Verizon keeps customer service high with a resilient, flexible information infrastructure from IBM.

Overview

- **Challenge**

  Maintain high availability of critical business data to help ensure provisioning and troubleshooting services are delivered to customers without delay

- **Why IBM?**

  IBM provided an exceptionally stable, low maintenance and high-performance online transaction processing data server

- **Solution**

  A flexible, resilient high-performance information infrastructure that effortlessly scales to meet growing business requirements

- **Key Benefits**

  High service availability; fast time to market for new services; able to manage 16 times the number of applications without adding database administrators (DBAs); enables support of one new application per month; helped avoid tenfold increase in number of DBAs

For nearly 15 years, IBM has helped Verizon leverage information on demand for its most essential services.

Success in the telecommunications industry is about flexibility. With intense competition from cable providers and ongoing price wars, telecommunication providers must rapidly adapt to change and deliver services quickly and cost-effectively.

Consider Verizon Communications, a leader in wireline, wireless, broadband communication and FiOS (fiber-optic based) TV services. In delivering business and residential services, the Verizon Telecom group uses sophisticated provisioning and

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– Geoff Poole, Lead Informix Database Administrator, Verizon

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troubleshooting applications that can help promptly identify which services a customer is eligible for, change or update services upon request, and immediately track any service problems.

At the heart of this infrastructure is information. If relevant data isn't available when needed, new services cannot be provisioned and customer service can be affected. Verizon estimates that each minute of downtime costs the company approximately 400,000 USD.

That's why the availability of its online transaction processing database — which houses vital information including customer directories, service availability, billing information and much more — is essential to the company's success. "Reliability is our top priority," explains Geoff Poole, lead Informix database administrator (DBA) for Verizon. "Any outage to our network applications can hinder our ability to provision new services or respond to customer requests."

Additionally, manageability of the environment is critical in keeping the cost of service delivery as low as possible. "We deploy about one new application each month," adds Tommie Stroup, technical manager, Verizon. "As a result, we need a database solution that can virtually manage itself. Otherwise, we would need to hire considerably more DBAs to meet our service level requirements."

A dynamic information infrastructure

For almost 15 years, Verizon has used IBM Informix® Dynamic Server (IDS) technology to support its provisioning, trouble ticket and work administration applications, with each application running on average on one server. Verizon maintains approximately 300 instances of IDS and each instance supports between 100 and 600 gigabytes of data.

IDS provides a flexible, resilient and high-performance platform to support hundreds of thousands of transactions daily. For example, one of the company's larger systems averages 6,000 transactions per minute, with peak loads reaching 10 times this number. Average response time is under one second.

According to Poole, IDS is an ideal choice because of its reliability, stability and ease of manageability. "Having a reliable data server is essential if we're to meet business needs," he says. "IDS is a core solution that helps us maintain high availability of our services. We push it quite a bit because it is a very stable environment and it can handle massive loads very efficiently. Additionally, maintenance requirements are minimal so that we've gone years in some cases without having to take the database down."

As the company has upgraded to new versions of IDS, the process has been seamless, helping staff maintain the high level of service availability. "We've never had any problems upgrading, even with versions that were meant to be fairly major upgrades," adds Poole. "This includes the latest upgrades on some of our applications to IDS 10. It's quite straightforward and we can just slip the new version into acceptance testing without our users ever knowing."

Fast time to market

Additionally, the scalability of IDS has enabled Verizon to support a growing volume of data without having to modify database parameters. "We have no limits to our scalability," says Poole. "Some of our systems have grown tenfold and it hasn't been an issue because of how Informix is designed."

This scalability and ease of use has also been essential in helping the organization rapidly deploy new capabilities in response to market requirements. "IDS is integral to supporting the rapid deployment of new applications," adds Stroup. "It is so easy to administer that we can respond very quickly to development requirements. If a team needs a new application launched by next week, we're able to supply the database. We've had some major success stories as a result."

A cost-effective platform

The efficiencies delivered by IDS have been essential in helping Verizon rapidly provision new services while keeping operational costs low. Currently, only seven DBAs are needed to support the nearly 300 instances of IDS across 200 servers. Without IDS, Poole estimates that he would need ten times this number. What's more, the organization has been able to support an increasing number of applications — from 2 to 32 — without increasing the number of DBAs.

"Using IDS, DBA productivity is high," says Poole. "Our DBAs can handle all production requirements and still provide valuable guidance to our development teams to help them optimize database performance."

Savings have also been realized through the migration of other database platforms to IDS. For example, when the company upgraded its national telephone and address system, it replaced its Sybase database with IDS to reduce costs. "By moving from Sybase to IDS, we dramatically reduced DBA support costs and realized an equally dramatic increase in reliability of one of our major systems supporting our national address and phone number directory," recalls Poole.

Key Components
Software
• IBM Informix® Dynamic Server

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Total cost of ownership continues to fall

Verizon is currently upgrading its IDS implementations to IDS 10 to take advantage of the external archive features, which will help its DBAs dramatically reduce backup and recovery times. Poole anticipates that processes that once took up to 8 hours to complete will soon be finished in just 10 minutes.

Additionally, the company expects that the advanced encryption features of IDS 10 will help developers more quickly encrypt confidential information so they can speed time to market of new applications. "Some of our customer service staff is offshore and we have to be careful about what information is accessible outside of the United States," explains Poole. "The security features within IDS 10 will make it easier to restrict access to sensitive information, such as social security numbers."

Verizon plans ultimately to upgrade to IDS 11 to improve staff productivity further. Specifically, new automated reporting capabilities will help the company's DBAs to identify problems before applications go into production. "With each new version, IDS offers features that help us reduce total cost of ownership and optimize efficiency even further," concludes Poole.

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