

Visual Mining: Scaling the Organization with the Intel® Early Access Program



SOLUTION SUMMARY

Challenge Visual Mining, a leading provider of data visualization software, wanted to deliver outstanding performance and reliability to its customers with a 100% Pure Java* application. Critical requirements: Build a new high end product, optimize it, and maintain source code portability -- gathering the hard data to predict application performance prior to deployment - all with existing staffing levels.

Solution By joining the Intel® Early Access Program, Visual Mining gained access to the full-line of Intel servers for performance and scalability testing. Delivering a product with optimized performance on the Intel platform - a popular deployment vehicle for many of the company's customers -- was critically important to Visual Mining. With remote access machines and servers provided on lease by the Early Access Program, the company was able to achieve performance and predictability goals without hindering development activities.

Business Value Predicting how the company's new flagship product, NetCharts Server* 4.0 will perform prior to production deployment builds customer confidence and allows for an appropriately sized server to be recommended. Collecting the performance and scalability data that makes these recommendations possible would be cost prohibitive without the resources provided by the Early Access Program. With hard data in hand, the development team can optimize application performance by bundling the best performing Java Virtual Machine (JVM) for each environment.

BUSINESS CHALLENGE

Delivering Performance and Predictability

Visual Mining builds data visualization solutions that transform a sea of numbers into useful business graphics. With customers from the financial services industry to the Federal Government, NetCharts Server 4.0 is deployed into mission critical environments where far-reaching decisions are made based on rapidly changing information.

Visual Mining built its quality reputation as a leading provider of robust charting software. The company is expected by its customers - and competitive pressures -- to deliver a high-performance product that scales predictably under load. Given the mission critical nature of many deployments, it is advantageous that Visual Mining assist the customer with sizing the production servers to ensure adequate capacity under the heaviest loads.



NetCharts Server was developed using Java to allow for deployment across a diverse range of operating systems and server platforms. Meeting the business need for cross-platform support while still providing the best performance on each platform was a daunting technical challenge to address. Unlike developers of native code applications, the tuning options available to Visual Mining were more limited due to Java's reliance on a virtual machine execution environment.

Market Changes

Although NetCharts Server supports both Intel and RISC-based platforms, Visual Mining has observed that over time many customers are deploying Intel-based servers into production environments. In addition, the Intel platform has been the focus of many recent innovations in JVM technology. To sort through the rapidly changing technologies and collect the performance data customers require to plan optimal deployments, Visual Mining joined the Intel Early Access Program in August of 2000.

Solution

Intel Early Access Program

Faced with the growing number of Intel-based customers Visual Mining needed to quickly collect the hard data to guide deployment planning and optimization efforts. Given the diverse ways in which open architecture Intel servers can be deployed - with different hardware configurations, operating systems, and JVMs -- the Visual Mining product development team was looking at a resource intensive process that would negatively affect project schedules.

"When we heard about the remote access services of the Intel Early Access Program," says Kevin Scott, Director of Engineering, "we thought it would be great way to mitigate the staffing impact of collecting volumes of performance data." According to Scott, "It's easy to underestimate the effort required to 'just run some tests', but the logistics aspect can occupy the team much longer than expected." This can become a significant problem with a finely tuned organization focused on shipping a quality product on time.

"With remote access to a wide range of Intel Servers," states Scott, "we saved countless hours of engineering time that is better spent improving our product."

Visual Mining worked with the remote access team to facilitate shared and exclusive access to test machines - Intel Pentium® 4, Intel Xeon™, Intel Itanium™, and Intel Itanium™ 2 processor-based servers -- running Red Hat Linux* and multiple versions of Microsoft Windows*. The benefits are substantial says Scott, "The remote access service gets us back to what we're supposed to doing in the first place - developing software."

Satisfied Customers

The end result of the effort to quantify scalability and improve performance was, of course, satisfied customers. "Visual Mining's customers benefit directly from our participation in the Intel Early Access Program," says John Chaconas, Director of Marketing. "Our customers know what to expect prior to deployment and are very satisfied with the performance of NetCharts Server running on the Intel platform."

Case in point is Transaction Design, Inc: A Silicon Valley firm specializing in performance monitoring of enterprise data systems. "Deploying NetCharts Server on Intel servers with Microsoft Windows* 2000," said Andy Orrock, Director, Transaction Design, "has provided the levels of performance and reliability that are required for mission critical applications." Additionally, "Integration with our existing infrastructure was straightforward due to the simplicity and familiarity of Windows- and Intel-based systems."

Looking Ahead

"The performance and scalability of NetCharts Server can make or break a sale," states Chaconas.

"Customers also want to know the application will scale prior to production deployments - surprises are simply unacceptable. Participation in the Early Access Program has fine-tuned our ability to make server sizing recommendations." Added Scott, "We expect to continue our testing as Intel releases new processors and server platforms. By doing so our technical team can be ready for customer scalability questions before they even arise."

Lessons Learned

- **The platform does make a difference in platform independent applications.**

Even 100% Pure Java applications can be optimized for the platform. By selecting the fastest and most scalable Java Virtual Machine (JVM), Java applications exhibit outstanding performance on Intel processors. According to Scott, "Our experience is that Java applications run faster and more reliably on Intel servers when using the IBM 1.3 JVM."

- **The Early Access Program enhances time to market.**

The remote access service streamlines the development and testing process by eliminating equipment costs and administrative overhead. Says Scott, "Having to acquire and manage the test servers would have been a significant drain on the technical team. Instead we just remotely logged in and ran tests at our convenience."

About the Author

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