

Gracenote

Sun x64 AMD Opteron Processor-based Platform and Solaris 10 OS
Play Music to the Ear, Handling 2 Billion Queries per Month

Customer Success Story

Industry

- Media and Entertainment

Business Issues

- Implement reliable server technology for 24x7 service
- Scale to handle 2 billion transactions per month
- Engage more prompt and reliable support service

Solution

Sun™ x64 technology with AMD Opteron processors provides the highest CPU-to-memory rate, and delivers reliable, scalable performance at high transaction speeds, even for heavily multi-threaded applications. Sun support keeps servers running at top performance in widely dispersed co-location facilities.

Business Results

- Scalability, reliability and availability to support 2 billion queries per month, 24x7
- 25% lower operating expenses for power and cooling
- 25% reduction in space requirement

Products/Services/Solutions

- Sun Fire V40z Server
- Sun Fire X4100 Server
- Sun Fire X4500 Server
- Sun Blade 8000 P Modular System
- Sun Blade X8440/X8420 Server Modules
- Solaris 10 Operating System
- SunSpectrum Support

URL Reference

sun.com/customers

Gracenote is an established mobile technology leader powering mobile music services from the world's leading handset manufacturers, including Nokia, Samsung and Sony Ericsson. Headquartered in Emeryville, California, Gracenote has offices in New York, New York; Tokyo, Japan; Berlin, Germany; and Seoul, Korea.

Success at a glance

Popular digital devices enable consumers to hold vast collections of recordings in the palm of their hands. But these devices would be of little use without the ability to search and instantly find the recordings listeners want to hear and display titles, composers, performers and other relevant information. The basic technology that makes digital music searchable—and provides value-added services such as playlists of other songs the listener may like—is the stock-in-trade of Emeryville, California-based Gracenote.

In selecting the hardware to run its online service, Gracenote considers products that meet its stringent criteria. "We need fast performance, and when you have hardware in multiple co-location facilities, some of which are remote from your offices, you need to put in equipment that is highly reliable," says Matthew Leeds, Vice President of Operations for Gracenote.

To get the performance and reliability it needs, Gracenote has chosen Sun x64 AMD Opteron processor-based servers. It currently uses Sun Fire™ V40z and Sun Fire X4100 servers, and a Sun Blade™ 8000 P Modular System with a Sun Blade X8420 Server Module. "Our Sun x64 systems with AMD Opteron processors are extremely reliable, with the highest price/performance

characteristics we could find in x64 servers," says Leeds.

Should there be a problem with a server, Gracenote knows that as specified by its SunSpectrum Gold™ contract, a technician will be on site within four hours and will have the necessary parts. "It gives us comfort to know we will be well cared for since we have co-location facilities that are more than a truck roll away from us," says Leeds.

The third part of Gracenote's Sun solution is the Solaris™ 10 Operating System. Gracenote handles 2 billion queries per month. All of its applications are heavily multi-threaded, which the highly efficient threading model in Solaris OS handles with ease. The company's Sun servers have always run Solaris, and to take advantage of this powerful threading capability, Gracenote migrated its non-Sun servers to Solaris as well. "With Linux, if you have too many concurrent threads it eventually just starts to slow down—there's a knee in the curve like a hockey stick," says Leeds. "With Solaris, there's no knee in the curve."

To replace several of its existing rack-mounted servers and avoid purchasing external storage, Gracenote has deployed a Sun Fire X4500 data server, which combines server functionality plus ultra-dense storage.

It saves space as well as capital costs. And with the Zettabyte File System (ZFS) of Solaris 10 OS, it's quick and easy to lay out the array groups for storage.

Gracenote consolidated the workloads of 33 Dell servers onto a pair of Sun 8000 P Modular Systems with Sun Blade X8420 Server Modules and has subsequently scaled further by adding more Sun 8000 P Modular Systems. "Not only does the Sun Blade 8000 P save money in terms of purchasing power, it also saves 25 percent of the space that rack-mount servers use and 25 percent of operating costs in terms of power and cooling," says Leeds.

Gracenote scales its infrastructure to handle peak, rather than average traffic. Its two biggest days are "Christmas and New Years Day when people lookup a lot of music with their new MP3 players and CDs," says Leeds. "We maintain three collocation facilities and can sustain the loss of one and still serve our customers. This means we have at least 150 percent of predicted peak capacity online at all times. Thanks to Sun's scalable, reliable servers, we can keep that capacity going all the time."

"Sun helps us deliver a scalable, reliable service that lets us sleep at night because we know that we can rely on the stability and performance of our Sun products."

Matthew Leeds

Vice President of Operations, Gracenote