

weather.com forecasts e-business success with Linux-on-IBM @server infrastructure.

Overview

■ **Application**

weather.com Web site, with customized weather reports and full-page Web advertising

■ **Business Benefits**

50% improvement in content-serving performance; dramatic increase in traffic and in advertising revenues; increased user satisfaction

■ **Software**

Linux®

■ **Servers**

IBM @server xSeries™

■ **Services**

IBM Global Services



On weather.com, you can find out if the sun will shine on your outdoor activities—and what you need to do to protect your specific skin type against the sun's harmful UV rays.

The outlook is sunnier than ever at weather.com, the world's leading source of weather on the Web, and the Web site of The Weather Channel. This popular site—consistently rated by Nielsen/Net Ratings among the top 20 Web sites—introduced a brand new approach to weather on the Web, backed by IBM @server hardware running Linux.

“Other Web sites are seeing revenues drop by an average of 20 percent,” says weather.com Chief Revenue Officer Paul Iaffaldano. “With the higher performance afforded by IBM @server xSeries servers running

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—Dan Agronow, Vice President, Technology, weather.com

Linux—freedom to innovate

Linux, we've been able to embark on a completely different business strategy, which is based on delivering contextual weather information. As a result, we've seen a dramatic increase in traffic and in our advertising revenues."



weather.com delivers forecasts for more than 77,000 cities, with current weather conditions gathered from satellite feeds.

Lifestyle-oriented weather reports demand robust infrastructure

Launched in the U.S. in 1995, weather.com recently expanded internationally, targeting the United Kingdom, Latin America and Europe. From their inception, all of the weather.com sites shared a common objective: the delivery of accurate, comprehensive weather reports. Users could pull up information on virtually any area of the world. They could also click on any ads that caught their eyes as they browsed the site. The sale of this valuable advertising space was weather.com's primary source of revenue.

In the late 1990s, the company saw an opportunity to turn up the heat at weather.com by presenting weather in a new way on the Web. The idea was to take a lifestyle-oriented approach, delivering information based on individual interests so it would be more meaningful to users. For example, golfers or skiers could pull up the top 50 courses or slopes in their vicinity and compare conditions at each location. Or allergy sufferers could assess their individual exposure risks based on their sensitivities and their specific locations.

weather.com envisioned that such a contextual approach would not only draw increased traffic—and thus increased ad revenues—but would also enable the company to charge premium rates for highly targeted advertising campaigns aimed at segmented audiences.

The only glitch in this plan was that weather.com's existing IT environment—which was fine for serving up flat files—could never withstand the high level of interactivity that the contextual weather reports would entail. Nor could it support the complexity involved in pulling together content from diverse sources to address specific user interests.

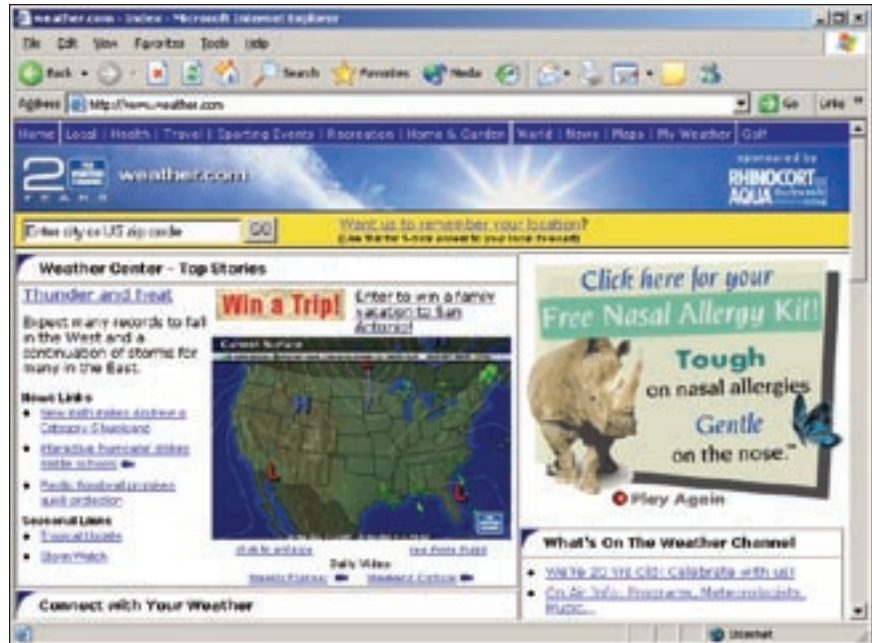
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More servers equal lower cost, higher performance

Seeking to migrate its IT environment to a more robust, high-performance platform, weather.com asked IBM Global Services to help develop the overall architecture and concepts for a new site design. This short consulting engagement gave the company a clear roadmap and a framework for moving forward.

That roadmap included migrating weather.com's hardware from Solaris-based Sun servers to IBM @server xSeries systems. In this capacity-enhancing move, weather.com replaced 36 Sun Enterprise 420R mid-tier servers with 65 xSeries 330 machines running Linux. It also swapped four Sun Enterprise 4500 with five xSeries 350 machines running Linux.



Traffic has increased fivefold on weather.com since it implemented the IBM and Linux solution.

The primary reason for the switch was cost/performance. With the 1.2 GHz xSeries servers, weather.com would get significantly more processing power than with the 440 MHz Sun servers—and at a much lower price. “When we saw the superior performance of the xSeries servers running Linux—and how favorably the cost compared with the Sun equipment—that really got our attention,” says Dan Agronow, weather.com’s vice president of technology. “Plus, Linux allowed us to exploit the IBM hardware without purchasing the [Microsoft®] Windows® operating system. Without the burden of Windows licensing, we achieved an even lower cost per server, on top of the savings of the hardware itself.”

Customer satisfaction is up since weather.com deployed the IBM infrastructure. “We now have fewer users complaining about slow page loads,” Agronow says. Iaffaldano adds, “Now we have the opportunity to run some unique and lucrative ad formats—such as full page ads—that other Web sites probably can’t handle. We’re generating more revenue with that capability.”

WebSphere software helps put content into context

Developed in 9 months, the new weather.com sites run on 65 xSeries servers. According to Agronow, the large pools of xSeries servers running Linux afford an extra measure of reliability to the weather.com sites. This is because an outage on one small server has a much lesser impact on overall performance than a failure in a pool of a few large servers.

Much rests on the reliability and performance of the IBM infrastructure. But happily, Agronow claims, "With the IBM platform we can generate dynamic Web content in less than half the time it previously took us to deliver flat files. That translates into a performance improvement of more than 50 percent, in a far more demanding environment." With nearly 2 million visitors per day—and more than 30 million page views per day during peak demand times—50 percent faster throughput translates into a lot of time saved for weather.com users.

Driving to the cutting edge with blade servers

While weather.com has achieved great success with its small 1U-high xSeries servers, Agronow is considering blade servers as another option. "With blade technology, we could reduce our server footprint and power requirements," he says. "We would probably also reduce our costs." But that's a move Agronow says he wouldn't consider without a strong technology ally like IBM. "The relationship we have with IBM is very important," he notes. "The IBM team has been very quick to respond when we've needed assistance—I've had nothing but positive experiences over the past three years. So now, when my counterparts in other companies ask about the latest e-business technology, I recommend IBM."

For more information

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Somers, NY 10589
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