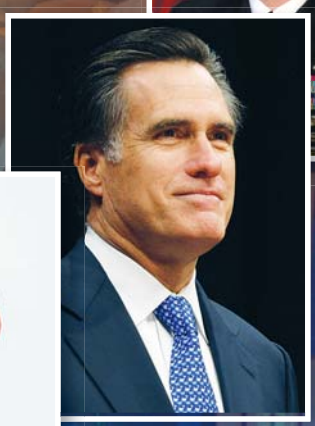
7x24 Exchange INTERNATIONAL

THE END-TO-END RELIABILITY FORUM

Supplement to:
Mission CRITICAL
Data center and emergency backup solutions

22 YEARS OF LEADERSHIP

General Hugh Shelton
FALL CONFERENCE
KEYNOTE SPEAKER



INSIDE ▶▶

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The ALL-NEW missioncriticalmagazine.com

MORE information. **MORE** resources. **MORE** ways to do your job better.

About the 7x24 Exchange INTERNATIONAL

7x24 Exchange is the leading knowledge exchange for those who design, build, operate and maintain mission-critical enterprise information infrastructures, 7x24 Exchange's goal is to improve end-to-end reliability by promoting dialogue among these groups.

BY BOB CASSILIANO, CHAIRMAN OF THE BOARD, 7X24 EXCHANGE

7x24 Exchange and *Mission Critical* have joined forces to produce the inaugural edition of this special publication, which is being distributed free of charge to the 7x24 Exchange International's membership, all subscribers of *Mission Critical*, and the wider data center community. This special publication will appear twice a year and will continue to provide information about the 7x24 Exchange and articles of interest to data center professionals.

The 7x24 Exchange is a not-for-profit organization that provides an educational forum focusing on important issues of the day for Mission Critical industry professionals. 7x24 Exchange is recognized as the leading knowledge exchange within the mission critical industry. The organization pursues its mission through its two national conferences, twice annual magazine, a multimedia website, and 19 affiliated chapters. 7x24 Exchange has a strong belief in and commitment to Corporate Social Responsibility and as such provides for scholarships and contributions to charitable organizations. 7x24 Exchange's venture with *Mission Critical* extends the reach of the organization to include a vast audience of mission critical professionals.

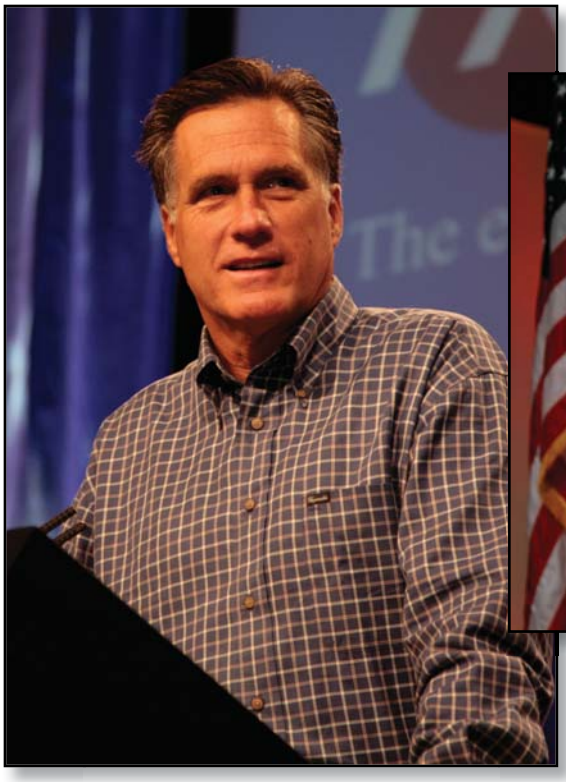
7x24 Exchange conferences offer sessions presented by organizations such as ASHRAE, The Green Grid, and the Uptime Institute so conference participants can get a broad perspective from other recognized industry authorities. Energy efficiency has been the hot topic at our last several conferences, which have all included multiple sessions, including case studies and technical presentations. Robert F. Kennedy Jr., chief prosecuting attorney for the Hudson Riverkeeper and president of Waterkeeper Alliance, was the keynote speaker at our 2011 Spring Conference, which was held at the Hilton Bonnet Creek in Orlando, FL. Mr. Kennedy's far-ranging remarks covered the positive economic benefits of sustainable development, while acknowledging the difficulties faced by those providing essential services to the nation.

The 7x24 Exchange also works on behalf of the industry. For instance, the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) considers the organization an industry stakeholder. As such 7x24 Exchange participated on the DOE/EPA Data Center Metrics Task Force, which developed standards and guiding principles for measuring energy efficiency in data centers.

7x24 Exchange conferences educate attendees on current and future events. For example, at the 2011 Spring Conference Alex Young from NASA's Goddard Space Center delivered a presentation on solar weather and solar flares and discussed the forecasts for increased activity in 2012/2013. He also explained how these phenomena could affect power grids, satellites, GPS systems, and other electronic systems.

As you can see from the cover the organization has also had prestigious conference keynote speakers such as RFK. Jr., Joe Theismann, Mitt Romney, Kirk Lippold, James Bradley, Gene Kranz, Fran Dramis, Chris Gardner, and more. These speakers not only share their own inspirational messages, they share lessons learned that apply to overcoming difficulties in our professional capacities.

About the 7x24 Exchange



Companies that reap the most benefit from 7x24 Exchange membership are those that operate or depend on mission critical environments like data centers. Members of the organization receive advanced information and knowledge exchange from experts regarding important topics affecting the mission critical industry. 7x24 Exchange members include firms in industries such as aerospace, energy, financial services, government, health care, pharmaceutical, manufacturing, media, technology, and other firms plus consultants and vendors that deliver products and services to mission critical industry clients.

The 2011 Fall Conference will be held November 13-16, 2011 at the Arizona Biltmore in Phoenix, Arizona. 7x24 Exchange Conferences are designed for education, information sharing, networking, and to provide a memorable experience for attendees and guests.

I look forward to seeing you in Phoenix! ■

A Performance Mindset

Building a business case

BY DAVID SCHIRMACHER, VICE PRESIDENT, 7X24 EXCHANGE

So what comes to mind when you think about the performance of your data center environment? I suspect the answer may depend on your area of responsibility. If you're a facility engineer, maybe your primary concern is the reliability and availability of your electrical and mechanical infrastructure. If you're a technology operations manager, meeting SLAs for network and data processing availability might be a primary focus. Those with financial responsibility are probably under enormous pressure to manage ever-increasing capital and operational budgets. And if you're sitting in the C-suite, you're likely getting hit from all sides with the added responsibility of managing the image and reputation of your firm. Whatever your area of focus, one thing is clear; actions you take, or don't take, to address efficiency, innovation, the environment, and a myriad of other data center centric performance issues can have long-term impact on your firm's reputation and ultimately, your bottom line.

TOO MUCH TALK, TOO LITTLE ACTION?

The topic of performance management has taken center stage at most industry events. Seemingly innumerable technical publications, blogs, and webinars highlight the endless opportunities for improving performance. Yet, despite all the talk, industry progress in driving performance is still far too slow.

Yes, there have been some notable successes. Google, Yahoo!, and Facebook are among the large operators that have recently completed data centers projects that set new performance levels for energy efficiency. Others have made strides in virtualization and cloud computing, driving compute utilization higher and energy consumption per unit of compute lower.

Still, it appears that the industry as a whole has not made a lot of progress. Back in 2009, the EPA's Energy Star program reported an average Power Usage Effectiveness (PUE) of 1.91 across a portfolio of participating organizations. This past May, the Uptime Institute reported an average PUE of 1.8 across facilities they surveyed. While the trend is moving in the right direction, this performance certainly does not reflect the potential opportunities that exist today.

So why is progress so slow? Is it a lack of opportunity? Unlikely. In fact, many experts agree that most existing data centers could dramatically improve the energy performance of their mechanical and electrical infrastructure by applying relatively straightforward efficiency upgrades or even by just adjusting operational practices.

Far too many organizations continue to operate their IT hardware at unnecessarily low utilization rates or even worse leave equipment energized that is not doing any work at all. Adopting strategies that address these inefficiencies not only reduces energy expense but often can free up stranded capacity allowing the deferment of expensive capacity expansion projects. Sitting on the sidelines waiting for the big new data center project to materialize just doesn't cut it anymore. Not only will executing smart enhancements to your existing facilities yield immediate benefit, the successes that you achieve will help motivate others in your organization to get involved.

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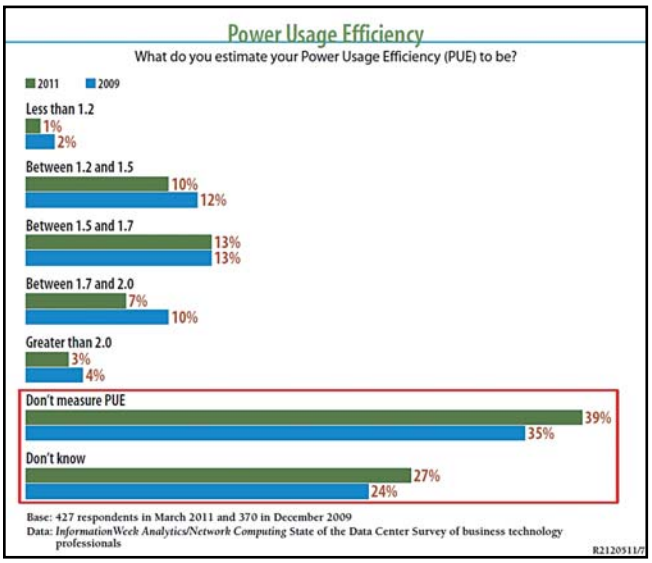
Some may say that lack of funding is responsible for the slow progress. I suspect this excuse is overused. In my experience, when a solid business case is made that demonstrates a real-world performance improvement with a definable payback, management usually jumps at the opportunity to act. All too often, proposals for energy initiatives are filled with unsupported claims or based on sketchy in-house data that have not been objectively validated. This can make it very difficult to get the necessary funding, even when the proposed effort has merit.

WORKING IN THE DARK?

While some may have a good reason to postpone acting, I suspect that in most instances decision-making based on perceptions rather than facts inhibits real progress. Whether

A Performance Mindset



it's "we don't have the dollars," "our data center is too old." "our operation is too complex," or any of a thousand other excuses, inaction is often justified by a lack of accurate performance data coupled with poor communication across the many silos of stakeholders. Operators that lack the detailed data necessary to empirically validate performance often find themselves creating lots of general "rules" to guide their operations. As long as everyone keeps to the rules there is little need for much discussion. While it is crucial to have solid processes to manage your operation, it is important to not allow those processes to inhibit challenges to the status quo. Arming people with accurate data and encouraging an environment of collaboration across stakeholder silos will go a long way to ending the communication gap so common in our industry.

If you think the communications gap across the various subject matter experts within your firm is wide, consider that the various industries do not treat similar challenges in the same way because they face different market pressures. In the financial services data center arena, a sudden spike in the financial markets can test the boundaries of processing capacity and even a small hiccup can result in major financial losses, regulatory penalties, or worse, can scare clients right over to your competitors. Protecting against these exposures will always be at the top of the priority list, even if it is at the expense of efficiency. Other industry silos have addressed this type of challenge by instantiating capacity on a public or private cloud to pick up the slack on an as-needed basis. A highly regulated environment can make decisions about the cloud very challenging as operators must be sure that access to highly sensitive data is secure, both when it is in use and after that capacity is released for other uses.

If you're an internet or social media service provider, you have a different set of challenges. Yes you need reliability, but often your biggest challenge is keeping up with the capacity required to support an ever-growing user base. Those massive and continuously growing compute volumes, along with their associated data center operational and capital expenses, are often the single largest contributor to your bottom line. While you may not have the same client challenges or regulatory limitations of a financial organization, your massive scale often puts you in the cross hairs of those driving environmental policy.

The list goes on. The government, academic institutions, research, manufacturing, and the general commercial sector all have unique business and operational requirements. All too often, these differences are used to explain why what the "other guys" are doing won't work for their operations. The flood of questionable performance data disseminated by sales and marketing departments has added to the confusion. Metrics such as PUE that, when properly applied, can be very helpful in describing high level energy performance, are often unfairly disparaged. Yes, people misuse them. Yes, PUE doesn't address overall compute efficiency. But when properly applied, PUE can set the stage for a deeper dive into the details by providing a baseline along with a frame of reference to measure progress against.

BUILDING A BUSINESS CASE

Whether your goal is to start-up a new data center performance management process or reinvigorating a stalled one, it's important to take a step back and reevaluate what you are trying to accomplish. While implementing one-off energy initiatives certainly can be beneficial, the most successful energy and environmental programs are the ones that are driven by a business plan that clearly articulates a value proposition in alignment with the strategic goals of your firm.

Creating a successful business plan will require some effort. A common mistake is to wait too long to get started and allowing year-end capital planning deadlines to drive the process. This frequently results in rejection of the project due to insufficient backup. Another misstep is to assume the acceptance of other stakeholders working in the environment. No one likes surprises, particularly if your initiative could potentially impact their world, or worse, steal the thunder from their efficiency initiatives. Engaging other stakeholder groups early in the process can be pivotal to gaining approval for a project. Finally, if your area of expertise is more technical then financial, try and find an ally with the business acumen to help you nail the commercial aspects of your plan.

A solid business plan will accomplish several things. First and foremost, it will demonstrate that the proper level of homework was done thereby giving credibility to the process. Second, since it is rare that a single person or department will have exclusive control over the data center, it will provide the information necessary for all stakeholders to evaluate project value and impact from their area of focus. Lastly, since the format engages the various stakeholders early in the process, it will have a far greater chance of gaining grass roots support, thereby making it much easier to get the approvals necessary to proceed. ■

CHAPTERS ACROSS AMERICA

The 7x24 Exchange chapters carry out the organization's mission and strategic goals at the regional level. The chapters actively pursue the goals of the 7x24 Exchange by providing a wide range of educational programs on important topics within the mission critical industry as well as various networking and information sharing opportunities at regional events.

7x24 Exchange International has 18 Chapters across North America and one in Europe. This has been a very exciting year for 7x24 Exchange International with respect to the growth and development of its chapters. Not only is the organization growing organically with new chapters being added in North America including Upstate New York, Florida-Alabama and Canada, but interest is developing for chapter formation in South America, the Middle East and Asia.

The chapters are very similar in operation to the national organization in that they have a board of directors for decision making and conduct regular meetings and events which provide education, networking, and information sharing. Chapter meetings are typically more focused on issues and concerns of the local area such as regional occurrences that may impact data center availability (i.e. California/Earthquakes, Florida/Hurricanes, etc.) Their meetings also include "Hot Topics of the Day" such as cooling and energy efficiency.

The chapters are an integral part of the 7x24 Exchange International and a great resource of information for members. If you are interested in getting involved with your local chapter please refer to contact information for your area on this page.

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ASHRAE

Managing Disruption: A Data Center Love Story
AOL

Open Compute Program (OCP)
Facebook

The Challenges and Opportunities of Mission Critical Computing
Intel

Data Center Maturity Model
Green Grid

Panel: The Hunt for Talent
AOL | Citi | Google

ECO Data Center
Deutsche Bank

Enabling Energy Savings in Data Centers with ENERGY STAR
EPA

Hidden Threats to Data Center Reliability
MTechnology

Global Data Center Concerns Affecting the North American Market
Uptime Institute

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November 13-16, 2011 Arizona Biltmore Phoenix, AZ

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For more information and to register visit www.7x24exchange.org