-95 and U.S. 460, 25 miles south of Richmond, Dinwiddie County provides quick access to the East Coast from New York to Florida. The Dinwiddie Airport and Industrial Park provide many opportunities to companies looking for the perfect place to call home.

For government resources, visit <http://www.dinwiddieva.us/county-depts/>.