



Associated Computer Systems, Ltd.

IBM Power Systems · System x · Storage · Network · Power and Cooling · Telephony

Spring 2009 Newsletter

Upcoming Events

New Generation of IBM Servers

Friday, May 15, 2009

11:30 AM - 2:00 PM

Embassy Club - Des Moines, IA

The New Generation of IBM System x and BladeCenter servers deliver business value and reduce costs for clients through industry leading scalability, virtualization and management capabilities. Hear the latest IBM System x and BladeCenter x86 dual-processor server portfolio announcements! IBM will illustrate how these new offerings can help drive down the operating costs of IT, without compromise. IBM's innovations in server technology are unmatched in the industry and will help provide a dynamic infrastructure.

Register today at www.acsltd.com/NewGenServers

CIVCO Medical Solutions Implements BladeCenter S with SAS Switch and VMware

CIVCO Medical Solutions has a solid history of innovation, growth and profitability. CIVCO focuses on designing, manufacturing and distributing products that improve patient care. Today, CIVCO products help enhance life for patients undergoing ultrasound, urology, multi-specialty interventional radiology and radiation oncology.

CIVCO products allow clinicians to increase productivity through greater patient throughput. Original Equipment Manufacturers (OEMs) are free to focus on increased equipment development and sales by leveraging CIVCO's clinical connection and enabling technologies. CIVCO offers distributors state-of-the-art products with growing demand and greater product turnover as downstream efficiencies are realized. Products are sold to hospitals and clinics worldwide to provide patients with quicker, safer procedures.

At the beginning of 2008, CIVCO started work on a server consolidation project that would consolidate and virtualize approximately 20 physical servers. CIVCO evaluated several different hardware and software platforms to support this new environment and ultimately selected an IBM BladeCenter with SAS RAID switches.

CIVCO implemented six HS21 Blades running VMware Standard with HA configured on five of the blades with the sixth blade being a hot standby spare. With the power of the BladeCenter S and the SAS RAID Switch, CIVCO was able to configure the 12 internal drives into a RAID 5 set that appears and functions as a SAN, at a fraction of the cost of a SAN. CIVCO has consolidated 6 servers so far and is continuing its consolidation and virtualization project.

Steve Miller, IT Manager at CIVCO Medical Solutions had this to say on the project:

"ACS has been an integral part in revitalizing the IT infrastructure at CIVCO Medical Solutions.

Most recently, ACS assisted CIVCO as we merged VMware together with IBM's BladeCenter S, both new technologies to our business. CIVCO has quickly realized the benefits of server consolidation via utilization of VMware, married with the new and exciting, always rock solid, IBM hardware platform. When all is said and done, CIVCO will have consolidated roughly 20 physical file servers down to approximately 7-8 virtual servers all running on the BladeCenter S reducing the need for rack space, power and cooling. CIVCO and ACS together create a powerful team"

If you would like more information on BladeCenter or virtualization, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acsltd.com.

SpiritBank Selects ACS and Double-Take for High Availability Implementation

SpiritBank, a community bank based in Bristow, Oklahoma, has 17 branches statewide. The bank, founded in 1916, has assets exceeding \$1 billion and more than 340 employees. The bank's commitment to customer success is reflected in its advertising, which exclusively features actual bank customers.

In Spring of 2008, SpiritBank selected Information Technology, Inc. to be their software provider for transaction banking including Premier (Core), Director (Imaging), Expedite (New Accounts Workflow), Navigator (Web Interface) as well as many other modules.

As a part of the implementation, SpiritBank wanted to implement high availability (HA) for five of the Information Technology, Inc. modules at their HA location in Drumright, OK. ACS, who partners with Information Technology, Inc. on num-

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erous projects, such as VMware and Double-Take implementations, was brought in by SpiritBank and Information Technology, Inc. to implement, test and document the HA solution.

The HA solution consisted of two physical servers running seven virtual servers. ACS setup the HA server, created the virtual servers, then installed Double-Take for Virtual Systems on the HA virtual servers and Double-Take for Windows on the production servers that were to be replicated. Once the initial Double-Take installation was completed, ACS configured the replication between the seven production servers and their targets located in Drumright, tested the failover and fallback scripts and documented the process for SpiritBank.

SpiritBank's CIO, Ray Riddle, states "The ACS staff was highly skilled and easy to work with during the project. They provided quality information in helping design and implement these solutions. I would recommend ACS to anyone who requires extra technical expertise to assist their staff or someone to lead a highly technical project such as ours."

If you would like more information on virtualization or HA solutions, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acsltd.com.

Control Systems Software, L.L.C. Upgrades with ACS Assistance

Control Systems Software, L.L.C. (CSS), located in Urbandale, IA, is a leading Agricultural Software company providing software and services to companies throughout the Midwest with membership consisting of some of the top cooperatives in the market. CSS offers products designed to provide real time management solutions, operational efficiency, and scalability to meet changing markets.

Recently, CSS decided to upgrade from a System i 520 with four partitions to a 9409-M50 Power System with five partitions. CSS is now able to use one partition for software development, two for test environments, one for Disaster Recovery, and one for Lotus Domino email and Website. Another key component of this upgrade was the addition of the BladeCenter S with VMware which offers the flexibility and scalability needed in today's environment.

CSS's CEO, Carol Stewart, comments, "It is essential that Control Systems Software, LLC. stay current with leading edge technology. It is reassuring to know that we can rely on the expertise at ACS to substantiate our decisions and it is a benefit to our members that we collaborate with ACS. We have learned from past experiences it is better to do it one time and do it right. ACS provides the skill level to give us that advantage."

After the installation, Jo McDaniel, System Administrator, said, "ACS's knowledge of the hardware, thorough understanding of the operating system and willingness to perform upgrades after hours combine for a successful implementation in a timely manner."

If you would like more information on upgrading to a Power System (System i), please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acsltd.com.

Effective Surge Protection

As the season changes and the thunderstorms approach, it reminds each of us to check and confirm that our facility has

the appropriate level of surge protection. To do this, we look to the IEEE Emerald Book for guidance. The IEEE recommended practices are based on research and studies. Now is not a time to risk the downtime associated with lightning surges, so we're providing a summary of critical recommendations.

Specific surge protection devices (SPD) vary by application and level of protection, however certain rules hold true for all businesses. First, all Service Entrance panels need to have an SPD connected. Secondly, each branch panel should be reviewed. At each panel we should ask "if the equipment connected to this panel is damaged due to a surge, what is the impact to our business?" If that answer is "devastating" or "significant", then there should be a SPD connected to that panel. Consider all critical, though not obvious equipment, such as the precision cooling for your data center.

The panelboard feeding the UPS in the computer room should ALWAYS have an SPD connected. There are still many customers that mistakenly believe the UPS is surge protection. This misconception is propagated by some manufacturers who specialize in residential grade UPS who benefit from uniformed customers. While it can be true that a high end UPS provides clean power when in normal mode, it will not when in by-pass mode. Tragically, the UPS can "self sacrifice" when exposed to a relatively small surge, and can cause the rectifier to fail. This may be acceptable in a home environment, but certainly not a data center. Surge components in a high quality UPS provide a minimum level of protection sufficient for a single small category surge. When they fail there is typically no audible or visual notification.

Surges can damage equipment by coming in the "backdoor" of your data center through data and signal wires. Any copper or aluminum wires that go through the building wall require protection, according to the IEEE Emerald Book. This includes coaxial cable (security cameras or TV), signal wires to the outdoor backup generator and telephone lines.

If you have existing surge protection devices, they should be inspected to make sure they are still functioning properly. If any surge device is more than ten years old, it is likely out of warranty and may have diminished protection.

We strongly suggest that you take a few moments, to audit your facility's surge protection status. We are happy to perform this service for you, and have a complete line of surge protection from Emerson/Liebert available to deliver piece of mind as we approach the peak storm season.

If you would like more information on surge protection, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acsltd.com.

"An Ounce Of Prevention..."

An ounce of prevention is worth a pound of cure — and that's particularly true when it comes to IT infrastructure. Regularly scheduled preventive maintenance tasks keep your equipment running right, resulting in many benefits:

- Prevents Costly Downtime Due to Virus or Spyware
- Prevents Potential Data Loss Due to System Failure
- Enhances Performance of System

Typical Preventive Maintenance Procedures

- High Availability Replication Monitoring – Monitoring your

High Availability Solution DAILY is essential to ensure that your data is current in case of failure. Far too often a solution is put in place, but, for some reason, stops working and is not checked regularly. Then, when you really need it, it is not there.

- Check Backup Tape Consistency - Do you want to find out after a fire or other disaster that your tape you have been taking offsite won't restore your data? ACS recommends that you regularly validate that your data from your tape can be restored on another system and be accessible.
- IBM Lotus Domino Monthly Systems Check – Regular system checks for Domino are crucial to ensure system integrity. By reviewing the Log.nsf regularly we can avoid data corruption, security risks, email routing issues and clean up orphaned databases from name changes or employee turnover. This will result in better performance, increased maintenance task efficiency (compact etc.) and fewer outages.
- Patch Management/Deployment for Desktops and Server - Protect against known vulnerabilities by patching Microsoft and select third-party vendor products with centralized deployment and reporting.
- AntiVirus Updates and Checks for Desktops and Server - Protect against virus outbreaks by monitoring your workstations and servers with centralized deployment and reporting.
- Spyware Updates and Checks for Desktops and Server - Protect against spyware outbreaks, security breaches and downtime by monitoring your workstations and servers with centralized deployment and reporting.
- PTF, CUMe and Operating System Upgrades for Power Systems (System i)
- Security Checks on Servers and Power Systems

If you would like more information on Preventive Maintenance Solutions, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acs Ltd.com.

System i Performance Analysis Provides Peace of Mind

How is your System i performing? How do you know? Just because the phone is not ringing off the hook does not mean your System i is performing well.

There are four major components to consider in the review of overall System i performance:

- Central Processing Unit (CPU)
- Memory
- Disk Arms
- Users

CPU - you need to determine overall workload, Interactive workload and Batch workload.

Memory - you need to determine whether there is enough memory available for all applications and system tasks that must run simultaneously.

Disk Arms - you need to determine if there are enough to provide adequate through-put for the data being processed.

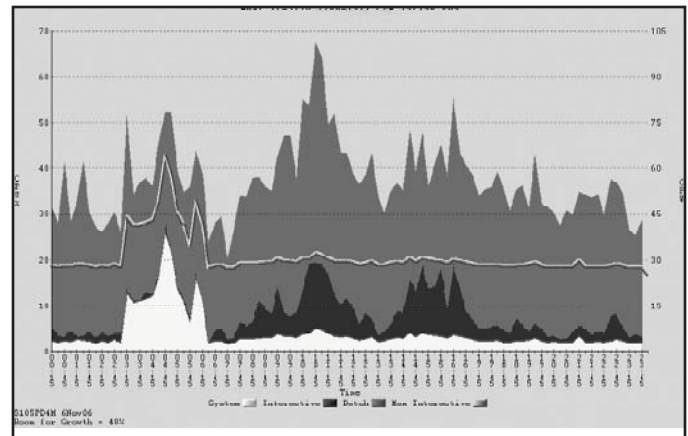
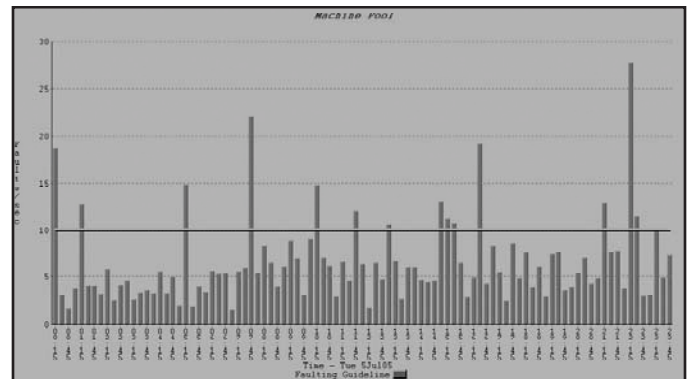
Because the size of the disk drives has significantly increased, it is very easy to have adequate disk storage, but not enough disk arms to provide adequate disk arm performance.

Users - you need to determine the number of concurrent users of the system. This is especially important if you utilize concurrent software licensing.

For each of these components you also need to determine if the resource requirements are increasing, decreasing or staying the same. You need to know at what point in the day/week/month resource changes are taking place. In addition, if you are considering a system upgrade, a system replacement or a system consolidation, how will the new system perform with the current workload, and/or a workload that will be increasing?

As you can see, there are many things to consider! ACS provides a “Rest Assured” System i Performance Analysis service to provide answers for all of these considerations.

ACS has teamed with Midrange Performance group and utilizes their Performance Navigator tool to provide easy to understand color graphs that address all of these considerations.



As part of the System i Performance Analysis, ACS will collect performance data, analyze the performance data, and create performance graphs showing best practice guidelines. Then we will review the performance graphs with you and your staff.

If ACS performs a System i Performance Analysis and you purchase a new system from ACS within 3 months of the analysis, ACS will issue a credit for the majority of the System i Performance Analysis Fee.

If you would like more information on the ACS “Rest Assured” System i Performance Analysis, please contact Ed Jensen at (888) 264-0188 or via e-mail at ejensen@acs Ltd.com.

What's New in VMware View - Next Generation of VDI

Recently, VMware announced the launch of the next generation of its virtual desktop infrastructure (VDI) solution, VMware View. This solution gives desktop IT more control over desktops and applications while saving time and money associated with operations such as provisioning, updates and deleting users from your environment. This flexible and scalable architecture will improve IT responsiveness to changing business and user demands.

Built on the industry-leading virtualization platform, VMware View is a Universal Client solution that lets you manage operating systems, hardware, applications and users independently of each other, wherever they may reside. VMware View streamlines desktop and application management, reduces costs and increases data security through centralization, resulting in greater end-user flexibility and IT control. It also enables customers to extend the value of VMware Infrastructure and VDI environments to encompass not only desktops in the datacenter but also applications and the delivery of these environments securely to remote clients, off or online.

Key features of VMware View:

- Unified Access - Access hosted desktop environments on industry leading VMware Infrastructure platform, blade servers, Windows Terminal servers or even remote physical PCs.
- Virtual Printing - Print to any local printer without installing print drivers.
- View Composer - Reduce the amount of storage consumed in a virtual desktop environment up to 90%
- ThinApp - Deliver and deploy applications more efficiently, more securely and more cost-effectively with agentless application virtualization

If you would like more information on VMware View, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acs Ltd.com

Lotus Domino 8.5 Drastically Improves TCO...

If Lotus Notes and Domino 8.0 didn't WOW you then perhaps some "Green", both environmentally and \$\$\$ wise, in 8.5 will convince you that there has never been a better time to upgrade your Lotus Environment. IBM Lotus Notes and Domino 8.5 introduces DAOS (Domino Attachment and Object Service). This service manages a single store object repository. With this initial release, all attachments stored in NSF databases can/will be maintained outside the NSF structure and managed by DAOS. In turn, this will drastically reduce the size of NSF's with large or many attachments (mail files for instance) and more importantly, eliminating duplicate attachments across the NSF and entire server. Your organization (and Lotus Domino environment) will benefit from DAOS by:

Reducing Total Disk Usage – Probably the most obvious benefit, DAOS will free up disk space. NSF files will be smaller and Attachment duplication will be eliminated. The amount of disk space saved will depend upon the individual size of the attachments and the number of times the attachment is duplicated in your environment. Remember this is across the

individual database (NSF) and the entire server so those "reply to all" emails with that large spreadsheet sent around to 7 people 3 times will no longer negatively impact your environment.

I/O Reduction – Because attachments are stored outside the NSF file, actions that do not directly access the attachment do not require the need to move around large blocks of data. Did you ever open an email and wonder why it took extra time only to notice later that it had a large attachment included, even though you didn't necessarily need to open the attachment, Lotus Notes is forced to pull that data from the server prior to opening the document for the user. Now that data will only be transferred when the attachment itself is opened.

Faster Compacts – As a rule of thumb, the "compact" task runs against your production databases nightly. By having smaller NSF files the task run time will be significantly lessened.

Reduced Backup size and throughput – Incremental backups will not need to look at objects stored in the DAOS repository once added. As references to the attachment are added and removed the attachment itself remains unchanged.

Improved mail delivery efficiency – Now when an email is sent to multiple recipients, the router need only process the pointer to the attachment rather than rewrite the whole attachment multiple times. This could significantly reduce bandwidth use and CPU cycles.

Completely Transparent to Users – From an end-user's standpoint there will be no discernable change. When an NSF is replicated locally, the attachments are copied from the repository to the local NSF in the more traditional fashion.

If you would like more information on Lotus Domino, please contact Mark Landry at (888) 264-0188 or via e-mail at mmlandry@acs Ltd.com.

Do You Have issues with Forgotten Passwords? Resolve Them with EIM's Single Sign-On Capabilities

Enterprise Identity Mapping (EIM) offers an approach that enables inexpensive solutions to easily manage multiple user registries and user identities on z/OS, i5/OS, AIX, Linux, Domino, Windows 2003/2008 and Exchange.

The EIM approach is quite different from those being utilized by many security vendors who are also focused on solving the problem of having multiple user identities defined in different user registries (such as SAP, Lotus Notes, RACF, AS/400, Kerberos, PKI, LDAP). These solutions are focused on hiding (but not eliminating) the complexity of having a user logon to many systems. This approach does not address the growth in distributed applications where the application spans multiple servers, needing to relate the end-user to local user identities at the servers.

EIM is working to solve this problem by providing the infrastructure to allow the association of one person to multiple user identities in existing security registries. Instead of an application needing to create side files that define these associations, the mapping associations are stored in one centralized place, the EIM domain controller. These associations will allow the multi-tiered applications and servers to understand who the end user is in their own terms, and allow access control and auditing to be done with the local identity.

This technology is built on a directory service (LDAP-accessible), which is now shipped in all IBM eServer operating systems. Using a directory service allows the associations to be used and managed in a distributed environment.

A server acts as an EIM client and contains an EIM-enabled application that requests EIM data using lookup operations. The domain controller stores information about the EIM domain, which includes an EIM identifier, associations between these EIM identifiers and user identities, and EIM registry definitions. The domain controller may reside on the same system or a different one.

If you would like more information on EIM, please contact Tony Foth at (888) 264-0188 or via e-mail at tfoth@acslltd.com.

Support Matrix

The following list includes the more prominent products and their lifecycle support. If there are additional products you would like to see tracked, please let us know.

Vendor/ Platform Products	Mainstream Support Retired
Microsoft	
Exchange Server 5.5 Standard Edition	12/31/2003
Exchange 2000 Server Standard Edition	12/31/2005
Exchange Server 2003 Standard Edition	04/14/2009
Exchange Server 2007 Standard Edition	04/10/2012
Windows NT Server 4.0 Standard Edition	12/31/2002
Windows 2000 Server	06/30/2005
Windows Server 2003	07/13/2010
Windows Server 2008	07/09/2013
Windows 98 Second Edition	06/30/2002
Windows NT Workstation 4.0	06/30/2002
Windows 2000 Professional	06/30/2005
Windows XP Professional	04/14/2009
Windows Vista Business	04/10/2012
Office XP Professional Edition	07/11/2006
Office Professional Edition 2003	04/14/2009
Office Professional 2007	04/10/2012
SQL Server 7.0 Standard Edition	12/31/2005
SQL Server 2000 Standard Edition	04/08/2008
SQL Server 2005 Standard Edition	04/12/2011
SQL Server 2008 Standard Edition	01/14/2014
Citrix	
MetaFrame XP FR3/SP4	06/30/2007
Metaframe PS 3.0	12/31/2007
Metaframe PS 4.0 x64	12/31/2007
Metaframe PS 4.0	12/31/2009
Metaframe PS 4.5	09/30/2011
System i	
i5/OS V5R1	09/30/2005

i5/OS V5R2	04/30/2007
i5/OS V5R3	04/30/2009
i5/OS V5R4	TBA
i V6R1	TBA

VMware

VMware ESX 2.5	06/15/2007
VMware ESX 3.0	12/10/2008
VMware ESX 3.5	12/10/2009
VMware Vmotion/VC/etc 1.4	07/06/2008
VMware Vmotion/VC/etc 2.0	12/10/2008
VMware Vmotion/VC/etc 2.5	12/10/2009

Lotus

Notes/Domino 6.0	04/30/2007
Notes/Domino 6.5	04/30/2010
Notes/Domino 7.0	TBA
Notes/Domino 8.0	TBA
Notes/Domino 8.5	TBA

Computer Associates

ARCserve Backup r9	06/01/2007
ARCserve Backup r10.5	06/01/2007
ARCserve Backup r11.1	09/30/2008
ARCserve Backup r12	TBA

Symantec

AntiVirus Corporate Edition 8.1	01/31/2007
AntiVirus Corporate Edition 9.0	03/31/2009
AntiVirus Corporate Edition 10.0	TBA
AntiVirus Corporate Edition 10.1	TBA
AntiVirus Corporate Edition 10.2	TBA
Backup Exec for Windows Servers 9.1	01/18/2007
Backup Exec for Windows Servers 10.0	05/06/2009
Backup Exec for Windows Servers 11.0	08/18/2010
Backup Exec for Windows Servers 12.0	TBA

Latest Cumulative PTF Package

	Last Change
V6R1M0	C8365610
V5R4M0 / M5	C8305540
V5R3M0 / M5	C8267530

From The "Ed"itor

In today's economic environment, it is important not to expend time, effort or money on activities that are not beneficial to your company. That is why we are very careful when scheduling events to make sure they are relevant to you and your technology environment.

With that in mind, please join us on May 15th for the "New Generation of IBM Servers" event at the Embassy Club.

Ed Jensen
Founder & CEO

