



CUSTOMER SNAPSHOT

Agency: Rock County, Wis.

Mission: Rock County serves a population of 154,000 residents living within a 720 square-mile radius. Rock County officials seek to provide a constructive, well organized and technologically innovative county government that preserves and enhances the lives of the local populace.

BUSINESS CASE

Requirements: Consolidate IT resources — including servers and storage — while maintaining and enhancing legacy equipment to meet budget demands.

Solution: Standardizing on HP desktop computers, LaserJet printers, ProLiant servers and an HP StorageWorks storage area network to consolidate systems and streamline IT operations. Expert HP analysis will help consolidate printer use, and cutting-edge ProLiant Blade Server and Consolidated Client Infrastructure technology may soon increase server capacity and improve desktop systems.

Results: Standardizing on HP solutions allows Rock County to use technology more efficiently and cost-effectively. Server consolidation saves IT staff time by simplifying support and the deployment of new software and services.

READY TO ROCK

HP enables Rock County, Wis., to make the most of current technology while exploring innovative options for the future.



Photo by Pat Goetzinger

Mickey Crittenden, director of IT for Rock County, Wis.

Centralized Desktop Solution

Rock County, Wis., intends to lower IT costs by adopting a thin-client approach to desktop computing. HP thin clients deliver cost-effective desktop technology, and improved security and manageability.

If necessity is the mother of invention, then Rock County, Wis., has necessarily positioned itself on the leading-edge of technological innovation.

Supporting 29 different county departments, Rock County's IT team faces the same economic and budget realities confronting governments throughout the

along the meandering Rock River. But the overriding principles are basic: standardization and simplification.

Less Is More

Consolidation has been key — especially for servers. "We're trying to simplify our infrastructure by limiting the number of

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country. But Rock County officials are attempting to lower the cost of county operations through the use of technology — HP technology, in particular.

Cost-effectiveness is especially important in this jurisdiction of nearly 154,000 people located in the economically hard-hit southeastern section of Wisconsin. Rock County serves citizens scattered over 720 square miles on an annual budget of about \$145 million.

"The pervasive theme of our county operation right now is driven by our budget realities," said Mickey Crittenden, director of IT for Rock County. "We can't necessarily seek the latest and greatest hardware and software — although we would like to — instead we're focused on using technology to lower overall costs. And we've been quite successful in doing that."

Cost management has come in many forms for this large county that stretches

servers that we have installed throughout our data centers," Crittenden explained. "The big benefit of that is that it is easier to manage fewer servers, and there's also significant cost savings with licensing and maintenance of the equipment."

Previously all applications in use by the 29 departments were hosted on servers distributed on several sites. Varying hardware and systems spaced throughout the county made interagency communications nearly impossible and maintenance a costly nightmare.

Consolidating on HP servers — including HP NetServers, 9000 series, e3000 series and HP ProLiant servers — Rock County centralized its processing resources. This provides the county with a centralized, highly adaptive enterprise that is secure, scalable and easily managed. The change saves time and money as IT staff members support fewer types of servers and

hp Compaq thin-client t5500 Windows®-based terminal

part no. DC641A#ABA

- 733 MHz processor
- 32 MB Flash, 128 MB DRAM
- VESA monitor support
- Microsoft® Windows® CE.Net
- 4 USB ports plus serial and parallel
- Integrated Microsoft® RDP and Citrix ICA protocols
- Altiris deployment solution
- Three-year limited warranty
- 24x7 phone support

\$368

\$13/mo. ITFlex price



hp Compaq thin-client t5700 Windows®-based terminal

part no. DC640A#ABA

- 1 GHz processor
- 192 MB Flash, 256 MB DRAM
- VESA monitor support
- Optional PCI Expansion
- 4 USB ports plus serial and parallel
- Microsoft® Windows® XP embedded
- Altiris deployment solution
- Three-year limited warranty
- 24x7 phone support

\$533

\$18/mo. ITFlex price

For the latest contract and pricing information, see www.hp.com/go/govcatalog or call 888/887-2081.

a smaller number of servers overall. Uptime is maximized, and intracounty communication is nearly seamless. IT professionals easily deploy new applications from a single source instead of traveling from department to department, or worse yet, from desktop to desktop.

“The result is a savings of tens of thousands of dollars for Rock County taxpayers,” said Crittenden.

A storage area network (SAN) also helps maximize the use of county IT resources. Linking storage equipment on a single network allows Rock County to use those devices more efficiently.

“Previously we had servers with directly attached storage,” explained Crittenden. “That meant some servers would be using 95 percent of their available disk space while others would be using only 15 percent. We just didn’t have the storage where we needed it.”

HP SAN technology lets the county consolidate disk storage and allocate that capacity according to application requirements.

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“This adds tremendous flexibility and real cost savings,” Crittenden said.

Similarly an HP StorageWorks Ultrium series LTO (Linear Tape – Open) tape library enables Rock County officials to quickly perform automatic backups each evening.

“We’re a lights-out operation at night, and we’re using our tape library to back up all our servers and make sure all those servers are up running in the morning without worrying that a backup procedure hasn’t finished,” Crittenden said.

Productive Printing

Despite the consolidation initiative’s extraordinary success, Rock County’s IT staff

continues to seek new and inventive ways to stretch shrinking budget dollars.

Rock County officials are aware of growing costs associated with maintaining older printers. Rather than haphazardly purchasing new equipment, Crittenden recently had HP imaging experts conduct an in-depth analysis of county printer use. HP’s assessment capabilities range from Web-based, self-service tools to comprehensive consulting services. Rock County’s analysis will provide managers with a clear view of existing printing capabilities, requirements and operating costs as well as the insight needed to ensure that future printing technology investments provide the best value for taxpayers’ dollars.



Mickey Crittenden in Rock County's data center.

Photo by Pat Goetzinger

“HP is helping us with the process of determining whether it is better to perhaps use one very capable high-end printer with all sorts of features and functionality for a given department rather than having separate locally attached printers for employees,” explained Crittenden.

Currently Rock County has a fleet of more than 500 heavily used HP LaserJet printers and a couple of new HP LaserJet 8100 series printers designed to facilitate centralized printing. Printer centralization allows agencies to better manage their printing and imaging needs, which can reduce overall expenses and increase user productivity. Crittenden believes the county’s current centralization efforts coupled with HP’s printer analysis — and the

eventual changes that take place because of that analysis — will provide even greater IT efficiencies and cost savings.

Everyone will benefit from the eventual outcome of the analysis, according to Crittenden, who added, “Again, this is something driven by the need to lower the cost of technology — in this case printer technology — to the county.”

Sharpening the Blade

As a part of their overall innovation and cost-savings strategy, the Rock County IT team has also deployed innovative HP blade server technology.

Blade servers make more efficient use of valuable data center space and resources by

enabling quick deployment of several servers in a single enclosure, seamlessly increasing processing power “on demand.” This also creates a redundant platform; so should a server fail, it can be replaced in minutes by another blade. At worst, hardware failures result in only a few minutes of downtime. With budget constraints continuing to loom, the time, space and potential financial savings provided by HP ProLiant Blade Servers could prove crucial to Rock County in the future.

In another cost-saving and efficiency-driving move, Crittenden has ventured onto the leading edge of technology by further empowering Rock County’s current 1,000 desktop machines through implementation of a thin-client desktop strategy.



HP’s Consolidated Client Infrastructure (CCI) solution is a blade PC strategy that establishes a one-to-one connection between end-users and dynamically allocated blades and centralized storage. Desktop images and data are stored and controlled in the data center. End-users access their desktop images from any device — thin-clients, tablets, PCs, workstations and handhelds — anytime, anywhere.

hp LaserJet 9055mfp

part no. Q3631A



- Print, copy and scan speed: up to 55 ppm
- Duty cycle: 300,000 pages per month
- Built-in duplexer for automatic two-sided printing
- 100 sheet reversing automatic document feeder
- 100 sheet multipurpose tray, two 500 sheet input trays, 1,500 sheet input tray, optional 4,000 sheet high-capacity input tray
- Output options: 100 sheet stapler/stacker equipped with two exit trays, 3,000 sheet multifunction finisher equipped with three exit trays, 2,500 sheet post-insertion kit, hole-punch kit
- 47,500 page toner cartridge
- Choose from simple purchase, pay-per-use imaging and printing or an acquisition package that includes installation, training, full server maintenance, equipment, staff and supplies
- Connectivity: Parallel, optional 10/100 base TX with HP print kit
- Consolidate document production into a versatile multifunction device

Price will vary with options chosen.

HOT DEALS PROMOTION

Receive up to \$2,200 in incentives when you buy or lease a qualifying HP printing or imaging product and an HP Care Pack! Over 40 products are eligible for rebates through April 30, 2004. Select from designjets, color LaserJets, monochrome, MFP, Deskjets, digital projectors, scanjets and more! There's no better time to upgrade your printing and imaging equipment. For more information, see

www.hp.com/go/getmore-gov

hp printer server appliance 4250

part no. J7941A#ABA



- Network types: Ethernet/802.3, RJ-45 10/100 TX
- Ports: RJ-45 (10/1000 base TX), DB9 (UPS support)
- 20 GB hard disk. Connect up to 50 printers and 300 clients to a single printer server appliance
- Remotely manage and monitor print jobs, troubleshoot problems, reboot the system, and install firmware upgrades
- Manage all aspects of drive installation from a single location

\$1,974

Print Management Solution

Rock County, Wis., is centralizing its printing resources to manage expenses and increase user productivity. HP helps jurisdictions meet these goals with Total Print Management (TPM), a comprehensive strategy for reducing the cost of printing and imaging. TPM controls costs and improves productivity through an innovative combination of print infrastructure, management tools, connectivity, and intelligent printers and multifunction products.

hp Web Jetadmin

- Free Web Jetadmin software manages, remotely installs and configures a wide variety of HP and non-HP network peripherals with a standard Web browser
- Proactive Management: Configurable alerts, instant e-mail notification, supplies alerts, services alerts and consumable gauges
- Advanced auto discovery: Allows administrator to schedule discoveries and discover unconfigured devices
- Third-party device certification program: Allows for universal printer support using one print management software tool

hp LaserJet 4101mfp

part no. C9149A

- Print and copy speed: up to 25 ppm black
- Duty cycle: 150,000 pages per month
- 100 sheet multipurpose tray, two 500 sheet input trays
- Up to 1,600 sheet input
- Analog fax accessory
- 1200 dpi laser output and 600 ppi color scanning
- Connectivity standard: Parallel, HP Jetdirect 615n (EIO) internal print server for Ethernet 10/100 base TX in EIO slot, hard disk drive in EIO slot
- Three-year next-day on-site warranty upgrade
part no. H7668E



\$2,466

For the latest contract and pricing information, see www.hp.com/go/govcatalog or call 888/887-2081.

County IT officials recently leveraged software from HP partner, Citrix, to centralize desktop computing and storage resources in the data center through a true 'thin client' desktop model. The solution dramatically lowers per-desktop costs by minimizing time-consuming and costly hardware upgrades while creating a more centralized access infrastructure capability on an enterprise scale.

"This is an absolute savings that was forced on us," explained Crittenden. "If we didn't move into the thin-client realm, we would have employees with desktops who would not be able to do their jobs."

The thin-client solution permits older desktops to function at a higher level while

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enabling more efficient software upgrades and an overall simplification of enterprise-wide desktop maintenance.

"Our thin-client strategy and standardizing on HP as much as possible has allowed us to move to a self-maintenance strategy that will probably save us in the realm of \$200,000 and \$250,000 a year," said Crittenden.

Not content to rest on his laurels, Crittenden continues to explore the latest in innovative technology and is even considering moving Rock County from a thin-client model to HP's blade PC solution.

HP's Consolidated Client Infrastructure (CCI) solution is a blade PC strategy that establishes a one-to-one connection between end-users and dynamically allocated blades

and centralized storage. Individual desktop images and data are stored and controlled in an IT infrastructure in the data center.

End-users experience increased service levels and a more predictable and available desktop experience with the ability to access their desktop images from any device — thin clients, tablets, PCs, workstations and handhelds — anytime, anywhere. CCI also reduces risks such as data security and integrity, viruses and software license compliance, associated with a highly distributed environment.

By radically simplifying deployment and updates as well as lowering hardware costs,

CCI can cut total cost of ownership for PCs up to 45 percent — a fact Crittenden is well aware of.

“Our preliminary conclusions are that there are some real significant benefits to using blade PCs,” Crittenden said. “What we’re really pursuing is a strategy of beefing up, putting our real power in the data center and keeping the desktops as lightweight as possible.”

Rock County’s partnership with HP helps the jurisdiction meet challenges created by the current economic climate, Crittenden said.

“It’s quite clear and it’s no secret in our organization that HP is our single most

important strategic IT provider. We’re very pleased that HP understands our need to lower the cost of technology,” Crittenden said. “When we talk with HP about our needs and requirements, we’re confident they understand exactly what it is we’re talking about and have many answers to the issues we’re confronting.” ▲

Blade Server Solution

HP PROLIANT BL P-CLASS

The HP ProLiant BL p-Class system is part of the new generation of HP ProLiant Server blades and infrastructure portfolio, representing a radical new concept in service design and optimized for rapid deployment and automated provisioning. BL p-Class systems are high-performance, high-availability server blades for multi-tiered data center applications.

Configure it to meet your agency’s growth needs

No matter how you configure it, the HP ProLiant BL p-Class system is built to please.



a

choose an hp ProLiant BL20p G2 server

The HP ProLiant BL p-Class server is built for effortless enterprise performance and expansion. HP ProLiant BL20p server blades feature up to two Intel Xeon 3.2 GHz processors, four DIMM slots for up to 4 GB max memory, two hot-plug SCSI hard drive bays, Smart Array Si RAID controller with an optional battery-backed write cache and Integrated Lights-Out Advanced.

BL20p G2 server only

part no. 323145-B21 *2,352

(configuration hardware not included)

Price valid until May 30, 2004



b

choose a server blade enclosure

HP ProLiant BL p-Class server blade enclosure is 6U and holds up to eight HP ProLiant BL20p server blades and two interconnects. This is built-in investment protection for the future needs of your agency. Server blades and interconnects blind mate into 6U server blade enclosures for network connection and power.



c

choose an interconnect

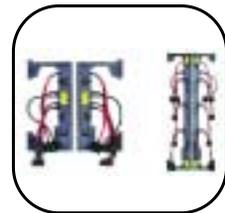
Each HP ProLiant BL p-Class server blade enclosure requires a pair of interconnects. The interconnects collect the NIC signals from the servers to the customer network. The HP ProLiant BL p-Class GbE interconnect switch is designed to reduce the number of network connections from 32 to as few as one per server blade enclosure.



d

choose a power enclosure and supplies

Hot-plug power supplies for the HP ProLiant BL p-Class infrastructure are housed in an HP ProLiant BL power enclosure. Power supplies convert 200 VAC to 240 VAC to -48 VDC to power server blade enclosures. The power supplies are front-accessible, hot-plug, and 1 + 1 redundant.



e

choose power distribution

Redundant -48 VDC power is distributed from the power enclosures to the server blade enclosures through the bus bar system. The bus bars swing open from the center to enable easy rear access to the server blades and network cables.

For information on HP blade servers, see www.hp.com/go/govcatalog or call 888/887-2081.