

hp customer success

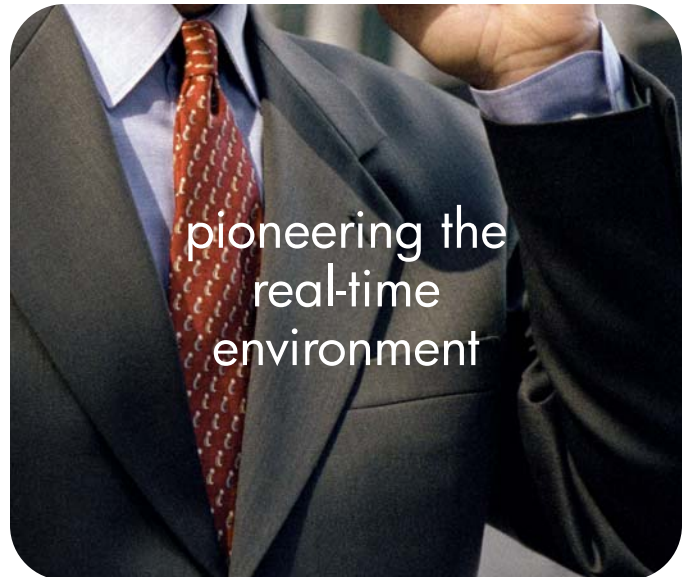


Sprint



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pioneering the
real-time
environment





Sprint leverages hp ZLE technology for an adaptive enterprise



The same challenge was presented to other computing vendors, but only HP responded with a solution that met all of Sprint's stringent requirements: the ZLE architecture, a real-time framework for consolidating and integrating information throughout the environment.

enabling an adaptive enterprise

The HP ZLE solution helps enable a flexible and adaptive environment by enhancing the end-user experience, proactively detecting and correcting problems, and eliminating information latency. This unique solution combines sophisticated enterprise application integration (EAI) and operational data store (ODS) technologies to remove the latency from information flow across the enterprise, in industries ranging from telecommunications and financial services to travel, manufacturing, and retail. By consolidating data from various data stores and optimizing the use of existing systems, the ZLE solution is readily incorporated into existing IT infrastructures, knocking down departmental and divisional "silos" and putting critical data at the fingertips of decision makers in real time. That was just what Sprint needed.

The initial ZLE deployment focused on collecting and using call detail records (CDRs) that came from Sprint's long-distance switches. Since then, Sprint has expanded the system to adapt to changing business requirements. The company continues to expand the environment, enabling it for real time with more customers and, most recently, adding international switches for data regarding flow of calls into foreign networks.

Operational measurements are also being added. These performance statistics are important for optimizing the network to support an adaptive infrastructure. To avoid the cost of deploying excess equipment, the company tends to run the network at near-maximum capacity. As calling patterns shift, and as areas grow and change, dynamic adjustments enable the network to adapt. The operational measurements and CDRs (the end result of a telephone call) kept in the ZLE system are used to map these critical network adjustments in real time.

for Sprint, the ZLE architecture:

- Captures, analyzes, and responds to real-time information for better customer service and fraud detection
- Provides the flexibility and scalability to keep up with growing and changing business requirements
- Ensures continuous operations and the highest level of data integrity
- Handles operational measurements, international gateways, and network alarms
- Provides superior mixed workload capabilities for a demanding environment

Today, companies across the industry spectrum are recognizing the enormous competitive advantage that real-time information about critical customers and business operations can deliver. Taking the "lag" out of information flow across the enterprise leads to better decision making, lower costs, and reduced risk. With its revolutionary Zero Latency Enterprise (ZLE) architecture, HP has led the way in making the real-time enterprise a reality. Sprint, a global communications company serving 26 million business and residential customers in more than 70 countries, was one of the first forward-looking enterprises to successfully implement the ZLE architecture.

Sprint is an industry leader in adapting to the changing needs of its customers. So in 1999, when the company wanted to transform its information technology (IT) into a service and outperform competitors by staying in front of customer requirements, Sprint came to HP (then Compaq) with a challenge. Sprint needed a real-time, intelligent view of its customers, an enterprise view of activities, and the ability to act on this information.

hp products and services at Sprint

Sprint takes full advantage of other HP technology besides the NonStop platform. Here are some examples:

- For Sprint's third-generation (3G) 1X wireless network at the Sprint PCS group, HP provides the next-generation data gateway, a core element that links Internet-based data and voice. HP also provides its OpenView service management solution and its storage technology, as well as HP-UX and Linux operating system-based servers.
- ProLiant servers support the Citrix call center application at Sprint PCS as well as the Sprint Local Telecom Division. They also support the Viacore application for integrated voice response, as well as Linux system content caching for the Sprint Vision 3G wireless data network for Sprint PCS.
- Sprint Global Markets Group (GMG) uses ProLiant servers to host managed services for enterprise customers.
- Sprint PCS and Sprint GMG use HP 9000 servers running the HP-UX operating system for major mission-critical operation support and business support systems.
- HP 9000 servers provide field crew workload management for the Sprint Local Telecom Division.

In addition, Sprint is also a major consulting and integration customer for HP Services. In a multiyear contract signed in 2002, HP Services was named the integration partner for the PCS Vision service infrastructure. Under the terms of this strategic alliance agreement, Sprint will continue to use HP Services, ZLE technology, and other HP and partner technologies to integrate its environment.

"The ZLE architecture is very expandable and flexible, and we are clearly utilizing this platform for a growing number of applications."

Kathy Walker, senior vice president of network services, Sprint

Another key benefit of the ZLE architecture is in the area of alarms. When an event occurs in the Sprint network, such as a cut fiber or the failure of a piece of equipment, a series of alarms is generated. The ZLE system makes it possible to quickly identify failure patterns so they can be fixed and network performance can be optimized.

consolidating and integrating

Sprint wanted to be able to consolidate and integrate data from the CDRs that were coming out of the network at a rate of thousands per second, to insert those records into a database, to glean information from them immediately, and to follow up with an appropriate response. At the same time, the company needed to mine the data in real time for patterns that indicate fraud or other criminal activity. And it needed those capabilities right away. ZLE technology satisfied these needs.

In addition, this technology will likely play a major role as Sprint moves to consolidate its three separate divisions (PCS, Long Distance, and Local) into "One Sprint" to create a seamless customer service environment that blends information about shared customers into a single view. "The ZLE data store is the only one within Sprint that can handle the information from all of these network elements," noted Kathy Walker, senior vice president of network services. "ZLE will make it possible to view the consolidated network infrastructure in real time, which will help ensure optimal business operations and unrivaled customer service."

Keep in mind that ZLE is an architecture, not an immutable solution. At its core is the ZLE data store, based on HP NonStop servers and the NonStop SQL database, capable of storing large amounts of data and supporting a mixed workload.

In the architecture, HP 9000 and HP AlphaServer systems are used to run key applications and data analytic functions, and HP ProLiant servers are used to host the client software applications; the underpinning technologies are best suited for the tasks at which they excel. All of the systems work together smoothly to get the job done.

a flexible and adaptable architecture

Sprint has found the ZLE architecture to be both flexible and adaptable. "The initial ZLE system met all of our needs around CDRs," said Walker. "Of the trillions of records that the system handles, we've never lost one yet. Removing the latency from this process has been invaluable in resolving customer disputes and providing enhanced customer service. In addition, the ZLE system has opened up many different ways I can manage based on real-time information. I can look into the front end of that 'funnel' at what's being collected; I can also mine, compare, and trend data that has been collected over a period of time."

Sprint was also pleased with being able to incorporate off-the-shelf software for reporting in its initial implementation. "The development group did not want to start writing separate reports for everybody who needed them," noted Walker. "So we purchased some commercially available software from MicroStrategy to make the process easier. In addition, we based the Web development front end on a product called ColdFusion." Sprint also uses the industry-standard Common Object Request Broker Architecture (CORBA) object technology to exchange information with other systems.

a partnership to be proud of

For Kathy Walker, senior vice president of network services at Sprint, the strong partnership between her company and HP is a source of great satisfaction. "The HP team members have a 'never lose' kind of mentality," she stated. "They don't take the relationship for granted; on the contrary, they give us a continued sense of loyalty and support. They listen carefully and well, and they make the strongest experts in their organization accessible to us.

"Today, when we're trying to place a new service or to design a new application for the NonStop platform, we still have access to these experts to brainstorm the right approach," Walker continued. "That's pretty compelling to us. The HP technologies are impressive—but equally impressive is the fact that HP works closely with us, using these flexible and adaptable technologies to help integrate our environment, support our business objectives, and solve our business problems more efficiently and effectively. This is why we view HP as a strategic business partner, rather than simply as a vendor."

"By harnessing technology and fostering innovation, Sprint can be much more sensitive to market and customer environments, and we can also be much more nimble in responding to these changes," Walker continued. "We bought the HP ZLE architecture for one purpose: CDRs. But as my technologists, users, and designers have become familiar with the capabilities of the system, they have started using it to support other critical projects and programs. The ZLE architecture is very expandable and flexible, and we are clearly utilizing it for a growing number of applications."

a customer focus

The business challenges that prompted Sprint to implement the ZLE architecture have not changed; if anything, they have grown. In addition to maintaining and enhancing its premier network, the company's business model is becoming more and more customer-centric. It has always been Sprint's pride to have the best network in the country: fully optical, fully digital, self-healing, with no downtime and with the fewest FCC-reportable outages. But this is no longer enough; the company must provide the best customer service in addition to a network that never goes down. The ZLE architecture is an essential tool for Sprint, today and in the future, both in optimizing its network and in delivering outstanding customer service.

For Senior Vice President Walker, a major challenge—and one that Sprint is stepping up to, with the help of the ZLE architecture—is to provide seamless service to customers across wireless and wireline domains. "In the past, people felt they had a smaller subset of capabilities in the wireless mobile environment than in the wireline office environment," she explained. "It used to be OK to say 'I'll take care of that when I get back to the office.' This is no longer an acceptable answer. Sprint needs to serve this new customer environment by making the same capabilities available across all domains."

combating terrorism and fraud

A critical need was being able to comply with the Common Law Enforcement Act (CLEA), which allows the federal government to examine CDRs regarding terrorist and criminal activity. In addition, Sprint wanted to attack fraud in its long-distance network. If a calling number is stolen, the Internet is a prime place for the information to spread. Within minutes, hundreds of individuals could be using that fraudulent number—and the result could be US\$1 million or more in lost revenue within an hour. The ZLE system allows Sprint to identify numbers at risk and act quickly to limit the potential for fraud.

continuing to expand

Looking forward, the goal is to continue to consolidate and integrate data resulting in an across-the-board collection of information. With one view, a customer can enter through the local network, hit the long-distance network, and then terminate on a wireless call to someone else; in this way, the customer is going across all three domains. The goal is to capture all of the information from those domains so that Sprint can present one bill, one solution, one error report, and one place to go if the customer has a problem. The HP ZLE architecture can make this possible.

ZLE will continue to be a key part of Sprint's computing infrastructure. The ZLE architecture is readily expandable, and this flexibility will help Sprint adapt to today's needs. "Our ability to mine data and understand the state of our services is a key competitive requirement," concluded Walker. "We are all competing for that customer loyalty and that next bit of business from a customer. For the future, and in close partnership with HP, there is no limit to what Sprint can put on the ZLE architecture to help expand our business and better serve our customers."



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