

***technical***<sup>®</sup>

Supporting Enterprise Networks and Operating Environments

**SUPPORT**

AUGUST 2014

VOLUME 6, NUMBER 8

**NaSPA**<sup>®</sup>  
NETWORK AND SYSTEMS  
PROFESSIONALS ASSOCIATION

# Physical and Cybersecurity are Converging

*By Aviv Siegel*



## Message from the President

Greetings NaSPA members,

There is a reoccurring theme running in this month's edition of *NaSPA Technical Support* consisting of "the top 10" ways, reasons, methods, considerations, tips, and techniques, spanning across a broad spectrum of Information Technology topics. Over the years, our readers have conveyed to us that they love bullet lists like these as they help them cut to the chase on complex topics. Do you have your own Information Technology "Top Five" or "Top Ten" (and that means DO's or DON'TS) that have worked well for you? Send them along and we'll review them for publication in a future issue. If we use them we'll give you the credit for sending them in!

Also in this edition, ask yourself whether the convergence of physical and cyber security is a means to an end, or an invitation to big problems? Target's data breach hit approximately 110 million customers last year while Russian criminals hit 1.2 billion Internet usernames and passwords just in the last month. Check out our cover story, *Physical and Cybersecurity are Converging* by Aviv Siegel.

Finally, may I impose on you for ten seconds? That's how long it will probably take you to forward this magazine to your advertising and marketing department. As you know, NaSPA has taken the unprecedented step of offering FREE basic memberships. While this has invigorated our 28 year old organization with thousands of new members, we are still a non-profit. We are always looking for help in order to keep quality publications like this one in circulation, and keep offering a slate of great member benefits. Advertising by your employer helps NaSPA and is a win-win for everyone. Your employer gets access to a targeted list of tens of thousands highly skilled IT members, readers and other professionals. NaSPA can continue to improve its many support service to Information Services Professionals, which helps everyone. In case you haven't noticed, there are not many organizations left today like NaSPA.

Would you help us continue our good work by introducing us to your organization? Like I said, it only takes ten seconds to forward this email. Ask your advertising folks to feel free to contact Jill Tucker at (414) 908-4945 x111, email her at [j.tucker@naspa.com](mailto:j.tucker@naspa.com). They can also contact me directly at [president@naspa.com](mailto:president@naspa.com). Many thanks from Leo, from NaSPA, and our membership!

Leo A. Wrobel, President  
Editor in Chief Technical Support Magazine  
[President@Naspa.com](mailto:President@Naspa.com)

**technical**  
Supporting Enterprise Networks and Community Environments  
**SUPPORT**

**NaSPA**

August 2014  
Volume 6, Number 8

Published exclusively for NaSPA, Inc.  
Network and Systems Professionals Association

[www.NaSPA.com](http://www.NaSPA.com)

### NaSPA Officers

President Leo A. Wrobel

Secretary/Treasurer Sharon M. Wrobel

### NaSPA Board of Directors

Chairman Scott Sherer

Directors Leo A. Wrobel  
Sharon M. Wrobel

Board Advisor Bill Elder

e-mail addresses available on [www.NaSPA.com](http://www.NaSPA.com)

### Technical Support™ Magazine

Editor-in-Chief Leo A. Wrobel  
[president@NaSPA.com](mailto:president@NaSPA.com)

Managing Editor Sharon M. Wrobel  
[sharon@b4ci.com](mailto:sharon@b4ci.com)

Associate Editor Jim Justen  
[jmjusten@gmail.com](mailto:jmjusten@gmail.com)

Graphic Designer Michelle Robinson  
[m.robinson@techenterprises.net](mailto:m.robinson@techenterprises.net)

Vice President of Staff Operations Scott Sherer  
[sherer@NaSPA.com](mailto:sherer@NaSPA.com)

Membership Department Nicole Cheever,  
414-908-4945 Ext. 116,  
Manager  
[NaSPA\\_membership@NaSPA.com](mailto:NaSPA_membership@NaSPA.com)

Advertising Sales Jill Tucker,  
414-908-4945 Ext. 111  
[j.tucker@NaSPA.com](mailto:j.tucker@NaSPA.com)

CustomerCare Center Bonnie Kuchinski,  
414-908-4945 Ext. 450  
[customer-care@NaSPA.com](mailto:customer-care@NaSPA.com)

List Rental Jill Tucker,  
414-908-4945 Ext. 111  
[j.tucker@NaSPA.com](mailto:j.tucker@NaSPA.com)

7044 South 13th Street, Oak Creek, WI 53154  
(414) 908-4945, (414) 768-8001 Fax

Notice: You have received this magazine because you are a member of NaSPA, the Network and Systems Professionals Association, Inc., or you are a NaSPA subscriber. NaSPA believes this publication to be of value to you and your career. If you wish to opt-out and not receive this magazine in the future or would like to change your delivery address, please send an email with your request to Customer Care, [customer-care@NaSPA.com](mailto:customer-care@NaSPA.com).

©2014 NaSPA. All Rights Reserved.

## Contents

### 2 President's Letter

## Articles

### 4 Ten Good Reasons to Virtualize Your Java Platforms

By Emad Benjamin

### 7 Top 10 Ways People Go Broke

By Mike Finley

### 10 Understanding Your Organization's Best Software Development Practices

By David Herron

### 16 10 Tips for Overcoming Facilitation Fears

By Nancy Settle-Murphy

## News Releases

- GT Software
- Meyer Werft
- 15285.doc XURON® WICKGUN VIDEO
- Technology Business Research Inc.

## Cover Story

### 21 Physical and Cybersecurity are Converging

By Aviv Siegel

## Join NaSPA now!

Call 414-908-4945, Ext. 116 or  
e-mail [NaSPA\\_membership@NaSPA.com](mailto:NaSPA_membership@NaSPA.com)  
for more information.

## Call for Authors

Technical Support Magazine brings you an eclectic collection of articles, of interest to Information Technology professionals of all types. Do you have valuable insights and ideas that can be shared with NaSPA members? Fresh, timely ideas are important to our members, even if you have never published before. Our editorial staff is here to help and welcomes your submission. It's never too late to start. Contact [president@naspacom.com](mailto:president@naspacom.com) for more information or to submit your article for review for possible inclusion in a future edition of *Technical Support*.

### NaSPA Mission Statement:

*The mission of NaSPA, Inc., a not-for-profit organization, shall be to serve as the means to enhance the status and promote the advancement of all network and systems professionals; nurture member's technical and managerial knowledge and skills; improve member's professional careers through the sharing and dispersing of technical information; promote the profession as a whole; further the understanding of the profession and foster understanding and respect for individuals within it; develop and improve educational standards; and assist in the continuing development of ethical standards for practitioners in the industry.*

*NaSPA serves Information Systems technical professionals working with z/OS, OS/390, MVS, VM, VSE, Windows Operating Systems, Unix, and Linux.*

The information and articles in this magazine have not been subjected to any formal testing by NaSPA, Inc. or Technical Enterprises, Inc. The implementation, use and/or selection of software, hardware, or procedures presented within this publication and the results obtained from such selection or implementation, is the responsibility of the reader.

Articles and information will be presented as technically correct as possible, to the best knowledge of the author and editors. If the reader intends to make use of any of the information presented in this publication, please verify and test any and all procedures selected. Technical inaccuracies may arise from printing errors, new developments in the industry and/or changes or enhancements to components, either hardware or software.

The opinions expressed by the authors who contribute to *NaSPA Technical Support* are their own and do not necessarily reflect the official policy of NaSPA, Inc. Articles may be submitted by members of NaSPA, Inc. The articles should be within the scope of host-based, distributed platforms, network communications and data base, and should be a subject of interest to the members and based on the author's experience. Please call or write for more information. Upon publication, all letters, stories and articles become the property of NaSPA, Inc. and may be distributed to, and used by, all of its members.

NaSPA, Inc. is a not-for-profit, independent corporation and is not owned in whole or in part by any manufacturer of software or hardware. All corporate computing professionals are welcome to join NaSPA,

Inc. For information on joining NaSPA and for membership rates, see [www.NaSPA.com](http://www.NaSPA.com).

Notice: You have received this email because you are a member of NaSPA <http://www.NaSPA.com>, the Network and Systems Professionals Association, Inc., or a subscriber to *Technical Support* magazine. NaSPA believes this publication to be of value to you and your career. If you wish to opt-out and not receive this magazine in the future or would like to change your delivery address, please send an email with your request to Customer Care, [customer@naspacom.com](mailto:customer@naspacom.com).

*All product names and visual representations published in this magazine are the trademarks/registered trademarks of their respective manufacturers.*  
7044 S. 13th Street, Oak Creek, WI 53154-1429.

# Ten Good Reasons to Virtualize Your Java Platforms

By Emad Benjamin

*This insightful article is provided courtesy of VMware Press and [NaSPA Supporter Pearson Publishing \(Informit\)](#). Did you know NaSPA Members get 30% off Pearson/Cisco Press? [See More Here!](#)*

There are many reasons for a company to virtualize their Java platforms. In this article we will explore the top-ten that are arguably the most relevant. While cost efficiency is one driving factor, there are many other reasons related to reliability and availability.

There are many reasons for a company to virtualize their Java platforms. In this article we will explore the ten that, in my experience, are the most relevant. While cost efficiency is one driving factor, there are many other reasons related to reliability and availability. In the past, Java developers had to worry about these while they were developing an application, and it was a major distraction from focusing on the actual business logic. Today with a VMware Hypervisor, it is possible to have the reliability, availability, and scalability requirements of Java platforms in such way that Java developers do not have to worry as much about these issues during “code construction” time.

## Reason 1: Manageability of big platforms

Manageability of platforms is the ability to easily administer all aspects of the VMs and JVMs, such stop/start and update/upgrade. Java, as a platform, can be designed and implemented (from a runtime deployment perspective) in a variety of ways to suit specific business application requirements. This is aside from the Java language itself, where Java programmers can take advantage of many design patterns available to implement a robust application. Because Java is a platform as well as a language, the platform behavior must be first categorized in order to quantify what the best practices are for each situation. After years of dealing with Java platforms, it dawned on me that there are three main categories, each distinguished by its own unique tuning technique. Once you understand the various categories and their behaviors, you’ll quickly realize the different manageability and tuning challenges that you must deal with. They are:

### Category 1: Large Number of JVMs



Figure 1

In this first category there are thousands of JVMs deployed on the Java platform, which are typically JVMs as part of a system that maybe servicing millions of users, perhaps a public facing application, or a large enterprise-scale internal application. I have seen some customers with as many as 15,000 JVMs.

### Category 2: JVMs with Large Heap size

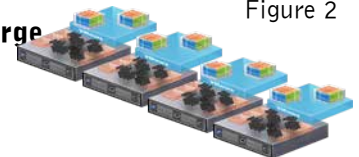


Figure 2

In this category there almost always fewer JVMs, from one to twenty JVMs, but the individual JVM heap size is quite large, within a range of 8GB-256GB and potentially higher. These are typically JVMs that have an in memory databases deployed on them. In this category Garbage Collector (GC) tuning becomes critical, and many of the tuning considerations have been discussed in the Virtualizing and Tuning Large Scale Java Platforms book to help you achieve your desired SLA.

### Category 3: Combination of Categories 1 and 2

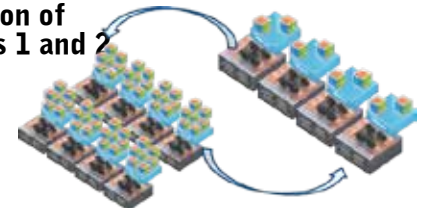


Figure 3

In this category, there are perhaps thousands of JVMs running enterprise applications that are consuming data from large (Category 2) JVMs in the backend. This is a common pattern for in-memory databases where thousands of enterprise applications are consuming data from Category 2 in-memory database clusters; you see a similar pattern in big data, HBASE and HDFS type of setups. Managing the deployment and provisioning of such environments almost always requires heavy manual steps; however, in vSphere (and certainly through various automation tools such Serengeti, vCAC, and Application Director) the deployment of such systems has been refined.

### Reason 2: Improve Scalability

Prior to the introduction of hypervisors, IT professionals tried to solve the scalability problem at the application

layer, the JVM layer, and the application server layer; this trend persisted throughout the mid-1990s and 2000s, and continues to this day. However, managing scalability this way comes at a very heavy cost, namely overburdening Java designers and implementers with the worry of platform scalability issues rather than focusing on business functionality. With virtualization, this changes. Using vSphere as the example, this kind of functionality gives you the flexibility to define the size of a virtual machine CPU and memory; the ability to have multiple VMs, multiple vSphere hosts, vSphere clusters, sub capacity resource pools; set HA, Affinity and Anti-affinity rules; and manage Distributed Resource Scheduler (DRS), Fault Tolerance (FT), and VMotion. Thus, you have all the scalability functionality that you could ever need to build highly scalable and robust Java platforms.

### **Reason 3: Higher Availability**

Higher availability is the ability to more easily meet your uptime SLAs with less downtime, whether during schedule or un-scheduled maintenance. If a VM crashes with VMware HA, it immediately restarts on another vSphere host, giving you a small outage window without any manual intervention needed to return to service. Of course, while this restarts the VMs only, you also need an ability to restart the JVMs; for this there are application scripts and Application HA plugins readily available in vSphere for you to leverage. You also have the ability to use affinity rules; for example if two JVMs and VMs need to be right next to each other on the same physical hosts, you can easily create such rules. On the other hand, if you want to make sure that two HA pairs of each other—maybe two critical redundant copies of JVM and associated data—are never on the same vSphere hosts, you can also setup such rules at the vSphere layer.

### **Reason 4: Attain Fault tolerance at platform layer**

Fault tolerance gives you the ability to protect critical parts of the Java platforms by ensuring zero down time of FT protected VMs. Fault tolerance will always maintain a separate VM on a separate vSphere host and remain a hot standby; if the source VM crashes, the standby immediately takes over without loss of transactions. During an event, if the primary/source VM fails to the active standby, the active standby becomes the primary and then immediately another VM is spawned as the newly privileged active standby. Another benefit to consider: imagine how much more time you'd have to focus on application development if you wrote code that didn't have to re-create its original state from a prior saved copy, and replicated on FT to always keep a hot redundant copy of the entire VM for you.

### **Reason 5: Virtualization is now the de-facto standard for Java platforms**

Five years ago, perhaps prior to ESX 3, there were some opportunities to improve performance, but ever since then performance on ESX 4.1, 5.1 and 5.5 has matched its similar physical deployments. Various performance studies have been conducted to showcase this. After performance was no longer an issue, many customers jumped on the opportunity to be able to overcommit resources in their less

critical development and QA systems to save on hardware and licensing costs.

But now there are more critical gains, namely in platform agility; to be able to move workloads around without downtime in order to facilitate near zero down time deployment of application components is a huge advantage versus your competitors, who may still be creating an outage in order to facilitate an application deployment. This trend is now prominent in the insurance, banking, and telecommunications industries where they realize the huge opportunity of virtualizing Java platforms. After all, Java is platform-independent to begin with, and hence the easiest of the workloads to virtualize as opposed to other tier-1 production workloads that have a tight dependency to the OS (although even with those we are seeing a mainstream virtualization trend is being set).

### **Reason 6: Save on licensing costs**

Since you are able to overcommit CPU and Memory resources in development environments, you can often achieve savings in software licensing costs. Further, if you implement a completely stateless type of application platform (i.e. all the nodes don't directly know about the other nodes and rely on vSphere for HA and fault tolerance) then you are quickly able to leverage more lightweight application containers that don't have additional costly availability features.

### **Reason 7: Disaster Recovery**

Disaster recovery is important because no prudent Java platform can achieve 99.99% uptime without a true DR implementation. Therefore, having all of the Java platform virtualized gives the ability to quickly protect the platform against natural disasters, using Site Recovery Manager (SRM). SRM additionally gives you the ability to test your DR plan, and provide ability to plugin in your own scripted extensions for any other post DR event automation.

### **Reason 8: Handling Seasonal Workloads**

Seasonal workloads can be an issue for many companies because they are expensive from both power consumption and licensing perspectives. How many times developers race to ask you to provision a bunch of VMs, to later find out that they used these resources for one week and then lay dormant for weeks or months? In situations like these you can use vSphere Distributed Power Management (DPM) to manage shutting down such systems, if needed, in order to release the unused capacity. You can also setup the ability to expand vSphere cluster to meet new demand if needed, along with load balancer integration to be able to wire-in the newly created VMs into the load balancer pool so that traffic can be immediately sent to these from the Load Balancer.

### **Reason 9: Improve Performance**

Since you have the ability to move workloads around with DRS and are able to better utilize the underlying capacity, virtualized systems can outperform their less physical counterparts. Certainly on a single vSphere host compared with a single physical server, virtualization does add some overhead, albeit minimal; but from a more practical point

of view, most production systems run on multiple physical hosts, hence it is really about comparing the performance of the entire cluster rather than the performance of the individual physical host. Even though we ran a test that compared the performance of virtualized Java platform to physical and found that up to 80% CPU utilization, the virtualized and physical platforms were nearly identical with minimal overhead in the virtual case. It is worth noting that beyond 80% CPU utilization, the virtualized results started to diverge a little from the physical case. This is great to know, since no one really runs their production systems at 80% CPU, except perhaps for short periods of peak times, and then the load trickles off.

Now even on a per-host comparison basis, we don't see memory overhead being greater than 1% of physical RAM per configured VM, and about 5% for CPU scheduler. The chart below plots load across the horizontal axis, response time on the left vertical axis and CPU utilization on the right vertical axis. The chart plots the virtualized case in brown, and the physical/native case in blue, note the straight lines are CPU measurements, while the curves are response time measurements.

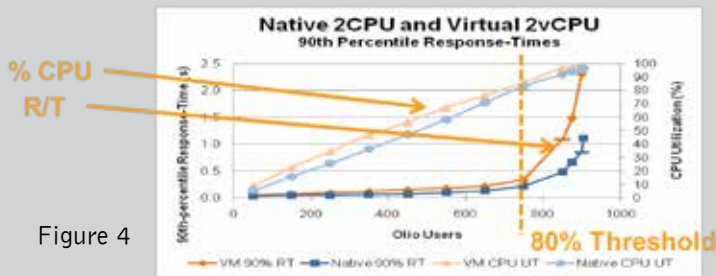


Figure 4

As you can see, up to 80% the virtualized case is near equivalent to the physical/native case, and while beyond 80% we start to see slight divergence.

### Reason 10: Cloud Readiness

When an entire platform is virtualized, it makes it relatively easy to move some workloads off to a cloud provider, especially in development environments where these workloads can be facilitated at minimal cost. For example, customers in Category 1 (with excessive sprawl JVM instances in a physical deployment) who try to move to the public cloud will see that they cost significantly more to run, because Category 1 workloads have an excessive number of JVM containers and often track to being CPU bound. At least if these systems are first virtualized, it gives them an opportunity to meter the usage more appropriately and then consolidate where needed, and then consider pushing the workloads to the public cloud. When the workload is virtualized, pushing it to a public cloud is a relatively straightforward matter of moving over files.

### Conclusion

In closing, making a Java platform virtualization decision these days almost always centers around one of the ten reasons presented in here. While these reliability, cost efficiency, availability, and scalability reasons are quite exciting, what's most impressive is that you can achieve all of the while still maintaining really good performance.

*Emad Benjamin (San Francisco Bay Area) has spent the past eight years focused on Java in VMware vSphere, vFabric GemFire and SQLFire environments. Currently a Senior Architect at VMware, he has been at the company since 2005. Benjamin is author of Enterprise Java Applications Architecture on VMware, and has presented on Java virtualization at VMworld, SpringOne, and Open World. He is the only published author with a deep background in the unique intersection between virtualization and Java. His profile at LinkedIn ([www.linkedin.com/in/emadbenjamin](http://www.linkedin.com/in/emadbenjamin)) is among the world's top 1% most-viewed LinkedIn profiles.*



# Top 10 Ways People Go Broke

By Mike Finley

*Self-Made Millionaire Shares Common Mistakes to Avoid*

You don't have to come from a wealthy family, have the next billion-dollar idea or work 18-hour days to become rich, says self-made millionaire Mike Finley. What you need is a financial education from the true experts in the field, while avoiding all of the "helpers," like your local financial advisor or life insurance agent. The list of true experts is identified below. It is critical to learn from these men and women as you not only learn about smart financial strategies, but maybe more importantly, you learn about all those things you should not be doing with your money.

"You don't have to be extraordinary in any of the headline-grabbing ways (and you shouldn't try); what you need is the self-awareness to avoid wasting money on short-term, retail-priced happiness," says Finley, author of "Financial Hapline\$\$,"

([www.thecrazymaninthepinkwig.com](http://www.thecrazymaninthepinkwig.com)), which discusses his journey to financial literacy and the principles and practices that allowed him to retire from the Army a wealthy man AND a happy man. The key is pretty simple. Value each dollar that comes into your life. Use it for good. Whether that money is spent on you or others, you MUST learn how to manage it effectively. Your future depends on it.

"Money used wisely can give you the financial security associated with the good life. This comes down to developing a positive relationship with your money. You control it, rather than it controlling you. Your best friend and your worst enemy are staring back at you through the mirror. Believe it."

Finley lists 10 of the most common money traps that lead to consumers going broke:

- **Make the appearance of wealth one of your top priorities by acquiring more stuff.**

The material trappings of a faux lifestyle, as seen in advertisements, are not good investments either financially or in long-term happiness. It is an illusion of wealth as you end up consuming more and more of those depreciating assets that lose most of their value over time. You can act rich or you can be rich, but you can't do both. Do you

want to act rich or be rich? Choose real wealth over the appearance of it. Your future self will thank you.

- **Work a job you hate, and spend your free time buying happiness.**

Instead, find fulfilling work Monday through Friday so you're not compensating for your misery

with expensive habits during the weekend.

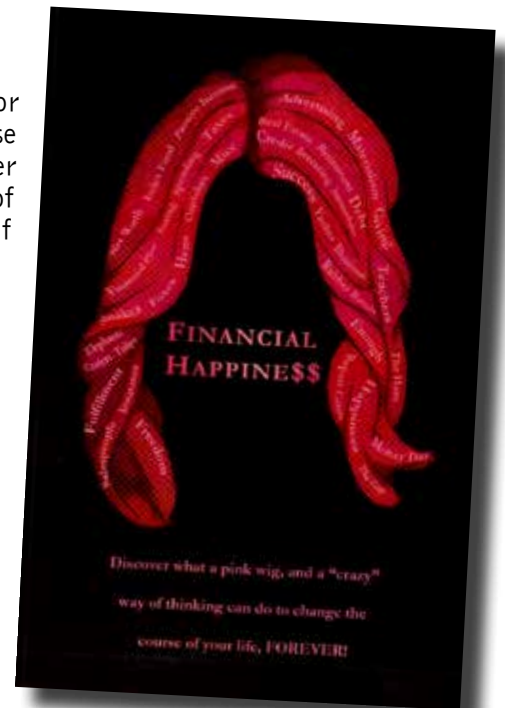
You cannot buy happiness! Spending more and more money on "stuff" will not make life any better. Actually, it will cause you more stress as you increase your debt with monthly payments, which forces you to go back to the job he hate to work long hours to pay for the stuff you bought, and on and on it goes. You must break that cycle. Reject that approach to living your life.

- **Live paycheck to paycheck and don't worry about saving money. Live for today, that's all that matters.**

Have you already achieved all of your dreams by this moment? If not, embrace hope and plan for tomorrow. (Appreciating your life today doesn't require unnecessary expenditures.) Living paycheck to paycheck is a choice that you should reject. Train yourself to develop the habits of the wealthy. Live below your means, save your money consistently and automatically out of each paycheck. Finally, invest that money wisely and efficiently in no-load index stock and bond mutual funds at a place like Vanguard.com. Stay the course and repeat these habits over many years and decades. Financial freedom will follow.

- **Stop your education when someone hands you a diploma; never read a book on personal finance.**

Just about any expert will tell you that the most reliable way out of poverty is education. Diplomas shouldn't be the end of learning; they should be a milestone in a lifetime of acquiring wisdom. Start learning today from



the true experts in the field of personal finance. Here they are: Eric Tyson, Jane Bryant Quinn, Jonathon Clements, John Bogle, Charles Ellis, William Bernstein, and Burton Malkiel. Pick up a book written by these men and women. Your life will never be the same. Believe it!

- **Play the lottery as often as possible.**

While you're at it, hit the casino! Magical thinking, especially when it comes to money, is a dangerous way to seek financial security. The lottery and the casino are selling dreams that are not going to come true. Reject that message and stay away from this vice. Fear and greed are not your friends when it comes to making good decisions with your money. Wealth is created outside the world of gambling, not inside it.

- **Run up your credit cards and make the minimum payments whenever possible.**

Paying interest on stuff you really don't need is a tragic waste of money. Living in the moment and ignoring the future is a recipe for disaster that you will know all too well when the future shows up one day. Pay that credit card bill off in full every month or get rid of it until you can. Some people should not have credit cards! Credit card debt is one of the worst decisions you can make with your money. Pay for your purchases with money that you have on hand. If you don't have it, don't buy it!

- **When you come into some free money, spend it. You deserve it.**

By that logic, you're saying that a future version of you doesn't deserve the money, which can be multiplied with wise investments (no-load index mutual funds). A financial free future belongs to those courageous souls who think beyond the moment. They want a better life for themselves and their family. They are ready to take responsibility for that future self that is counting on the present self. They take extra money that falls into their life and end up paying down debt, increasing their savings, and investing wisely and efficiently for a brighter tomorrow. They take control of their life!

- **Buy the biggest wedding and the biggest ring so everyone can see just how fabulous you really are.**

Nothing says "Let's start our future together" like blowing your entire savings on one evening. Money problems are the biggest issue with marriages. Do not make life any harder than it has to be. Life is hard enough. Get the ring and get married without picking up any debt. You will go into married life with fewer problems and more opportunities.

- **Treat those "amazing" celebrities and "successful" athletes as role models.**

Try to be just like them whenever possible. As far as we know, there's only one you the universe has ever known. Don't dilute your unique individuality by chasing an image that is created out of thin air. Those celebrities and athletes have plenty of problems of their own. You only get to see what they allow you to see. You don't want to emulate them or their habits in many cases. When looking for the

answers to life, stop looking outward, and start looking inward. YOU are the answer!

- **Blame others for your problems in life. Repeat after me: *I am a victim.***

The victim mentality is an attempt to rationalize poor habits and bad decision-making that take you in a direction you do not want to go. The successful in life take responsibility for their lives instead of blaming others. They look in the mirror and challenge what that person is thinking, saying, and doing. They seek out environments and people that will take them higher and if they don't find them, they create them. They are creating their life story. They have taken control of their life. They believe in this mantra: You change the environment; don't let the environment change you. Believe in that and believe in YOU.

"If you're feeling uncomfortable with your financial situation, don't just sit there in a malaise of 'If only I had more money,'" Finley says. "Instead, use it as motivation for a better life; that's why the discomfort is there. Get started and don't look back. The future belongs to those who take control of their lives. You can do this. You MUST do this."



### About Mike Finley

Like most Americans, Mike Finley was raised with no education in personal finances. Seeking direction, Mike joined the Army out of high school. He soon realized he didn't understand money management and began the long journey of educating himself and others. After 26 years in the service as a Military Policeman, during which he practiced the principles he learned, he retired a millionaire. Finley is the author of "Financial Happiness," ([www.thecrazymaninthepinkwig.com](http://www.thecrazymaninthepinkwig.com)) and teaches a popular financial literacy class and investing class at the University of Northern Iowa. He donates much of his time to additional groups, including Junior Achievement of Eastern Iowa and organizations serving veterans and current military personnel. He has answered that age old question, "what can I do and how can I help?"



*Give Your Information Technology Career That "Extra Edge."*

# Get Published with NaSPA

The **N**etwork **a**nd **S**ystems **P**rofessionals **A**ssociation (NaSPA) has provided award winning publications like [\*Technical Support Magazine\*](#) to Information Technology (IT) professionals worldwide since 1986. Our publications begin and end with people like YOU. NaSPA has published the work of hundreds of IT professionals for the benefit of thousands of members and IT practitioners. Do you have what it takes to be a NaSPA contributor? We invite you to find out today.



## Call for Original Articles and Technical Papers

NaSPA invites you to submit a 1000-1500 word article or research paper for one of our publications. The topic is open as long as it is germane to IT, however mainframe, data center, and other high end operations and systems programming subjects will be given preference.

You must be a NaSPA Member in good standing. *Gold Membership is FREE.* Platinum Members enjoy higher publication priority for only \$39.00 yr. All members receive:

- **Technical Support Magazine Subscription**
- **Employer Advertising Discounts**
- **Expansive On-Line Technical Library**
- **Job Placement and Hiring Site**
- **Discounts on NASTEC and IDCE Shows**
- **Discounts on Auerbach and Cisco Press Publications**
- **Home and Car Insurance Discounts**
- **More**



Restrictions apply and all articles become property of NaSPA. For more info and author agreement Email [president@naspa.com](mailto:president@naspa.com). First time authors welcome. Remember, whether you are already in the IT profession or are still in school, articles look GREAT on a resume! Corporate submissions acceptable if they are not overt sales pitches. **What are you waiting for? Get your name out there today in one of NaSPA's great publications!**

# Understanding Your Organization's Best Software Development Practices

By David Herron

Understanding or identifying your organizations best practices is not a difficult thing to do. The challenge for most organizations is that they have to work within the context of preconceived notions as to what a best practice really means and the misconception of how it should be effectively deployed. A best practice, as we will soon learn, can have a significant impact on an organizations ability to improve performance within the software development lifecycle and to deliver quality products on time and within budget. Unfortunately, it can also become that ill-fated silver bullet that fails to produce the anticipated or desired results. The way forward is for an organization to understand clearly how to recognize a best practice, what makes for successful execution and ultimately how to identify their own best practices. We have all read articles about software development best practice of one kind or another. Sometimes these articles entertain us with first-person stories about how a particular development method, technique or development tool has had a positive impact on the development and delivery of software.

Over time, as we continue to hear more about a particular technique or software process that has provided positive results, we come to label these occurrences as best software practices. And, I think that for the most part, the label is deserved. The relevant question at this point is to ask ourselves, what is the nature or what are the characteristics of a software development best practice.

## Characteristics of a Best Practice

If we are to identify software best practices within our own organization, we first need a common definition upon which we can all agree. And as part of that definition, identify the core characteristics that help us to distinguish something as a best practice.

Currently, I am not aware of any industry standard or certification process that is used to qualify something as a best practice; nor are there any rules or guidelines that help us to classify something as a best practice. We talk about frameworks like the CMMI (Capability Maturity Model Integration) as being a best practice or the Project Management Institute's Body of Knowledge as being a

set of best practices, but why do we? How do we know if something is a best practice? What gives a practice or a process that special distinction of being the 'best'?

In this day and age, it only makes sense to make good use of the internet and do a Google search on the term "software best practices". Here are a few of the 'hits' that came up.

"Best practices are generally-accepted, informally-standardized techniques, methods or processes that have proven themselves over time to accomplish given tasks. Often based upon common sense, these practices are commonly used where no specific formal methodology is in place or the existing methodology does not sufficiently address the issue." [1]

*"A method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark. See also best in class and leading practice".*

And best in class was defined as:

*"The highest current performance level in an industry, used as a standard or benchmark to be equaled or exceeded. Also called best of breed."* [2]

"In software development, a best practice is a well-defined method that contributes to a successful step in product development. Throughout the software industry, several best practices are widely followed. Some of the more commonly used are: an iterative development process, requirement management, quality control, and change control." [3]

It would be difficult to find much of anything to really disagree with in the above definitions. They all sound about the same and the vast majority of people would agree that they could be accepted as a general definition of a best practice. If we examine these definitions a little closer we can find some key phrases that underscore some of the core characteristics of a best practice. Things like; generally accepted, proven over time, shown superior results and a well-defined method. These key words and phrases tell us that a best practice is quantifiable (shows results), relatively easy to understand (well defined) and has a history of success (proven over time). Let us look at two fairly standard quality related practices that are

typically referred to as a best practice. In addition, let us see if we can apply these key words to these two practices.

The first one that comes to mind is the practice of conducting a formal review and/or inspection. Perhaps this was what was meant by 'Quality Control' in the previous definition. We all know that reviews and inspections involve the reviewing of artifacts such as requirements documents and design specifications for the purpose of identifying and correcting defects. The benefit of a formal review is to create a deliverable that is accurate and free of errors and omissions. I doubt there will be much debate among the readership that formal reviews could be classified as a best practice. The process for conducting formal reviews and inspections are very well defined (e.g., Fagan). There are specific measures (defect analysis) that quantitatively can tell us that it is effective. And formal reviews and inspections have been around...well, forever. The second practice that is often mentioned in a best practices discussion is requirements management. Requirements management as a best practice is a rigorous, definable and repeatable process that enables analysts to extract effectively requirements from a customer or end user. There are numerous methods for defining requirements, and so this best practice is not labeling a specific process, but it is addressing the practice or methods associated with good requirements management.

Once again, we can certainly fit requirements management to the general definitions noted above. It is generally accepted. Good requirements practices have been proven over time. And the techniques associated with these practices have been well documented.

A brief look at some of the measures that are associated with the above best practices include process compliance, defect density, effective removal rates and functional sizing. Process compliance is the basic practice of creating a formal mechanism to monitor and report compliance to a particular process. It does not provide insight as to the effectiveness or efficiency of the process but it does provide management with a view into the behaviors of the software development teams.

Defect density is often used to quantify and evaluate the number of defects attributed to a particular piece of software, systems application or software product. It is calculated by dividing the total number of defects found by the functionality delivered (measured in function points). The measure can be used to assess the overall quality of the software and also to predict the potential need for ongoing support.

The effective defect removal rate is used to measure the rate of defect removal throughout that lifecycle. The calculation involves calculating the number of defects removed at each phase of a lifecycle divided by the total number of defects discovered. This activity occurs at the various phases of a lifecycle. So for a waterfall lifecycle, you may have defect rates attributable to your

**THE TECHNOLOGY YOU NEED  
WHEN YOU NEED IT**

**KNIGHT POINT**  
SYSTEMS

For more information, please visit [www.knightpoint.com](http://www.knightpoint.com). We look forward to connecting with you.

**White collar  
technology.  
Blue collar  
toughness.**

**Count on OCC for:**

- Security
- Environmental Monitoring
- Voice/Data/Video Communications
- Automation
- Production Rates and Yields
- Equipment Control and Monitoring
- ERP

With cables and connectivity developed to resist chemical exposure, moisture, dust, extreme temperatures, and other conditions often found in mining operations, we deliver a high-tech product with a blue-collar work ethic. OCC delivers quality communications under the toughest conditions. And that's a commitment that runs deep.

**OCC**  
OPTICAL CABLE CORPORATION  
800-622-7711 | [occfiber.com](http://occfiber.com)

requirements phase, your design phase, your coding phase, etc. This proves to be a very powerful quality measurement tool that provides insight as to the effectiveness of your quality practices. So these two examples present us with our first clue as to why something may be called or labeled a best practice: it works; it can be quantified; and it can be proven to be successful. Case in point - have you ever worked in a software development shop that has initiated a process improvement strategy to include reviews and inspections (an agreed upon best practice) only to see that program not well defined and therefore not properly executed, then sooner or later the practice falls by the wayside for one reason or another? I am sure you have. So was it a best practice or not? And if it does not work in your organization is it no longer a best practice? Of course not. It simply was not executed effectively and therefore it did not provide the 'best' results for that particular organization.

The point here is that a best practice such as design reviews or requirements definition is only as good as its execution. And the success of that execution is somewhat dependent upon measuring the process and the results. Measures do not make the process work better but they will provide information about compliance to the process, measure the output of the process and evaluate the impact; thereby ensuring the effectiveness and long-term use of the best practice. Measures will also ensure a return on the investment relative to the expense incurred to implement the particular best practices strategy.

Therefore, we have learned that in order for a best practice to be truly a best practice for any given organization it has to have some measure of success. Simply 'doing' the best practice is not enough. So when deciding to use one of these common and familiar best practices it is important to understand not only the techniques and methods but also the governance and measures of performance that will be used to ensure the best use of a selected best practice.

### **Effectively Implementing a Best Practice**

It is hard to explain why more organizations are not following well-known and well-documented best software practices. The software industry is mature enough to have the basis of experience to understand that there are in fact better ways of developing and deploying software. Why wouldn't an IT organization invest in the techniques that have been proven to have a significant impact on improving quality, delivering on time and satisfying the end user?

Unfortunately, I think the answer is simply that most organizations do not fully understand what it takes to implement successfully a best software practice. They buy into the concept, they want the results, but their expectations are not aligned with the reality of achieving a positive outcome. To underscore the point, in an article on the Nine Best Practices, the authors from Niwot Ridge Consulting, Niwot Colorado state that "In order for the Best Practices to be effective management must be engaged in specific ways." [4]

In summary, they suggest that management engagement involves:

***Commitment to the practices and the consequences of the practices.*** This commitment usually comes in the form of a formal endorsement of the process and the deliverables from the process. By officially sanctioning the Best Practices approach, both top management and all the participants agree in public that they are committed to make this work.

Action to implement the best practices. Have a commitment is easy, making good on the commitment is the hard part. The action needed to deploy the Best Practices will be managed just like any other project, with a detailed project plan, well-defined outcomes, and measurable deliverables.

Funding for the changes that will result from the practices. In order to accrue the benefits of the Best Practices, money must be spent. The actual funding details are not currently known. The total amount will be small compared to the total investment for the project. The return on this investment will be very large – a major contribution to the successful completion of the product.

***Follow-up for the behaviors that result from the practices.*** Using the Best Practice of Project-Wide Visibility of Progress Versus Plan the deployment of the Best Practices will become a visible project.

***Measurement of the outcomes of the practices.*** With measurement, management cannot take place. This is a Best Practice item that will be used for deploying the Best Practices."

Okay, so we have learned another lesson about best practices. Implementing a best practice is hard. It takes work and it takes commitment. Often times it requires changes in organizational behaviors and perhaps even changes in the culture. But if an organization truly wants to improve, it must adopt known best practices or find some other way to position them to be executing at a performance level that will yield positive results.

We have been talking about known software development best practices as recognized methods and techniques that can be adopted by organizations and when properly executed can lead to success.

And we have also learned that just because something is labeled as a best practice there is no guarantee that it will be properly implemented and yield positive results.

So a best practice is only a best practice if it is applied effectively within a given organization. If we look at that from a different perspective why wouldn't we consider that there could be any number of development practices, techniques, methods within an organization that are yielding positive results. Therefore, wouldn't those constitute best practices for that organization? After all, isn't that what is really most important—to discover our own best practices.

We have learned that two characteristics of a best practice are that it is well understood and that it provides positive measureable results. We need to have the means to be able to understand and to assess our current development practices. The assessment should have measures of performance as well as providing clear insight as to what specific practices are providing positive results. In other words, what are our current best practices? If we can isolate those instances where we are effectively designing, developing and deploying software then we can learn from our own internal experiences and provide that knowledge across the organization.

## References

- [1] Wikipedia, The Free Encyclopedia.
- [2] Business Dictionary.
- [3] Search Quality Software.
- [4] Niwot Ridge Consulting.

Certain names and logos on this page and others may constitute trademarks, servicemarks, or tradenames of Taylor & Francis LLC. Copyright © 2008—2012 Taylor & Francis LLC. All rights reserved.

## About David Herron

*David Herron is a Business Development Manager and VP of Knowledge Solution Services for David Consulting Group. Over the course of his professional career David has provided consulting and coaching services for a variety of IT organizations throughout the US and Canada. He is an acknowledged authority in the areas of performance measurement, process improvement and organizational change management. He is a noted author and lecturer, and is a co-author of several books on topics relating to IT performance measurement. He can be contacted at dherron@davidconsultinggroup.com.*



**CRC Press**  
Taylor & Francis Group  
**AUERBACH PUBLICATIONS**  
[www.auerbachpublications.com](http://www.auerbachpublications.com)



**SecurityRecruiter.com**



**Advance Your Career Today!**  
**SAVE 30%** on all Cisco Press Certification and Networking Technology learning products today.

Shop Now At [ciscopress.com](http://ciscopress.com)  
Use Coupon Code **TECHSUPPORT**

**Cisco Press**

Coupon TECHSUPPORT valid for 30% off the list price of eligible products purchased on ciscopress.com. Coupon may not be combined with any other offer, and is not redeemable for cash. Coupon not valid on book + eBook bundles, Rough Cuts, Safari Books Online, or Live Online Training. Coupon expires on December 31, 2012. Offer subject to change.

**Auerbach Publications**  
The Final Word in Enterprise Computing and Networking



**NaSPA®**

P.O. Box 398  
WOODLAND PARK, CO 80866  
PHONE: 719-686-8810  
PHONE: 877-417-6830

# A FEW JOB POSTINGS ON NASPA'S WEBSITE



Program Director, Health Information Technology  
Heald College, Honolulu Campus  
Honolulu, Hawaii, United States

Associate University Auditor, Information Technology  
Brown University  
Providence, Rhode Island, United States

Supervisory Information Technology Specialist  
U.S. Securities and Exchange Commission  
Washington, Dist. Columbia, United States  
Chicago, Illinois, United States

Assistant/Associate/Full Professor of Business -  
CIS/MIS/Information Technology  
Pacific Lutheran University  
Tacoma, Washington, United States

Information Technology Specialist  
U.S. Securities and Exchange Commission  
Washington, Dist. Columbia, United States

Head of Information Technology  
Yale University  
New Haven, Connecticut, United States

Library Systems & Information Technology  
Operations Manager  
University Library, University of Saskatchewan  
Saskatoon, Saskatchewan, Canada

INFORMATION TECHNOLOGY PROGRAM MANAGER  
SANTA CLARA VALLEY WATER DISTRICT  
SAN JOSE, California, United States

Health Informatics and Information Technology Instructor  
Community College of Baltimore County  
Maryland, United States

Information Technology Analyst  
The City of Red Deer  
Red Deer, Alberta, Canada

Principal Information Technology Specialist  
(Governance, Risk, and Compliance)  
Asian Development Bank  
Manila, Other / Non-US, Philippines

Information Technology Instructor  
Pensacola State College  
Pensacola, Florida, United States

Information Technology Project Leader  
Alcoa  
Pittsburgh, Pennsylvania, United States

Lecturer(s) (Information Systems and  
Applied Technologies) (Variable Time)  
Southern Illinois University Carbondale  
Carbondale, Illinois

Manager, CSE Information Technology  
University of Nevada, Reno  
Reno, Nevada, United States

Information Technology Analyst/Developer  
John Deere  
Rock Valley, Iowa, United States

Information Technology Systems Networking Instructor  
Southwestern Community College  
Creston, Iowa, United States

Director of Information Technology  
Slone Partners  
Georgia, United States

Director, Information Technology  
Burnet, Duckworth & Palmer LLP  
Calgary, Alberta, Canada

Information Technology Specialist  
U.S. Securities and Exchange Commission  
Washington, Dist. Columbia, United States

Lead Information Technology Auditor, Audit Services  
Nemours  
Jacksonville, Florida, United States

Senior SQL DBA  
TechStar Consulting, Inc.  
Redmond, Washington, United States

SYSTEM ANALYST, ORACLE  
DynPro, Inc.  
Raleigh, North Carolina, United States

Software Engineers  
Technovators, Inc.  
Princeton, New Jersey, United States

Staff Eng/Sci, Res Engrg  
UTC Research Center  
Connecticut, United States

Clinical Director of Youth Programs  
Center for Alternative Sentencing and Employment Services  
(CASES)  
New York, New York, United States

Cathodic Protection Site Manager  
Northern Gas Networks  
Leeds, Yorkshire and the Humber, United Kingdom

Staff Eng/Sci, Res Engrg  
UTC Research Center  
Connecticut, United States

Sr Manager - Digital Production Systems  
American Water Works Association  
Denver, Colorado, United States

Business and Tech App Analyst  
UNCG  
Greensboro, North Carolina, United States

Junior Software Developer  
Global Partners  
Waltham, Massachusetts, United States

Sr Consultant Apps Development Sap Abap  
Carefusion Resources, Llc  
San Diego, California, United States

Sr Software Engineers  
Oclc  
Columbus, Ohio, United States

Software Engineering Manager (AI)  
Capital One  
Vienna, Virginia, United States

Technology Development Program Associate  
Howard University  
Capital One  
McLean, Virginia, United States

Software Deployment Specialist (IO)  
Capital One  
Glen Allen, Virginia, United States

IT Applications Analyst (1814\_691247)  
Integris Health  
Oklahoma City, Oklahoma, United States

Director Of Technical Services  
Ics Nett, Inc.  
Vienna, Virginia, United States

**CLICK HERE FOR MORE**

# Ten Tips for Overcoming Facilitation Fears

By Nancy Settle-Murphy

*Nancy Settle-Murphy, author of [Leading Effective Virtual Teams: Overcoming Time and Distance to Achieve Exceptional Results](#), and her colleague Dr. Keri Pearlson answer a few common questions from people who are thrust into the role of meeting facilitator, and would prefer to do practically anything but facilitate!*

If you'd rather walk through fire than facilitate a virtual meeting, you're not alone! (Come to think of it, leading virtual meetings can actually feel a bit like walking through fire!) Whether you're a project leader, group manager, subject manager expert, or individual contributor, sooner or later, you'll lead a meeting where some or all participants are not in the same room. Most of us have to lead a lot of these types of meetings. (Probably too many, but that's another topic for another time.)

Some of us thrive in our role as meeting facilitator. For many others, especially those who tend to be introverted or who prefer to keep their heads down and focus on their work, this role can be intimidating at best and excruciating at worst. But it doesn't have to be this way. If anything, those who tend to be thoughtful and reflective (read: introverts) typically make much better listeners, a key quality of a terrific facilitator where there are no visual cues to go by.

Joining me in writing this month's Communiqué is my friend and colleague Dr. Keri Pearlson, President of CIO advisory services firm KP Partners, who has led hundreds of meetings with executives over the years, many of which have been virtual. Here we answer a few common questions from people who are thrust into the role of meeting facilitator, and would prefer to do practically anything but facilitate!

**I find social chit-chat to be incredibly painful. Must I encourage this?** Essentially, yes, but we can make it less painful. Even though this kind of conversation doesn't come naturally for many people (and yes, some consider it an unnecessary waste of valuable meeting time), it's often the only opportunity people have to get to know each other in a virtual world. To make this kind of relationship-building conversation a little easier, always have one question ready to get things going when people join the meeting. (Examples: What's the weather like where you

are? Where are you calling in from today? Who's going to win the playoffs?) Vary the question with each meeting if this is a group that meets regularly. We suggest that you open the teleconference line five or so minutes earlier than the official start time to give others time to exchange pleasantries and get to know each other beyond their role on this team. Not everyone participates, but those who do will appreciate the fact that you made it possible, and it warms up the group so they are ready to do the necessary work when the business starts.

**How can I establish credibility with meeting participants who I've never met?** When we have no existing relationships with the people whose meetings we will be leading, we like to contact them personally in advance. We send an email or IM to set up a quick call to find out what makes them tick, and let them know something about us. If it's a large group, we choose the people with whom a strong relationship will be especially important right off the bat, such as executive sponsors, key influencers, affected stakeholders, or expected resisters (if change is at hand). Have a few questions ready to prompt a good conversation, such as: What would you most like to have happen as a result of this meeting? What's your greatest concern? What else should I know about this group (or this project, or your organization) that will help me facilitate the meeting? You might also ask whether there are others they suggest you speak with in advance.

**If I feel uncomfortable during the virtual meeting, how do I get help?** It's a good idea to have a safety net in place at all times. First, don't try to project an assertive, confident style if that's really not what you're feeling. Be authentic. By this we mean talk naturally, use your notes, and, if necessary, pass the conversation to your "wingman." How do you get a wingman? Look over the list of attendees and reach out to "friendly" people, such as a colleague you have worked with in the past, or someone who generally seems helpful. Let them know you may need their help and prep them as to when and how you may want to pass them the ball. (Examples: When I ask about greatest concerns, if no one else speaks, may I call on you to talk about X? If people in the software group hold back, will you ask Jane to share her ideas? If we go too far off track, will you jump in and suggest we postpone the conversation until later?) In advance of the meeting, make notes that include these questions, and refer to them if you feel stuck. Over time, you can develop a whole cadre of wingmen (or "co-captains") who can take turns leading various parts of the meeting. After all, the goal is a successful and productive meeting, so getting others involved is perfectly fine.



**I have a hard time getting people talking. What are some tricks?** The best way is to ask great questions, and then sit back and listen. A good question stimulates creative thought, generates curiosity, and invites people to share ideas. Both close-ended and open-ended questions have their place. Close-ended questions usually require less time to answer, and can be a great way to poll everyone quickly. (Examples: On a scale of 1-10, what's your enthusiasm for this idea? Fill in the blank: If only we could do \_\_\_\_\_, this project would be guaranteed to succeed.) Open-ended questions, those that cannot be answered in a single word, encourage deeper thinking, so use them sparingly if you're tight on time or have a lot of people on the call. (Examples: What lessons can we apply from the last project? What are some actions we must make sure NOT to do if we want to be successful here?) The more provocative and unexpected your questions, the more you'll get their attention.

**What if I panic and suddenly freeze up?** Actually, if we don't feel at least a few butterflies when we start a meeting, that's a sign we're probably not all that jazzed about it, which can be a big problem. That's because, unfortunately, a lack of energy is painfully obvious, even without visual cues. If we are feeling excited, or even a bit anxious, then our participants are likely to have heightened anticipation of what's to come. If you're in the midst of leading a meeting, and you suddenly freeze, first review your notes and see if that helps get you back on track. If not, then enlist the help of one of your wingmen. (If you haven't given them a heads-up as to when you might need a virtual life preserver, you can try a private IM, or simply say something like: "Juan, would you please summarize how your group approached this issue?")

**How do I get a talkative person to take a break without seeming rude?** Assuming we have an audioconference set up that allows people to talk over each other, we like to politely interrupt, explain why we are jumping in, summarize so the speaker knows she was heard, then call on someone else at the virtual table. Here's an example: "Bonnie, sorry to interrupt. You have some great ideas, but I am concerned that we may not have enough time to hear from others. Let me summarize your key points..." Then ask others to share theirs. "Jack, since you seem to have a similar situation, what do you think we should do about X?" If the talkative person resists giving up the spotlight, we use an "idea parking lot" that we return to later in the meeting. (Example: "Bonnie, those are some great ideas. Let's put them in our parking lot for now, and if we have time, we can review them at the end. If not, let's agree how best to continue the conversation.")

**How do I stop people from multitasking?** First, we ask people to stay off mute, if there are a dozen or fewer participants. This way, when people stray, it's embarrassingly apparent. And stray they might, so be prepared with a comment like, "I know we asked everyone to stay off mute, but I hear some typing, which is pretty distracting. If that's in your office, would you please see what you can do about it?" If someone on the call is typing, s/he will get the hint. Another tip: Design your

virtual meetings to keep participants on their toes. Let them know you will be calling on everyone to participate, so they won't be tempted to check out, even temporarily. Vary the way you ask questions. You might go around your virtual table in different directions when you ask people to respond. Use multiple forms of communications, such as typing ideas into a virtual flipchart, running a quick poll, or asking people to raise their (virtual) hands. Keeping people busily occupied is a great way to dissuade them from checking out of the meeting.

**How do I get quiet people (like me) to speak up without putting them on the spot?** Right at the start, we give people fair warning that everyone will be asked to participate throughout the meeting, and that lurkers are not allowed. Use a friendly tone with a smile on your face as you say this, so people don't feel scolded. Good prep questions help draw people out. A "warm" call ("Suzette, can you share some of the ways that your group was able to overcome this hurdle?") works far better than a blunt: "Suzette, you've been awfully quiet. What do you think?" We keep track of participation by using simple checkmarks by each person's name, so we can make a special effort to engage those who have been quiet. Setting up a shared meeting space where people can respond in writing as well as by speaking is another great way to balance participation. This gives more reflective participants a chance to contribute without feeling pushed.

**What should I do if I encounter dead silence?** Some of our clients refer to these eerily long stretches of silence as "hearing crickets." This can happen a lot, especially if people are merrily multitasking away. We acknowledge the silence openly by stating our observation: "Wow. All I hear is silence. Since I can't see you, I have no idea what this might mean. Can someone help me out?" And then – remain perfectly quiet, resisting the natural inclination to fill the void. Chances are very great that someone will jump in, and others will follow suit. If silence continues for more than a minute, a warm call like this can work well: "Let me go around the table and ask each of you if you have anything we should know about this topic before we decide." There are times when we like to intentionally build in periods of silence to give people time to think and reflect before speaking, which can be especially important for those who speak another native language.

**What's the best way to close out the meeting?** We always set aside at least 5-10 minutes for a wrap-up, depending on the objectives and duration of the meeting. State clearly that you have come to the wrap-up portion of the meeting, and that any additional topics must be covered another time. Summarize a few key points (e.g., decisions reached, issues surfaced, or actions assigned). Gain agreement as to how progress will be reported and tracked and where meeting notes can be found. State the next meeting date and time, objectives, and participants. Alert people as to when they can expect a follow-on email, meeting request, or link to your shared portal. Circle back to any parking lot items and agree how and when they will be covered. Thank people for their time, attention

and energy, and acknowledge their contributions. Always remember to end your meeting with a clear “goodbye,” with a smile on your face.

Most of us are not natural facilitators, but with practice and preparation, anyone can do a great job. Enlist a colleague who can help you plan and lead your meeting. If he is also in this meeting, ask him for feedback right after the meeting ends, while the details are fresh. Offer to do the same in reverse, which helps both of you build your skills and reinforce your successes. Before the meeting, practice role-playing the situations that you find the most intimidating. Prep your wingman, letting her know what you may need, so you never feel like you’re dangling over the abyss without a safety net. Above all, plan your conversation around the WIIFM (what’s in it for me?) from your team’s perspective to keep people focused, engaged and involved.

---

*Nancy Settle-Murphy is president and principal consultant for Guided Insights. She wears many hats: facilitator, trainer and coach, change management consultant, organizational development consultant, and communications strategist. She thrives on helping global teams master the art and science of virtual collaboration for peak performance.*

*NaSPA thanks its longtime supporter Auerbach for this article. Did you know that NaSPA members receive a 15% discount on Auerbach and CRC press publications? Visit [www.auerbachpublications.com](http://www.auerbachpublications.com) for more GREAT content!*

# NEWS RELEASE

## GT Software Announces Release of Fujitsu’s NetCOBOL for .NET v6.0 and Fujitsu’s NetCOBOL for Windows v11x64 to Further Reduce Costs and Enhance Capability, Performance and Productivity

Atlanta, GA – July 8, 2014 – GT Software, the sole distributor of Fujitsu’s NetCOBOL outside of Japan, has announced two new releases for its NetCOBOL user base, namely NetCOBOL for .NET v6.0 and NetCOBOL for Windows v11x64.

NetCOBOL is a COBOL compiler that not only takes the risk out of modernizing legacy applications by preserving original COBOL code, it now runs on Microsoft® Windows® Azure™— without virtual machines or emulation. NetCOBOL also helps customers reduce cost over other COBOL compilers because NetCOBOL solutions run on as many machines as necessary — without the runtime fees that other COBOL compiler providers offer.

*New features and performance enhancements provided by the two recent releases include:*

### [NetCOBOL for .NET v6.0](#)

- Supports Visual Studio 2013 / .NET Framework 4.5.1
- Support for CSV data file format
- Support of recursive calls
- Support of CBL subroutines that are compatible with COBOL CBL subroutines from Micro Focus Co., Ltd.
- Performance enhancements for stored procedures

### [NetCOBOL for Windows v11x64](#)

- Provides UTF-32 support; encoding form UTF-32 can now be used
- Support for COBOL Resource Projects, which are used for management of library and descriptor files in NetCOBOL Studio
- Support for COBOL Solution Projects, which are used for management of multiple projects in NetCOBOL Studio
- Adds a project configuration conversion capability, which converts previous version Project Manager projects from NetCOBOL for Windows v10.1 and earlier to NetCOBOL Studio

These newest enhancements to the .NET and Windows NetCOBOL solutions integrate additional functionality and support of more technologies with an improved user experience. In addition to .NET and Windows platforms, GT Software also offers Fujitsu’s NetCOBOL for Linux and for Solaris (SPARC).

Scott Lance, president at GT Software, notes, “We are excited to launch this latest version of NetCOBOL, and pleased that we can continue to introduce new ways for our customers to leverage .NET technology and drastically reduce their costs, while increasing performance and productivity.”

For more information about Fujitsu’s NetCOBOL solutions, please visit [www.netcobol.com](http://www.netcobol.com).

### **About GT Software**

For more than 30 years GT Software has helped enterprise organizations align their IT infrastructure with business strategy by unifying business information across mainframe and emerging server platforms, data formats or programming languages. More than 2,500 organizations across the globe trust GT Software’s solutions to improve customer experiences, operational efficiency and innovation. For more information, visit [www.gtsoftware.com](http://www.gtsoftware.com). GT Software and all other GT Software products and service names are registered trademarks or trademarks of GT Software. All other trademarks or registered trademarks belong to their respective companies. © 2014, GT Software. All rights reserved.



**COMPETITIVE PRICING + ACCOUNT MANAGERS  
WHO WORK WITH YOU TO FIND THE  
BEST SOLUTION---**

**WWW.SERVERRACKOPTIONS.COM**  
**800-458-6255**

**SERVER RACKS - STANDARD - CUSTOM**

**PDU'S - KVM SWITCHES - PORTABLE A/C  
RACKMOUNT KEYBOARD MONITORS  
AND MUCH MORE!**

**SEE OUR NEW AUTO-LOCK C13 POWER  
CORDS & JUMPERS**

**ISC™ Information Support Concepts, INC.**  
Leading Information Technology Products Since 1987

## MEYER WERFT launches IT innovation with *assyst*

Munich, Germany, July 2014

MEYER WERFT GmbH (Papenburg) and Axios Systems (Munich) announce the launch of a successful partnership in the field of [IT Service Management \(ITSM\)](#). The aim of the collaboration is to streamline MEYER WERFT's ITSM processes and operations with Axios' leading ITSM solution, *assyst*.

In recent decades, MEYER WERFT has earned an excellent reputation worldwide. The company is known mainly for the construction of large, modern and sophisticated cruise ships.

MEYER WERFT has answered the challenges of global ship building through innovation and quality. More than 270,000 people visit MEYER WERFT to witness ships being built, such as Quantum of the Seas which will carry more than 4,000 passengers in the height of luxury, offering world firsts such as a 90m high observation capsule and parachute simulators.

MEYER WERFT was the first compact shipyard in Europe and is one of the most modern shipyards in the world. Innovations and latest technologies are shaping the yard everyday - one reason why MEYER WERFT has chosen the innovative solution *assyst* by Axios Systems.

*assyst* will initially be rolled out for the fulfillment of Incident Management and Request Management. After rollout, further expansion is planned into various ITIL areas to help structure configuration and change management plans.

Ralf Knobbe, Coordinator of IT Governance at MEYER WERFT, said, "With the help of *assyst*, work runs are to be optimized in the long term within the IT department. Through efficient handling of faults and requests, *assyst* enables IT to better support the departments."

In the future, company-wide rollout of *assyst* is planned. The aim is to optimize other processes using *assyst* and to increase the efficiency of the IT department.

### About MEYER WERFT

MEYER WERFT is one of the largest shipyards in Germany and employs more than 3000 internal and 2500 external employees. MEYER WERFT is the market leader in the construction of cruise ships.

### About Axios Systems

For more than 25 years, Axios Systems has been committed to innovation by providing rapid deployment of SaaS and on-premise [IT Service Management \(ITSM\) software](#). With an exclusive focus on ITSM, Axios is recognized as a world leader by the leading IT analysts and their global client base.

Axios's ITSM software, *assyst*, is purpose-built, designed to transform IT departments from technology-focused cost centers into profitable business-focused customer service teams.

An out-of-the-box solution, *assyst* enables faster, less costly delivery and support of IT services better than any other enterprise-class ITSM solution, allowing our clients to offer unparalleled multichannel support.

In 2014, *assyst* was accredited for all fifteen PinkVERIFY™ ITIL® processes, and was the first technology vendor to do so within a single solution.

For more information, please visit our website at [www.axiossystems.com](http://www.axiossystems.com)

Press Contact: [pr@axiossystems.com](mailto:pr@axiossystems.com)

## XURON® WICKGUN™ VIDEO DEMONSTRATES DESOLDERING BRAID DISPENSER

A new video that shows how easy, safe, and effective the WickGun™ hand-held desoldering braid dispenser is for printed circuit board repair and related work has been introduced by Xuron Corp. of Saco, Maine.

The Xuron® WickGun™ Desoldering Braid Dispenser Video demonstrates in only 34 seconds how this handy tool lets users dispense, position, and cut-off braid completely using one hand while freeing their other to hold the soldering iron. Eliminating finger burns, this tool is up to five times faster than most methods and can reduce waste by 50%, claims the firm.

Illustrating how the tool has a thumbwheel for advancing and retracting the braid and a trigger for cutting it, the Xuron® WickGun™ Desoldering Braid Dispenser Video shows how easy it is to feed the braid and cut it off once saturated. The tool uses compact easy to install cassettes, preloaded with 15 ft. each of copper braid in four sizes from 0.035" to 0.110"W.

The Xuron® WickGun™ Desoldering Braid Dispenser Video can be viewed at:

<https://www.youtube.com/watch?v=EBrkHB60Vhs>

For more information contact:

Xuron Corporation  
Abby Robey, Marketing  
62 Industrial Park Rd.  
Saco, ME 04072-1840  
(207) 283-1401 FAX (207) 283-0594  
e-mail: [arobey@xuron.com](mailto:arobey@xuron.com) (tech. contact)  
[www.xuron.com](http://www.xuron.com)



# NEWS RELEASE

**Technology Business Research Inc.'s** (TBR) Private Cloud Customer Research report estimates the \$41 billion private cloud market in 2014 will grow at a 14% CAGR to \$69 billion vendor opportunity by 2018. TBR surveyed 331 private cloud end users across the United States, the United Kingdom, Germany, France, India and China to understand customer adoption drivers and barriers and current and expected buying behaviors and budgets over the next 12 months. The report details the competitive vendor landscape; helps clients understand how enterprises are shortlisting, selecting and engaging with private cloud vendors; highlights future budgeting and purchase scenarios; and enables cloud providers to align their offerings to market demand.

TBR Cloud Practice Manager and Principal Analyst Allan Krans believes market opportunity will continue to grow as users and solutions develop and mature. Krans said, "As private cloud matures, growth is entering a different phase that is driven more by the flexibility and ease of management than by just security or cost savings. The skills gap in implementing, migrating and managing private cloud is driving customers to seek vendors that deliver clear and end-to-end migration road maps."

The split between adoption of self-built and third-party-delivered private cloud has held steady at 30% and 70%, respectively, in 2013 and 2014. We expect the preference for third-party-delivered, or managed, private cloud will increase over the next two years as hybrid integration, increased complexity of clouds and security concerns challenge enterprise IT skills and capabilities, resulting in customers using a systems integrator or private cloud vendor to save time and reduce costs.

Vendors are struggling to adapt to the new cloud paradigm, as pointed out by Cassandra Mooshian, a TBR cloud analyst, who said, "Though they top the leaderboards, IBM, Microsoft and HP— vendors with broad cloud portfolios — have lower satisfaction scores than those with more focused portfolios like Cisco. Trying to be all things to all people deters customers that want those tailored and specialized solutions; think of Walmart versus a grocery store."

One thing that has not changed for cloud is that security remains top of mind for private cloud adopters. Mooshian insists that vendors with continually advancing security offerings and expertise will find ongoing success in the private cloud space, as 59% of respondents pegged security as a top concern and/or pain point around adopting cloud, and 19% indicated they will hire a third party to help mitigate their security concerns.

TBR's Private Cloud Customer Research report helps vendors build strategic go-to-market plans by offering a critical view of the opportunities in private cloud, both self-built and third-party-delivered, examining the landscape through a business-centric lens and highlighting customer buying behavior. The report also identifies leaders and laggards and opportunities for buyers and providers in the private cloud market.

For more information join us Thursday, July 31, 2014, at 1 p.m. EDT for our private cloud webinar, "Cutting through the Fog: What is private cloud and what role does it play in the broader IT market?" at [www.tbrevents.webex.com](http://www.tbrevents.webex.com).

Additional cloud customer research includes TBR's Hybrid Cloud Customer Research and Cloud Professional Services Customer Research reports. TBR also publishes the Public Cloud Benchmark quarterly and the Managed Private & Professional Services Cloud Benchmark and Cloud Components Benchmark semiannually.

For more information about the Private Cloud Customer Research report or to purchase the report, please contact Alison Crawford, senior marketing manager, at 603.758.1838 or [alison.crawford@tbri.com](mailto:alison.crawford@tbri.com), or James McIlroy, vice president of sales, at 603.758.1813 or [mcilroy@tbri.com](mailto:mcilroy@tbri.com).

## ABOUT TBR

Technology Business Research, Inc. is a leading independent technology market research and consulting firm specializing in the business and financial analyses of hardware, software, professional services, telecom and enterprise network vendors, and operators. Serving a global clientele, TBR provides timely and accurate market research and business intelligence in a format that is uniquely tailored to clients' needs. TBR analysts are available to further address client-specific issues or information needs on an inquiry or proprietary consulting basis.

*TBR has been empowering corporate decision makers since 1996. For more information please visit [www.tbri.com](http://www.tbri.com).*

Insurance  
savings  
start here.



Liberty  
Mutual.

# Physical and Cybersecurity Are Converging

*By Aviv Siegel, Chief Technology Officer at AtHoc, Inc.*

Convergence – the IP-enablement of everyday business functions creating an overlap of physical and cyber security issues - is no longer a “concept.” It is now a reality. Ask Target, where hackers accessed the company’s network via an attack on the third party provider for the heating/ventilation/air conditioning (HVAC) system to steal the financial information of more than 110 million customers.

The same technique used for the Target data breach - a practice known as “spear-phishing,” where an email laced with malicious code is sent to a specific individual - is also the number one choice of attack by hackers who are targeting government agencies for the sake of espionage. According to Verizon’s recent “Data Breach Investigations Report,” cyber espionage attacks on government computers around the world more than quadrupled from 120 in 2012 to 511 in 2013.

The IP-enablement of physical devices is a trend that is increasing both in the private and public sector. It is intended to increase efficiency and savings for operations costs. The functions of devices such as those that control access to buildings, air conditioning, or even soda dispensing machines are now controlled via an organization’s IT network.

While well-intentioned, this convergence has created a new security threat that both public and private organizations are struggling to combat. Nowadays, an interruption in the network can impact not just online operations, but also the physical operations of an organization.

To address this issue, organizations are beginning to treat both cyber and physical security as one in the same and developing a unified response. When it comes to the melding of physical and cyber assets - and the potential security problems that convergence presents - these companies and agencies also recognize the human problem. Meaning, many organizations still have separate staffs to manage the physical side of things, i.e., access to a building by personnel, patrolling the parking lots, heating and air conditioning maintenance staffs, but then they also have separate staff that manages the IT network. The problem is that these staffs don’t communicate enough or are familiar

enough with each other’s processes to present a unified front against the cyber threats posed by convergence.

The answer by a handful of visionary organizations is to create a unified response for both physical and security issues by establishing a centralized unit called a global security operations center (GSOC). The function of a GSOC is to have a single point of coordination, where the same staff coordinate the response to any security issue no matter what the type. There are still dedicated personnel to manage physical and IT assets, but their actions are coordinated by the GSOC.

In order for the GSOC to establish coordination, a key element is deploying some type of IP-enabled interactive crisis communications network. The GSOC must be able to provide alerts to a targeted group of individuals who are tasked with responding to a given situation.

An example might be where a cyber attack has been discovered, requiring parts of the network to be shut down. Whether you are a company that finds its customer support network disrupted, or a government agency whose Web site has been impaired preventing citizens from engaging in basic services online, such as setting up an appointment with the DMV or veterans trying to process health care requests), it is not just a cyber issue. Other business units or department functions would need to be alerted and brought into the response, such as customer support personnel, external communications, the legal department in case privacy issues are involved, representatives at the executive level, and perhaps product or solutions managers.

With the deployment of an interactive crisis communications network, a GSOC can alert all of these various functions on an automated basis as soon as something happens via the use of texts, push notifications, pop-up alerts on desktops and laptops, along with the exchange of rich data such as images, videos and maps on mobile devices. These features combine to create an effective and interactive mass notification system with the ability to reach entire populations, groups or key personnel in an instant and ensure an optimal response to virtually any type of threat.

Some organizations are now embedding automated mass notification alerts with fire detection monitors so that when they go off, the appropriate staff is alerted. Smoke or a fire in a server room is not just a physical issue and it is not just an issue involving building maintenance and the fire department. If the room has to be shut down or is damaged by the fire or by the process of putting the fire out, and those servers process critical online functions, that is a much bigger issue that can impact a broader number of operations units.

It is foreseeable that organizations will also integrate mass notification systems with cyber detection devices so that as soon as an event happens, an automatic alert notifying appropriate responders immediately goes out, increasing the speed of response. Many companies still follow the cumbersome process where an IT security manager will discover the cyber event, then they alert their managers, then the manager alerts their boss, who in turn has to make the decision of alerting the business continuity team, who then has to start the time consuming process of assembling and alerting a response team one by one to join a conference call to begin the response effort.

In both of these scenarios, it is important to note that today's emergency mass notification technology is IP-enabled, allowing for communications to be interactive in nature. In other words, first responders to an incident can send information such as pictures or video from their phone to the GSOC. Today's technology also gives GSOCs the ability to track the location of individuals, identifying who might be nearest a building to go investigate an incident. Or, if a responder needs assistance, the interactive nature of today's crisis communications network allows them to communicate status and/or activate a duress feature.

The effectiveness of today's crisis communications networks goes beyond just the technology for interactive communication. There are now various models of delivery for the network to give enterprises the flexibility they need to deploy an emergency mass notification system that fits their own organizational structure. Some organizations choose to host the functions of the communications process entirely onsite, via a centralized point such as the GSOC, using their own internal network. However, there is a risk that if their cyber network is disrupted enough, their own means of using email or internal instant messaging – or even the use of their IP-enabled phones – may not be available. As such, some organizations might elect to have the entire crisis communications process hosted offsite via the cloud on a network not impacted by the incident. To accommodate both scenarios, some organizations are choosing a hybrid model, where personally identifiable information is stored in servers onsite, while the actual functions of alerting and

communications are conducted offsite in case, again, their own internal network has been disrupted.

Today's interactive communications systems can also be used for other critical situations and operational needs. Enterprises can also initiate computer incident handling procedures to isolate and investigate potential network information system compromises. In addition, IP-based alerting networks could also support the dissemination and confirmation of IT security advisories by cyber teams in organizations. Enterprises are leveraging IP-based notifications to improve accountability, recall and deployment of cyber response teams. Lastly, all of this information can be used to certify that crisis response procedures in place for compliance purposes.

Whether you are a government agency or a business, the risk of threats such as cyber espionage are real and growing, particularly in lieu of convergence. Both entities would be well served to develop the unified response embodied by GSOCs and deploy IP-enabled crisis communications networks to protect physical and cyber assets to ensure resilient operations.

#### **Related Reading**

- *Information and Physical Security: Can They Live Together?*
- *Transforming Your Security Team into a Security Operations Center*

---

#### **About the Author**

*Aviv Siegel is the CTO and co-founder of AtHoc, Inc. As CTO of AtHoc, Aviv spearheads all technical architecture design and product development as well as overseeing key client implementations.*

*Aviv has 20 years of experience in architecting and developing communications and security systems for both top-secret military and complex commercial applications, both as a Captain in the military and senior R&D executive of technology companies. His technical and engineering achievements include managing mission critical R&D projects in real-time communications, security and classified high-bandwidth communication and imaging systems.*

*Immediately prior to AtHoc, Aviv was co-founder and CTO of Kinetica Ltd. where he led development projects for multiple government and commercial organizations and was the lead creator of Kinetica's WISE methodology for Internet project development.*

*NaSPA thanks its longtime supporter Auerbach for this article. Did you know that NaSPA members receive a 15% discount on Auerbach and CRC press publications? Visit [www.auerbachpublications.com](http://www.auerbachpublications.com) for more GREAT content!*

# Introducing the World's Fastest, Most Flexible, and Easy to Use Disaster Recovery System



- **Rapidly Recover From Natural Disasters, Network Outages and Other Complex System Failures**
- **Stay in CONTROL - No Matter WHAT HAPPENS**
- **No Equipment to Buy, No Capital Expenses**
- **Available Now From Your Local Phone Company, or CALL US Directly for Immediate Set-Up**

## *"Houston, we have a problem."*

- Astronaut Jim Lovell, Apollo 13, April 13, 1970

Does this phrase sound familiar? It should, and not just because you saw the movie. Any disaster begins almost exactly the same way. You don't know what happened. You don't know how bad it is. You don't know what has been affected. You don't know what to tell the media. What you DO know is that until you have some hard information, you are recovering blind. How would YOU communicate with your responders after a disaster?

We have all seen the movies where the General picks up the "Red Phone" and is in instant control of a situation. Today, commercial organizations and government demand "military-grade" command and control. They find it with us.

### Welcome to FailSafe Communications

FailSafe offers a telephone company-grade service for recovery of critical communications. Our Command and Control services allow for almost instant *situation analysis* by executives and responders. This allows your recovery plan to change quickly, and allows executives to make informed decisions based on each unique event. Just as important, FailSafe recovers inbound calls transparently, without changing phone numbers. Remember, when customers stop calling in, the cash register stops. Either way, the key to successful recovery is COMMUNICATIONS. With FailSafe you cover all the bases and are *always in control*.

In a hurry? Download our [Complete Brochure HERE](#).

In 1986 our principals made disaster recovery history when we were the first in America to locate a disaster recovery center inside a telephone office. Today we offer a phone company-grade disaster recovery service "in the cloud." We serve police, fire departments, 911 centers, universities, banks, credit unions and others in conjunction with their local phone company. If your service provider is a member of our network, our service can be conveniently charged on your your phone bill. If not, no problem. We can sign you up directly and activate you in days.

Hear it yourself. Dial 1 (866) 501-8430 now for recorded information from our actual system. Better yet, why not sign up for our free online demo held EVERY WEDNESDAY. Discover how to keep your business running, and yourself in control, when it matters most.

### ARE YOU A SERVICE PROVIDER?

Now Hiring Sales Agents and Channel Marketers including Independent Telephone Companies, CLECs, VARs, Network Integrators and VoIP providers. [Learn More HERE](#).

*Fast, Reliable, Affordable, and Available Now In Your Area*

**FailSafe**  
Communications Inc.

"For Your Information.. We've Got Connections!"™

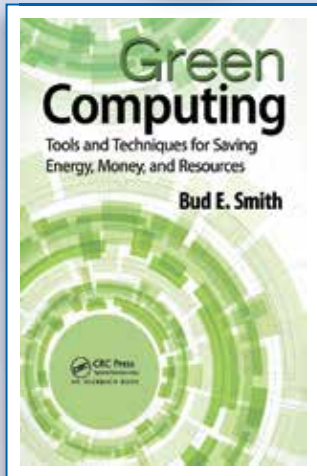
(866) 501-8430

[Info@failsafecommunications.com](mailto:Info@failsafecommunications.com)

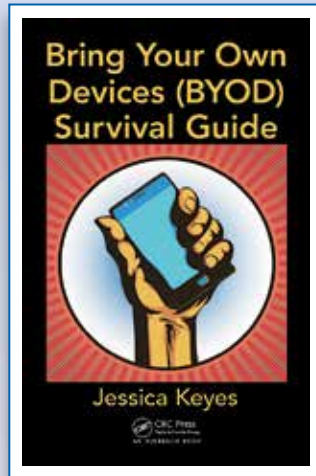
ENJOY SPECIAL SAVINGS ON THE BOOKS YOU NEED TO



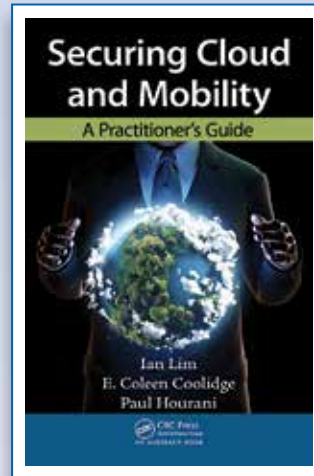
# Ensure Agile, Resilient, and Energy-Efficient Networks and Systems



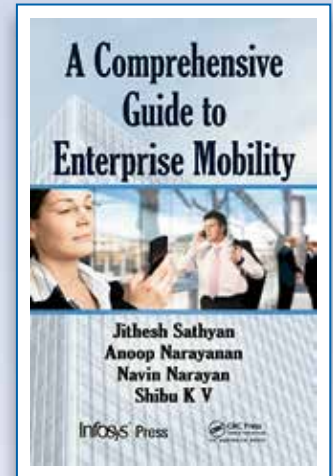
ISBN: 978-1-4665-0340-3



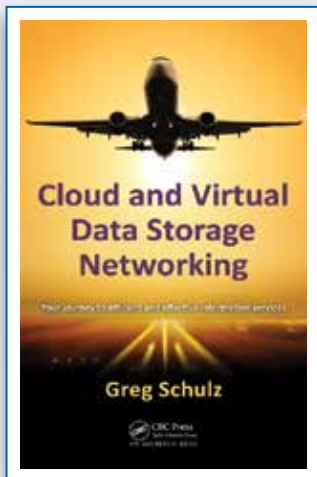
ISBN: 978-1-4665-6503-6



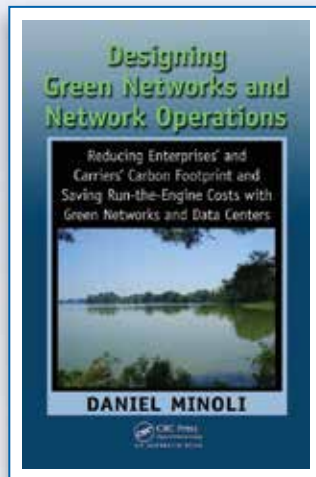
ISBN: 978-1-4398-5055-8



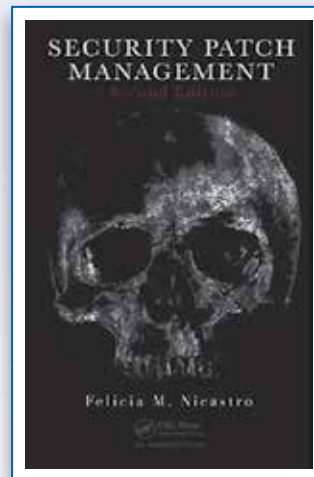
ISBN: 978-1-4398-6735-8



ISBN: 978-1-4398-5173-9



ISBN: 978-1-4398-1638-7



ISBN: 978-1-4398-2499-3



ISBN: 978-1-4398-3487-9

**Sign Up for Our Free Newsletters and Connect with CRC Press IT Books on Facebook, Twitter, and LinkedIn to Keep the Discounts Coming!**



The final word in information systems security



In-depth... insightful... for today's technology leaders



Improving organizational performance through IT



[WWW.CRCPRESS.COM](http://WWW.CRCPRESS.COM)



CRC Press  
Taylor & Francis Group

Order online and enter discount code **GWN13** to **SAVE 25%**, plus **FREE Standard Shipping**

[www.auerbachpublications.com](http://www.auerbachpublications.com)