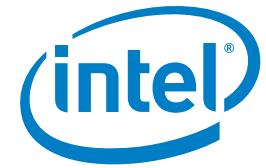


CASE STUDY

Intel® Xeon® processor 5400 series
Intel Xeon processor 5500 series

Energy
Enterprise Server
Technology



Optimizing Energy Efficiency for Managed IT

Low-voltage Intel® Xeon® processors help DataPipe* create a dense, energy-efficient infrastructure for managed IT services

To succeed in the competitive marketplace for managed IT services, DataPipe must deliver outstanding processing performance for its clients while controlling the costs of running its data centers. When the company's IT group designed a new data center, it standardized on the low-voltage Intel® Xeon® processor 5400 series to deliver the processing power that clients demand while supporting the density, scalability, and energy efficiency needed to contain costs and support continued customer growth. DataPipe will now implement servers with the Intel Xeon processor 5500 series to provide a robust foundation for a new cloud computing offering.



CHALLENGES

- **Improve performance.** Retain a competitive edge by designing a new facility and refreshing existing data centers with cutting-edge technology that can deliver outstanding processing performance for a broad range of customer applications.
- **Control power, cooling, and real estate costs.** Maintain profitability in challenging economic times by creating a dense, energy-efficient infrastructure that maximizes the number of services DataPipe can support in each data center.
- **Ensure flexibility and scalability.** Build a flexible, scalable infrastructure that can quickly and cost-effectively accommodate increased demand and changing customer needs.

SOLUTION

- **HP servers with low-voltage Intel® Xeon® processors.** DataPipe deployed HP ProLiant* servers equipped with low-voltage processors from the Intel® Xeon® processor 5400 series. The company will soon implement new HP servers with the Intel Xeon processor 5500 series for a new cloud computing offering.

IMPACT

- **Outstanding performance.** Intel Xeon processors help DataPipe clients accelerate applications and workflow in financial services, healthcare, manufacturing, media, software development, and other fields, allowing DataPipe to stay competitive in a tight marketplace.
- **Energy efficiency.** Low-voltage multi-core Intel Xeon processors help DataPipe support more clients and services in each data center.
- **Scalability.** By creating a virtualized environment based on Intel Xeon processors, DataPipe is more responsive to customer growth and changing customer needs.

From financial services and manufacturing to pharmaceuticals and software development, companies in a broad range of fields are turning to managed IT services to tap into the latest technologies without the expense of having to buy, manage, and maintain their own in-house infrastructures. DataPipe has clearly benefited from the trend. Founded in 1998, this managed IT services company now has more than 1,200 clients worldwide, which it supports from six data centers and eight business locations in the United States, the United Kingdom, and China. The current economic climate is helping to foster continued growth as companies outsource IT to cut costs.

In designing a new data center to accommodate customer growth, the DataPipe IT group needed a processing architecture that could deliver, first and foremost, exceptional performance for customer applications. "Whether our clients are running financial algorithms

DataPipe®

"Intel® Xeon® processors are the common denominators in our HP servers. They provide the outstanding multi-core processing performance our clients demand while helping us conserve data center space."

– Mark Cravotta,
Vice President, Worldwide Sales
DataPipe



Intel® Xeon® Processors Create an Energy-Efficient Data Center

or developing new software, they depend on us to provide outstanding multi-core processing power for their solution," says Mark Cravotta, vice president of worldwide sales at DataPipe. "Even in tough economic times, investing in technology that delivers performance is essential for us in attracting and retaining business."

To maximize the number of clients in the new data center, DataPipe needed an architecture that could help contain power consumption, heat emissions, and data center space. "In each data center, our limiting factors are power, cooling, and real estate," says Cravotta. "Once we reach a data center's capacity, we can no longer sell any additional services. Our goal was to adopt a processing architecture that would consume less power, generate less heat, and deliver the greatest possible performance per server so we could deploy more servers and accommodate more services in the facility."

Low-Voltage Intel® Xeon® Processors Help Maximize Data Center Density

After evaluating hardware from leading vendors, the DataPipe IT group decided to deploy HP ProLiant® servers in the new data center. The company had already been using HP servers as the standard for Microsoft Windows®-based services hosted in its other facilities. "The HP ProLiant server product line has the breadth we need to accommodate a variety of customer needs," says Cravotta. "If a customer requests a particular number of hard drives or amount of RAM, we can easily find an HP server model that will fit."

To deliver strong processing performance and facilitate the design of a densely packed

data center, the DataPipe team standardized on the Intel® Xeon® processor 5400 series. In the existing data centers, new servers with these processors were integrated among HP servers that used a mix of Intel processing architectures. "Intel Xeon processors are the common denominators in our HP servers," says Cravotta. "They provide the outstanding multi-core processing performance our clients demand while helping us conserve data center space."

The DataPipe team selected the low-voltage processors from the Intel Xeon processor 5400 series to maximize the performance-per-watt ratio for servers. These energy-efficient processors run at just 50 W (or 12.5 W per core) compared with the 80 W and 120 W used by other processors in the series. "Using low-voltage Intel Xeon processors helps us significantly reduce the power consumption and heat emissions from each server," says Cravotta. "As a result, we can use more servers in the data center, and accommodate more clients, without having to spend more for power, cooling, or real estate."

New Intel Xeon Processors Provide a Foundation for Cloud Computing

DataPipe constantly integrates cutting-edge technologies into its offerings to attract new clients and improve the efficiency of the company's services. The DataPipe IT group is currently planning to integrate the latest-generation HP ProLiant G6 servers with the Intel Xeon processor 5500 series to help further increase processing performance while reducing power and cooling costs.

"The new energy-efficiency features of the Intel Xeon processor 5500 series will help

SPOTLIGHT ON DATAPIPE

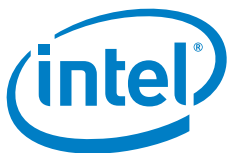
DataPipe provides custom solutions for businesses with complex Internet-facing infrastructures. The company proactively manages security, monitoring, storage, data center operations, servers, and applications, including database administration and the full software stack. To support the company's 1,200 clients around the world, DataPipe runs six data centers and eight business offices in the United States, the United Kingdom, and China. For more information, visit www.DataPipe.com.

us pack even more processing performance into our data centers without having to add power or cooling," says Cravotta. "At the same time, the improved performance and increased memory bandwidth of the Intel Xeon processor 5500 series will appeal to many existing and prospective clients who are looking to tap into more computing power or reduce transaction latency."

With the Intel Xeon processor 5500 series, DataPipe is creating a robust virtualized server environment, Stratosphere™, for hosting customer applications. "Virtualization allows us to increase the flexibility and scalability of our infrastructure to meet changing customer needs. We can deploy new virtual machines quickly and cost-effectively when our clients want to add a new test server or ramp up processing power for seasonal e-commerce traffic," says Cravotta. "The Intel Xeon 5500 processors provide the performance, memory bandwidth, and reliability we need to host numerous virtual machines on each physical server."

Virtualizing servers with the Intel Xeon processor 5500 series provides a strong foundation for DataPipe's new cloud offering, Stratosphere. "Our clients want the benefits of cloud computing without the risks associated with unproven technologies," says Cravotta. "The Intel Xeon processor 5500 series provides a reliable and powerful platform that will enable us to launch our new offering. With the Intel Xeon processor 5500 series, we can retain our competitive edge."

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