Ready-to-Run Software, Inc.
The Industry Leader in Cross-Platform Software Services

Cross-Platform Software News

Volume 1, Issue 1 October 2002

Welcome To Cross-Platform Software News!

I would like to take this opportunity to welcome you to the inaugural edition of **Cross-Platform Software News** from Ready-to-Run Software. In this age of information portals and content-directed e-mail, Cross-Platform Software News is our attempt to help you deal with constant change by providing you with a synopsis of the current issues and information pertinent to shifting technology in diverse, cross-platform environments – from wireless to web-based platforms, from Linux to Windows 2000, etc.

This publication is targeted at technical and operational management responsible for software engineering, deployment, maintenance and support within a cross-platform environment. Specifically, ***if your organization must face the issue of building and/or deploying software applications within heterogeneous environments — including across the web — then this publication is intended for you***.

We would like to hear from you. Please feel free to send us your comments and questions as well as your ideas and suggestions for future topics. It is my hope that you will join us with each edition in order to gain valuable information, share experiences and try to keep up with the world of change as it relates specifically to platform dependent issues. Thank you!

Jeff Moskow
President & CEO, Ready-to-Run Software, Inc.

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Computing Platform Market: Where Are We Headed?

This is the first of a quarterly series examining the marketplace from a computing platform perspective. To make this analysis more useful, we have divided the marketplace into four segments: servers, desktop computers, handheld devices and embedded devices.

While there are clearly operating systems that exist in multiple market segments (e.g. Linux is currently a player in all four), an analysis by segment should be most useful for companies that are looking to make tactical and strategic platform decisions *that are usually focused on a single market segment.* In this initial review, we will begin with an analysis of the server market.

Driving Force in Server Market

As a result of the now completed Hewlett-Packard and Compaq merger, one of the more significant changes that must and will occur in the market is the inevitable platform shift. Over the next *ten* years, Hewlett-Packard has announced that it will eliminate the Alpha and PA-RISC processors and begin a migration of these users to IA-64 (and presumably other Intel) hardware platforms; and while both Tru64 and OpenVMS will be supported for some time to come, ultimately HP-UX will be the preferred server platform from Hewlett-Packard. While H-P has developed a migration plan within this ten-year horizon, it is safe to assume that most end-users and software publishers will look to make platform changes over the next 2-4 years. The reasons for this earlier migration will vary from risk management to market perception but, since the end point of the journey is pre-destined, many will begin the trip sooner rather than later. However, just like Y2K, there will also be the frantic push at the finish for those who procrastinate. Overall, there is no question that this market dynamic as well as the continuing need for increased performance and capability will foster the general progression to 64-bit server computing – led of course by the shift to IA-64.

Platform Vendor Trends & Statistics

Based on figures from Gartner Dataquest (Jan 2002), worldwide server shipments (units) showed the following trends ending 2001:

1) Compaq still in first place with 23.3% market share (down 1.4%)
2) Dell now in second place with 16.1% market share (up 3%)
3) IBM in third place with 15.0% market share (down 0.2%)
4) HP in fourth place with 9.7% market share (down 0.5%)
5) Sun now in fifth place with 5.8% market share (down

0.9%)
6) All others 30.1% (same as 2000)

Contributing to the mix, there are the other players in the server platform market that can sometimes muddy the water. For example, the acquisition of SCO by Caldera in late 2000 continues to cause confusion as Caldera's multitude of offerings, including SCO Openserver, Open UNIX, UnixWare and OpenLinux, makes for a wide variety of choices without any clear market winner. One would rather have the vendor advise which of their systems to invest in rather than being told to build, test, debug and support *five* different platforms. Although it should be acknowledged that Caldera (and also IBM for that matter) provide "binary compatibility" with Linux to help reduce this problem, making the situation much more manageable. Finally, those developing on Sparc Solaris and deploying on both Sparc and Intel Solaris machines are well aware of Sun's announcement that Solaris 9 will only be available on Sparc and that the Intel Solaris product will "remain available and supported under normal terms until mid CY2004…".

Operating System Leaders

The clear O/S leaders remain Windows and Unix. Only Windows and Linux are gaining market share, however, so it will be interesting to watch how quickly and steadily applications continue to be built for, and ported to, Linux.

Most industry analysts agree that the bulk of the migration to Linux-based servers is a result of migration from Unix systems and that while Linux market share continues to grow, it is generally not at the expense of Windows servers.

According to Intel, 84% of all servers shipped in 2001 had Intel processors. It is harder to find data about the split between Windows, Linux, Unix, BSDi, FreeBSD, Netware and others -- and that doesn't even address the variety of Linux platforms currently available. And while most would agree that RedHat, SuSE and Mandrake hold the top three slots, there would probably be some debate about who came in 1st, 2nd and 3rd.

Lastly, while most of us think of Netware as ancient history, it was only during 2001 that Linux took the number two slot from Netware to become the second largest operating system used for new Intel-based server deployments.

Web Server Software

In the world of web servers, the latest Netcraft surveys document Web Server software usage on Internet connected servers. For more info, see (http://www.netcraft.com/survey/). This survey shows that Microsoft Servers continue to gain market share as IIS (and Microsoft's Personal Web Server - PWS) increased to 27.15% in April 2002 from 26.81% the month before. The runaway leader still remains Apache at 64.38% and while we don't have the breakdown between Unix/Linux Apache servers and Windows Apache servers, it's probably safe to assume the Internet is still predominantly serviced by Unix/Linux based server platforms. For the foreseeable future, we do not see a significant decrease in demand for Apache web server software.

The Future of Server Platform Market So what's ahead?

A significant battle between Microsoft Windows, Linux and Unix is shaping up (Microsoft takes the Linux "threat" very seriously). In the Linux world, expect to see further consolidation among the top three distributors. We expect to see Mandrake market share decline. In the Unix arena, expect a long-term migration away from Compaq's Tru64 and SGI's IRIX. It's still a little too soon to tell how AIX, HP-UX and Solaris will divide up the remaining Unix market (and how much will end up moving to Linux).

The bottom line is that there will continue to be consolidation within the marketplace. As with every technology sector, the server platform market is slowly consolidating to a few leading companies. As the fog is beginning to lift, we see more cross-platform migration and integration to and amongst the leading hardware manufacturers and operating systems. It will be a safe choice to adjust your strategic planning to reflect this reality.

Comments? Please let us know what you think and what you're seeing in your vertical markets.

SpeechWorks International: Speaking of Cross-Platform

SpeechWorks International, Inc. (NASDAQ: SPWX), a global leader in speech recognition and text-to-speech (TTS) technologies and services, had a decision to make.

The Overall Goal of the Project

SpeechWorks needed working versions of their Speechify™ text-to-speech engine to run on Microsoft® Windows NT/2000 and Sun® Solaris®. The original version was already up and running on Linux. The project was more complex than a simple port of code, however. Since the product is a TTS engine that can typically be deployed in such applications as a customer service center or call center, performance and scalability are critical. There were very specific performance metrics that had to be met. And, of course, they had to be met under an extremely aggressive time schedule. At the same time, SpeechWorks also had a number of other advanced projects that they were working on diligently in order to continue the development of their market position.

As many leading companies will do with their research and development efforts, SpeechWorks often will explore various approaches to getting the job done. SpeechWorks opted to find expertise that could supplement their resources in making the migration to new platforms. This approach would allow SpeechWorks to keep critical internal resources focused on groundbreaking R&D while still meeting product objectives. It was under these conditions that SpeechWorks made the decision to employ the services and the expertise of Ready-to-Run Software (RTR).

Nature of the Platform Problem

The Speechify product was designed to offer superior performance and audio characteristics. The initial Linux version of the product met these criteria. The SpeechWorks set the same standards as for Ready-to-Run as the measurement bar for the cross-platform migration to Windows and Solaris.

Sure, getting the TTS engine to respond on the new target platforms with a simple 'Hello World' statement was

relatively straightforward. The real problem was that the Speechify product had to be deployed as a true scalable application. For example, latency and quality voice output could not degrade as the number of concurrent connections accelerated or as bursts of increased load volume were experienced.

Expertise Made The Difference

The difference in the success of the project was the in-depth knowledge and experience of the Ready-to-Run Software engineering staff with each of the operating systems and, also, their understanding of related architectural hurdles. This background was essential in eliminating some of the subtle but, potentially, showstopper issues such as memory management and increasing the performance of persistent processing under Windows. ***"We selected RTR because of their cross-platform expertise and their ability to deliver under a very tight schedule",*** said Bill Ledingham, Vice President of product development at SpeechWorks. ***"We were very pleased with the quality of their deliverables and the significant contribution that their team made on this project."*** Just one more example of how the cross-platform software services of Ready-to-Run Software helped a client get to market and to make the most of their software.

About SpeechWorks International

Want to find out more about the speech related technologies provided by SpeechWorks? Check out the company overview and their product & services: http://www.speechworks.com.

Are Web Services In Your Future? If So, When? *(Notes From The Editor)*

One of the 'hot' topics in both the technical and the financial press these days is the next evolution of Internet-based software technology, namely Web Services. How much of this evolutionary shift is marketing hype and how much is reality? For importantly, what does it mean for you?

What Are Web Services?

In order to review this topic, let's begin with a simple definition of web services. Web services will be defined here as the use of the web for automating and integrating business processes and logic in the form of distributed services by deploying emerging open standards (XML, SOAP, WSDL, UDDI). The vision being painted is one of total interoperability and instant connectivity to information and compute capability when, where and as needed by the user. This vision incorporates a fully integrated network that will include servers, PCs, handheld devices, appliances and applications all offering timely access and interaction with the Internet serving as the backbone. Software applications and equipment will be built agnostically and quickly by sharing and interchanging data and functions developed as services on demand.

It's Déjà vu – All Over Again

For many of us, this evolution certainly brings back memories of the promises of software component architecture, Java (write-once, run everywhere) and even, dare I say, implementations such as EDI (Electronic Data Interchange). These lessons from history offer ample evidence to support a cautious, if not skeptical, view of this latest movement. Rather than touting web services as a panacea or the final portal into nirvana, a somewhat sobering view of this new approach as simply the next significant step along the way is, perhaps, more appropriate.

Standards Offer Hope

The one caveat and overriding factor for heightened optimism is the growing acceptance of aforementioned standards as the basis for dialogue, decision and development of the foundation for web services. So, in fact, there is more hope that there will be less complexity in building interoperable solutions and that the historical failures of purely proprietary approaches may be swept aside. What does all this mean to your business? Is it simply fewer API specs to worry about, less need for custom integration, decreased reliance on middleware products?

In order to support this evolution, core technology and products are being rolled out. Microsoft's .NET™ and Sun ONE™ from Sun Microsystems supply foundation framework and developer tool sets. IBM WebSphere™ and BEA Weblogic™ take the development, integration and infrastructure even further. All of these are providing rudimentary support for the implementation and delivery of web services following web standards and protocols.

Benefits To Be Gained

Looking ahead, what are the real benefits? There is no question that web services offer the promise of faster time-to-market with new and improved service components. Since the concept of re-use is a core attribute of web services then expanded deployment and highly flexible and agile businesses will result. And, finally, collaboration across businesses will provide increased efficiencies. For example, as common services are developed, your business might require package shipping & tracking as part of it's application and will be able to easily locate and integrate this service for 'dynamic' execution across the web. For a good overview and more in-depth review of web services ROI, I would recommend the following article as a starting point:
http://www.webservices.org/index.php/article/articlestatic/197/1/24/

When Should You Get Started?

Most businesses are taking it slowly with internal implementations being planned or developed at this time. Some are limiting their initial trial efforts to selected trading partners making sure that a level of understanding and practical experience is gained before extending it to more critical or mainstream e-business applications. Quite frankly, this approach does make sense given the embryonic state of web services in general. At the very least, you should have some part of your staff becoming familiar today with a relevant set of tools and standards. Also, you might consider partnering with your customers, your vendors or a firm like Ready-to-Run Software who is familiar with these technologies to create a first launch project for proof of concept or to lay the foundation for the future.

Over the long run, Web Services offer the prospect of driving the next significant leap in business productivity. In the short term, however, unresolved issues such as security standards make it difficult to plunge into the pool. But, most businesses should – with cautious optimism – be looking to dip their toes into the water by deploying web services within the boundaries of the enterprise. The current bet on the street is

that the ultimate gain will be worth the early pain although realistically we are still years away from widespread availability of web services. You should begin planning now for this next phase in technology evolution. There is no question that web services are going to be part of the fabric of business. As such, building fundamental competency is critical. So, let me close with some simple advice that my mother always gave to me: "Whatever you do – do something!"

Cross-Platform Software News Briefs

RTR CEO Among Speakers At HP World

Jeff Moskow, CEO of Ready-to-Run Software, was an invited speaker at this year's HP World held Sept 23-27 in Los Angeles, CA. Jeff's presentation topic: "Outsourcing Software Development While Maintaining Core Competencies".

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What's Coming In The Next Issue?

- Update of computing platform market trends and key management issues
- Top cost saving ideas for engineering/IT management—where do you go from here?
- Case Study—Microsoft .NET Passport authentication

Send Us Your Questions & Ideas For Articles

You are encouraged to submit your feedback, commentary and your ideas for future articles which will be considered for publication. What cross-platform issues are you facing?

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For more information about the sponsor of this publication, visit us at our company website: http://www.rtr.com

Located in N. Chelmsford, MA, RTR has served clients from start-ups to Fortune 100 companies including IBM, Microsoft, Sun Microsystems, Fleet Financial, TRW, 3M, Exxon, and many others. Our primary cross-platform software services include: a.) *Cross-Platform Migration & Porting, b.) Application Integration, c.) Web Services Implementation, d.) Product Maintenance/Tech Support.* RTR — specialists in platform, O/S, technology and configuration issues offering **"stress relief"** so you can finally begin to relax a little! Call today for an introductory package 1-800-743-1723.

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