

Quest STRATEGIC ADVISOR

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Quest | CASE STUDY

Infrastructure matters and the Nordstrom Measurement

Long before he became Senior Director of Worldwide Engineering at BEA Systems, Inc., Jay Kay built data networks for GTE. Those early years shaped his view of what makes a well-run data center and, most importantly, his belief that "at the base of every successful data center is solid cable management." Alas, notes Jay, cable rarely gets the attention it deserves.

In fact, it's not only cable management getting short-shrift, he reports, "it's the entire base infrastructure — from cabling to labeling, to simple rack and installation and design."

Building a data center on sand

At BEA, Jay's responsible for the smooth operation of more than 4,000 servers serving two data centers and four labs — none of which would operate properly, he says, without the right wiring, switches, etc.

"Not having the base infrastructure in place is like building your house on sand instead of a foundation."

Unfortunately, he adds, it's something people regularly do without appreciating the impact on operations.

"If you're having consistent problems with the

performance of your data center, your lab, or your network, you'll probably find it's rooted in the base infrastructure. The solution to a problem further up — the second story of the house is warping — lies in the basement."

What's more, this lack of consideration for what's happening "down below" means not only under-performing applications, network traffic jams, downtime, and lost productivity, it also means spending money you don't need to spend.

"Throwing hardware at a problem is a gut reaction for many folks, and usually it's a mistake. People will spend lots of money on equipment and software

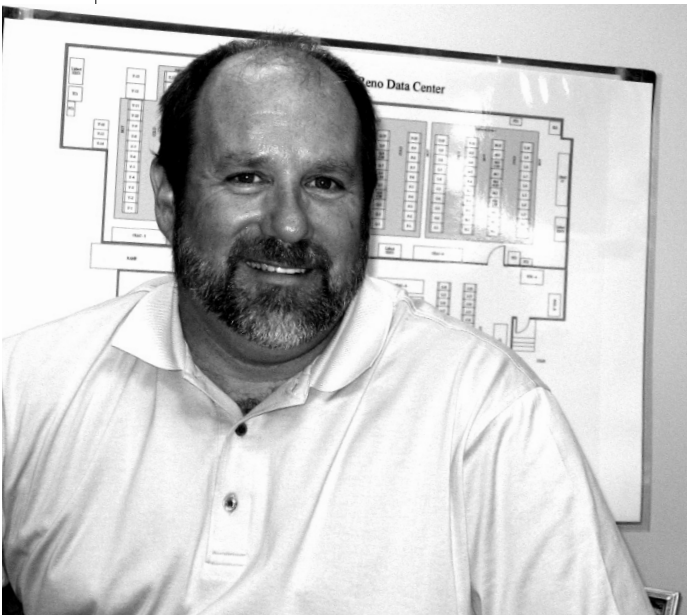
they don't need, and it doesn't resolve the problem."

Jay's advice is to get down and dirty: "The base infrastructure is where you should begin your problem resolution."

Not surprisingly, Jay isn't someone who would build his house on sand. So back in 1998, when he was working for North American Mortgage, one of the first trips he made was to the cabling closet. It was, he remembers, "in shambles. I needed to rewire the entire facility."

After evaluating three different companies, Jay chose Quest to help him straighten out the mess.

BEA SYSTEMS, INC. (Continued on p. 2)



THE BOTTOM LINE

Solid cable management makes a data center. Responsive, highly-skilled, consistent performance defines a partnership.

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BEA SYSTEMS, INC. (Continued from p.1)

According to Jay, Quest de-installed and then re-installed about 4,000 cables of varying lengths, dressing and labeling each per Jay's specifications. When they were finished, he says, "You could eat off the cables. Closets that were a disaster — like someone had thrown six-foot spaghetti into the room — were turned into a showpiece. It was exactly the specs I had laid out,

“ And I know this sounds like a sales pitch, but to be perfectly honest, I would put Quest’s technical expertise against any organization I’ve worked with in my thirty years in IT. ”

— Jay Kay

and to this day North American is still using the wire management plan we put in place in 1998.”

Meeting the Nordstrom measurement

That level of service is the key reason Jay has continued to work with Quest over the last ten years, on projects ranging from a major move to Microsoft Windows at North American, to the build-out of a \$28 million dollar data center at Harley-Davidson, to a number of services currently in play at BEA Systems, including reviewing plans for the doubling of its data center...and a very large cable implementation.

“I get a real person on the line with an answer when I call Quest — I’m not put into some automated queue. I get the sense from Quest that “Yes, we care

FROM TIM BURKE...

IT’s neglected foundation

This issue of our newsletter is devoted to infrastructure. Although it comprises the very cable and wiring on which every network and application runs, it’s not unusual for organizations to do an initial infrastructure design and installation and then never think about it again. Even when laid in place 10-15 years ago, infrastructure gets noticed only when there’s a major problem or move.

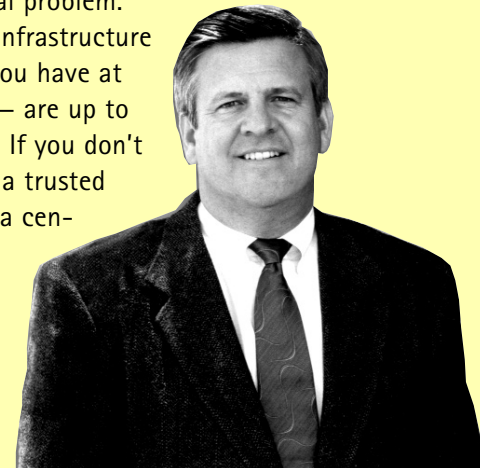
But two reasons make it worth noticing: performance and unnecessary expense.

Performance and cost

Performance troubles begin when new bandwidth hungry applications are routinely layered onto existing infrastructure with no real analysis of the impact. These problems typically get blamed on the network or applications — and that’s where the unnecessary expense starts.

Because infrastructure is low on most folks’ radar, performance problems get ‘solved’ by upgrades to software or networking equipment...money spent everywhere but on the fundamental problem.

Performing an audit of your existing infrastructure every year or two to determine if what you have at the base level — your cables and wiring — are up to delivering what users expect is essential. If you don’t have the time or expertise in-house, ask a trusted partner. And if you’re building a new data center, be sure to let experts manage the infrastructure installation. Don’t leave it to an electrical contractor.



about your problem.’ Our account representative, Gary Schick, isn’t a vendor salesman, he’s a partner. He keeps me informed, takes the time to understand our business, and always gives me the straight skinny.

And I know this sounds like a sales pitch, but to be perfectly honest, I would put Quest’s technical expertise against any organization I’ve worked with in my thirty years in IT.”

This is the quality of service Jay expects all vendor partners to meet, and

keep on meeting. He calls it ‘The Nordstrom Measurement.’

“In the more than twenty-six years I have been a customer of Nordstrom, I have always received first-class service. I have a difficult-to-find shoe size. More than twenty years ago I went looking for shoes at Nordstrom’s, found what I needed, and to this day, twice a year, someone calls to alert me to a sale in my size. That’s the type of service I expect from vendors. It’s the quality of service I get from Quest.”

Quest's Infrastructure Services:

Helping you get the most from all those cables

Behind every email, every phone call, every database query lurks a vast array of wires, cables, and signals enabling these everyday activities that the business cannot do without.

It's easy to forget about the miles of cables and wires buried in the walls, under the floors. And it's hard to remember that, like any other aspect of your organization's IT infrastructure, those miles of cables and wires can become outmoded and suboptimal — especially as the business grows and IT systems and networks are upgraded.

Sometimes, in fact, you may not need new network gear at all. You may simply need to upgrade — or even just analyze and simplify — your cabling.

An integrated infrastructure team

Quest Infrastructure Services can help you find out and then will deliver what you need — all conforming to exacting EIA/TIA standards, whether it's an infrastructure audit or a single-point upgrade or full, end-to-end building installation.

Quest Infrastructure Services' technology consultants, project managers, engineers, and product specialists work as a team to deliver a fully integrated approach to your infrastructure requirements that always considers the needs of your entire business. Since 1990, Quest has installed thousands of miles of underground coaxial, fiber-optic, and twisted-pair cable for business, government, telecommunications, and education clients.

Quest Infrastructure Services offer complete consultation, design, installation, and deployment, including

- Fusion splicing/fiber-optic infrastructure,
- Infrastructure cabling (Cat 5 and 6),
- IP video surveillance,
- Voice-over-Internet Protocol (VoIP),
- Directional boring/trenching
- CATV, and
- Data closet design and cleanup.

And we do wireless, too ...

Quest Infrastructure Services can also help you make the most of wireless technologies. Quest professionals will conduct onsite wireless assessments and design and deploy internal, external, and meshed wireless networks.

Visit www.questsys.com/cabling_video.html for a video overview of our Infrastructure Services.

DID-YOU-KNOW?

QUIZ: Where do you stand when it comes to VoIP

A recent study by Nemertes Research* provides insight, translated here into a quick quiz:

1. What's the state of your VoIP rollout?

- No plans
- Planned for 2008
- Planned for 2007
- Pilot
- Full deployment
- Limited deployment
- Growing rollout (i.e., moving entirely to VoIP)

2. How do your VoIP costs compare to traditional time-division multiplexed (TDM) PBXs?

- We're spending less on MACs (moves, adds, and changes)
- Startup VoIP costs (capital and operational) are higher than we expected
- Ongoing VoIP operational costs are lower than for TDM PBXs

The insights

1. The Nemertes study reports these findings:

- No plans: 1% of study respondents
- Planned for 2008: 3.1% of respondents
- Planned for 2007: 6.2%
- Pilot: 9.4%
- Full deployment: 18.8%
- Limited deployment: 28.1%
- Growing rollout (i.e., moving entirely to VoIP): 33.3%

2. The Nemertes study also reveals these VoIP cost generalizations:

- External TDM MACs cost an average of \$168, while IP MACs cost only about \$10
- Startup VoIP costs (capital and operational) are as high or higher than for TDM PBXs
- While ongoing VoIP operational costs are lower than for TDM PBXs, isolating and repairing VoIP outages can take one to three times longer than a TDM PBX outage

* (The Business Case for Voice Over IP, http://whitepaper.informationweek.com/shared/write/collateral/ANL/52409_13114_36476_Nemertes_issue_paper-VOIP_Business_Case_PC1.pdf?ksi=778409&ksc=1292179718)

IN THE MEDIA ROOM

Visit <http://www.questsys.com/media.html> for:

VIDEOS

Who We Are: Features people, like you, describing how they achieved powerful and reliable business systems success with Quest's help.

HCIN video: Learn how VoIP and Video Technology can provide workable language interpretation solutions to comply with regulations and increase customer service and revenues. See how Quest has collaborated with Health Care Interpreter Network (HCIN) for better patient care.

Business Continuity Planning/Disaster Recovery: Natural and/or man-made disasters may affect your business. More than 25% of businesses damaged never recover. Ensure your future.

Video overview of our Infrastructure Services: Wireless, Broadband, Fiber-optics, Fiber Splicing, Infrastructure Cabling and more.

PODCASTS

QUEST ON THE RADIO: If you caught Quest on the radio, you're probably looking for more information on our Threat Review Process. Missed the show? You can download the podcast.

PCI Compliance podcast: Join (Co-Hosts) Scott Draughon (My Technology Lawyer) and Oliver Rist (InfoWorld) as they interview Mike Dillon (Quest CTO) and Jon Bolden (Quest Dir. of Professional Services) about PCI (Payment Card Industry) compliance.

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Coming in the next issue of *Quest Strategic Advisor*:

Case Study of Solano County, California

What's New...

→ **YOU SPOKE - WE LISTENED. QUEST'S NEW SEARCHABLE PRODUCT CATALOG -** at www.QuestCatalog.com – just keeps getting better and better. You'll be greeted with hot deals – great prices on gear ranging from notebook and desktop computers to printers, security appliances, routers, and servers.

Looking for storage devices, monitors, maybe a UPS? No problem – you can search by the appropriate category. You can also search by price range and brand name. [QuestCatalog.com](http://www.QuestCatalog.com) has everything your business needs, including ways to contact Quest for advice about managed services. Even support services from such vendors as IBM, Microsoft, Symbol, and Lenovo are available for purchase. While you're at the site, please set up your own personal account and login. You'll always be able to contact us directly. Email us through the site and let us know if you have any questions. How may we help you?

→ **A SEARCHDATACENTER.COM FAQ** succinctly discusses the kinds of cabling infrastructure required in data centers.

Among the issues covered: when and why you should choose copper and/or fiber, choices in fiber, choices in copper, emerging standards, when to future-proof and what to future-proof against. The site (http://searchdatacenter.techtarget.com/generic/0,295582,sid80_gci1240683,00.html) offers several articles about data center cabling – such as a discussion about using shielded cables and dealing with alien crosstalk.

