



KEY HIGHLIGHTS

INDUSTRY: TECHNOLOGY

Ready for

IBM | DB2.

data server software

CHALLENGE

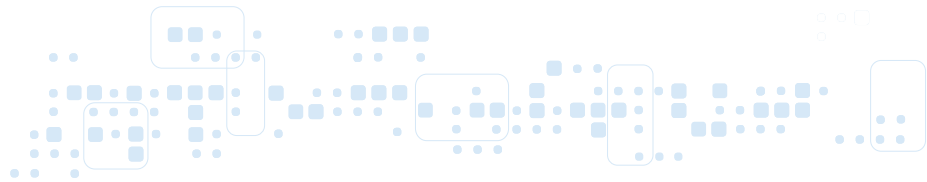
Proliferating combinations of hardware and software caused server sprawl and hardware underutilization, slowed completion of software testing

SOLUTION

VMware Infrastructure maximizes hardware usage, enables more tests in less time

DEPLOYMENT ENVIRONMENT

VMware ESX and VMware Workstation on a variety of hardware brands and configuration



“The bottom line is that VMware’s virtual infrastructure enables higher flexibility, allowing us to better manage changing needs and letting us run more test streams simultaneously on our Windows and Linux test beds. Because we can perform more concurrent tests, we can bring high-quality releases to market more quickly – and that means we can give our clients the same high quality products sooner.”

Sal Vella

IBM Vice President, Development, Distributed Data Servers and Data Warehousing

IBM Software Uses VMware Virtualization For DB2 Development

More Tests, More Environments Mean Stable Releases and Faster Time to Market

DB2 Needs a Big Development Environment

IBM DB2, a leading database, runs on many hardware platforms and a significant number of different versions of Linux and Windows operating environments. The number one concern of DB2 customers is reliability, so IBM needs to support as many different configurations as possible without compromising its high quality standards for the product.

The number of test and development environments required as a result is substantial, creating a challenge keeping up to date with ever-changing operating systems and service packs. The DB2 development team required dedicated server environments for each version of Windows on which it wanted to run tests. This was impractical from both a cost and scheduling point of view and caused many tests to be run serially even if the machine had plenty of headroom to run tests in parallel.

During the course of a product life cycle, all service releases are put through the complete test cycle, which grows with each additional operating system iteration. The testing process becomes an ever-greater logistical and execution challenge and can drag the release date out. Meanwhile, of course, new hardware and operating system combinations continue to emerge, requiring the deployment of yet more servers.

Having enough hardware to keep up with the combinations was becoming an enormous effort. More servers meant increasing space and cooling requirements, and more time spent on updates, OS patches, and security as in any production environment. Yet the servers themselves were barely being utilized since each one could only run one operating system at a time. And of course, the necessary imaging and re-imaging of whole systems was an administrative time drain.

IBM turned to VMware virtualization technology to address these issues. “The use of VMware has allowed us to test more systems in a shorter period of time,” said Sal Vella, IBM Vice President Development, Distributed Data Servers & Data Warehousing. “We have much higher utilization of our hardware and more flexibility in the range of operating systems we can have installed and running at the same time. For our core testing environments we’ve seen a seven to one server consolidation which has cut our capital needs without sacrificing the team’s capabilities”

Team efficiency and ability to respond has improved as well. “VMware allows us to deploy new test environments in less than half an hour when in the past it could have taken from half a day to a full two days for hardware re-imaging,” says Vella. “Using preconfigured VMware images has also given our development team control over the testing environment rather than having to engage a separate operations department whenever we need a new server setup.”

The DB2 team has also consolidated its support systems by keeping VMware virtual machine images of older or unique systems on file, rather than having to keep a server idle in case of support calls. “VMware ESX has allowed us to consolidate these systems down from ten physical servers to only two,” Vella points out. “We’ve been able to retire another 30 servers and we still have more capacity than we did before. Plus we have reduced our power and cooling needs substantially just by eliminating all of that hardware.”

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Results

- Setup time for complex test scenarios reduced from as much as two days to 30 minutes
- Consolidation ratio of 7:1 for core regression testing environments
- Consolidation ratio of 4:1 for large scale system scenario testing
- Reduced capital expenses and power and cooling requirements
- Completion of more tests in less time
- More time to focus on quality and actual test results, less time spent managing the environment

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