

# NetworkIP supports expansion with IBM Informix and System x

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## Overview

### Challenge

- Upgrade an aging architecture to improve service levels
- Improve backup, recovery and system redundancy to mitigate risk and the high cost of downtime
- Accommodate business growth

### Solution

- IBM Informix Dynamic Server 10 and 11.5 upgrade and migration to IBM System x hardware

### Benefit

- Provided improved performance, superior disk management and enhanced Internet options with estimated savings of US\$120,000 over three years
  - Automated processes to reduce costly system downtime
  - Reduced database man hours by 75% and outage recovery time by 90%
  - Saved US\$60,000 in facilities costs
  - Increased storage capacity by 50% without additional infrastructure or licensing costs
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NetworkIP remains true to its promise: “Your Connections. Our Commitment.” Managing billions of telecommunications and Application Programming Interface (API) connections, the company provides a leading combination of usage-based pricing, a patented call quality solution (iQT), a Software-as-a-Service (SaaS) platform, innovative technologies, as well as business management and reporting tools. Prepaid long distance, conferencing, Communication Enabled Business Process (CEBP) solutions via its subsidiary Jaduka, and customer call center services help customers create new revenue opportunities, while delivering value to end users.

With no capital or back-office investment, customers can run entire business operations on NetworkIP’s Carrier-Grade SaaS Platform. NetworkIP’s Integrated Connections Solutions (ICS8) application suite integrates with telecommunications hardware and switches, which communicate with the company’s Customer Management Interface and API, allowing customers to manage and configure their products. IBM® Informix® Dynamic Server (IDS) supports ICS8 and all call processing activities, estimated at more than 2 million voice calls per day. In addition to ICS8, NetworkIP’s subsidiary, Jaduka, delivers real-time communication services through the cloud enabling companies to easily blend voice into critical workflow activities—and effectively “speak” with employees, partners and customers.

Over the years, increasing customer demand necessitated some phased database and hardware upgrades to improve service levels, reduce maintenance costs and support disaster recovery initiatives. NetworkIP continues to use IBM solutions to provide the scalability needed to achieve its business goals.



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—Andrew Ford, Senior DBA, NetworkIP  
Integration

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### **IT growing pains initiate upgrade decisions**

NetworkIP realized the need to upgrade its database architecture to improve service levels and process times for generating critical reports. In addition, the backup, recovery and system redundancy of critical database engines required optimization. A proactive approach required implementing a robust disaster recovery plan.

The process began by evaluating business and technical requirements against a vendor review with a focus on controlling costs, while implementing all the technical aspects of the solution. After considering several offerings, including Oracle and MySQL, NetworkIP decided to remain with IBM and upgrade its IBM IDS database environment.

The company turned to IBM Business Partner, One Point Solutions, and together they developed a plan to address immediate needs, reduce the total cost of ownership, improve the return on investment and provide a clear path for future technology and business expansion. The IDS upgrade leveraged NetworkIP’s existing investment and provided a familiar environment with no need to rearchitect software applications.

Because NetworkIP requires continuous 24/7 availability, any changes to hardware or software could not impact service delivery to its customers. IBM IDS replication technology enabled upgrading 18 servers, with seamless integration and without business disruption.

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## Solution Components:

### Hardware

- IBM® System x®
- IBM SAN Storage
- IBM Tape Backup

### Software

- IBM Informix® Dynamic Server 11.5
- IBM Tivoli® Storage Manager

### Business Partner

- One Point Solutions
  - Partner One
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## Seamless IDS database upgrade delivers ROI

Upgrading to IDS 10 in 2007 allowed NetworkIP to take advantage of improved performance, superior disk management features and enhanced Internet options, while saving an estimated US\$120,000 over three years, improving ROI significantly. Implementing the IDS High Availability Data Replication (HDR) solution enabled automating lengthy manual processes and reduced costly system downtime.

In addition, server consolidation eliminated the inefficiencies, resulting in US\$60,000 of savings in facilities costs and reduced total cost of ownership. Automating some daily time-consuming tasks resulted in a 75 percent reduction in database man hours. Recovery from outages has been reduced by more than 90 percent, and critical reports are now generated three times faster. NetworkIP has also more than doubled its storage capacity, allowing the business to continue to grow without any additional infrastructure or licensing costs.

The system now runs IDS HDR across six pairs of servers providing a “hot standby” in the event of a system failure. NetworkIP now has a secure system incorporating full disaster recovery and failover capabilities.

“With IDS’s zero maintenance HDR solution I can rest easy at night knowing that each critical database engine has a hot standby that can be quickly brought into service in the event of a hardware or operating system failure,” says Andrew Ford, Senior DBA, NetworkIP Integration.

The IDS upgrade provided NetworkIP with a robust platform that delivers increased efficiency and productivity, while an improved disaster recovery program including back up, recovery and failover (through HDR) helps NetworkIP ensure security and performance, while delivering greater ROI.

## Moving forward with IBM System x and IDS 11.5

When the timing was right, NetworkIP decided to move forward with improving its critical Carrier Grade SaaS Platform to meet growing business requirements. “It was time to replace our existing hardware and upgrade to accommodate that growth,” says Ford. “We wanted to replace all the database servers and storage associated with the critical database engines that support our daily operations.”

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—Brian Kirk, Vice President, Business Development, NetworkIP

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The entire project took about 18 months which included planning the upgrade, estimating the budget, talking to vendors, deciding on the technology to purchase, and then six months to implement. The NetworkIP team met with many vendors, including HP, 3PAR, Dell, EMC and IBM, to evaluate each solution and several different configurations.

“IBM offered the only solution that would ultimately let us achieve the required performance and redundancy within our hardware budget,” says Ford. “We eventually selected IBM for the server, storage and SAN solutions, and we decided to upgrade to IBM Informix 11.5. We also use IBM Tivoli® Storage Manager.”

Working with IBM and Partner One, an IBM Business Partner for hardware, NetworkIP was able to perform hands-on testing and prototype the proposed System x® environment at an IBM Virtual Innovation Center.

### **Streamlining the migration process proves successful**

The heart of the migration used Informix Enterprise Replication (ER) technology to set up the new hardware, and then progressively upgraded each server over a period of weeks, with no downtime. Using ER for the initial data load, easily pushed data from the old to the new hardware platform and migrated any additional updates. Essentially, NetworkIP had two real-time, in-sync copies of the data on the old and new platforms.

Ford explains, “The migration process was simply a matter of redirecting the applications to the new servers. There was almost zero downtime while migrating to the new IBM System x platform. This was quite incredible, considering that we upgraded everything to support applications that must be available 24/7 and can never go down. We always had total redundancy for each server because we were running the Informix HDR feature. In addition, we reengineered the system architecture to ensure that each server has multiple paths to the data. Everything is fully redundant and ‘hot swappable.’ Since the upgrade, outages are almost a nonevent, and our customers are pleased with the consistent system reliability and availability.”

NetworkIP is also using Informix ER to replicate the call processing data from its main data center in Longview, Texas to a new switch site in Atlanta, Georgia. “Enterprise Replication allows us to localize core call processing data to improve response time,” says Ford. “We can connect our applications directly to the database in the Atlanta data center instead of accessing data over a long-distance network.”

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—Andrew Ford, Senior DBA, NetworkIP  
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## System x and Informix upgrades deliver business value

“As a result of implementing the new System x servers and the upgrade to Informix 11.5, we have noticed many improvements,” says Ford. “For example, our top transactions, billing for telecommunications services and account update transactions, run seven times faster. We can now handle seven times more load with the new servers than we could with the old servers. Processing new accounts runs about five times faster, and our overall reporting runs about six times faster, while batch updates on accounts run about ten times faster.”

He adds, “We have many batch applications that run at night. In particular, billing has to happen as quickly as possible. With the old servers, that process was started at midnight and would still be running at 8 or 9 o’clock in the morning, which would cause problems. We are always open for business, so the faster we can run batch processes the better. IBM System x servers help us achieve our goals.”

“Our business users are also happy with the overall increase in processing speed and system performance,” continues Ford. “What do the users have to say? ‘I just updated 476,000 account retrievals in 12 seconds. I just updated over 360,000 accounts in 60 seconds. The System x servers really fly. I was able to perform a full table scan in 40 seconds, down from 5 minutes to process a day’s worth of data.’”

“As for improvements specific to IDS 11.5, the new nonblocking checkpoints feature has improved processing efficiency,” Ford notes. “Now, even if the check point is 60 seconds, processing continues. We reduced administrative man hours because processing continues, even during long checkpoints. This is a real benefit of IDS 11 that we saw after the migration.”

According to Brian Kirk, Vice President, Business Development, NetworkIP, “Migrating to IBM IDS 11.5 was an easy choice for all of us at NetworkIP. We experienced improved performance and reliability increases across the board; just when you think it can’t get any better IBM proves to us why they lead the industry. Our partnership with IBM over the years has continued to attract new business and puts us further and further ahead of our competition.”

## For more information

Contact your IBM sales representative or IBM Business Partner.

For details on Informix Dynamic Server, visit:

[ibm.com/software/data/informix/ids](http://ibm.com/software/data/informix/ids)

For details on the Informix family of solutions, visit:

[ibm.com/software/data/informix](http://ibm.com/software/data/informix)

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For more information on NetworkIP, visit: [www.networkip.net](http://www.networkip.net)

For more information on Jaduka, visit: [www.jaduka.com](http://www.jaduka.com)

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