



## EMC Turns to VMware vRealize Suite to Transform Database Provisioning and Management

Computer data storage company EMC deployed several components of VMware vRealize™ Suite to deliver database as a service (DBaaS). The solution dramatically accelerated database deployment, slashing delivery times by 99 percent. It also makes ongoing management of databases more effective, allowing administrators to quickly and easily make necessary changes. And it allows IT staff to be more responsive to business needs and strategic goals.

EMC is a global leader in helping organizations optimize their operations and deliver IT as a service. The company offers data storage, data security, cloud computing, and related solutions to help businesses manage their information assets. It serves more than 400,000 customers from 400 locations in 86 countries around the world. EMC ranks 128 on the Fortune 500 list, with an annual revenue of \$21.7 billion.

### The Challenge

As a leading IT company with 60,000 employees around the world, EMC relies heavily on information technology for its own operations. EMC's IT department needs to deliver state-of-the-art technology and services to support the company's objectives. And in a highly competitive market, it needs to respond faster and more cost-effectively than ever before.

This is especially true when it comes to database servers. IT staff must quickly and effectively provision databases to support operations such as enterprise resource planning (ERP), customer relationship management (CRM), and internal application development. And it needs to do so while managing a vast and highly complex environment.

EMC's IT organization oversees a portfolio that includes 11,000 virtual machines, 500 applications and tools, and many hundreds of database servers. The company operates one of the world's largest Oracle database and application grid deployments.

EMC had virtualized its mission-critical databases. Even so, the process of spinning up a new database server typically took two weeks, involving 14 teams and seven distinct phases. The lag was becoming unacceptable. Lines of business couldn't wait for databases to be provisioned. Instead, they started looking outside EMC's IT department to public clouds to meet their needs. The result was higher costs and less security.

In short, IT personnel had to find a way to respond more quickly and effectively to business priorities. "Our primary need was for greater agility," says Darryl Smith, chief database architect for EMC. "We needed to do more with less, and we needed to do it faster."

### The Solution

EMC evaluated several options before it settled on a VMware solution. "There are a few players in the market that can do at least part of what we wanted to do," Smith explains. "But they lack a workflow engine, or they lack a full set of APIs, or they don't

### INDUSTRY

Technology

### LOCATION

Hopkinton, Massachusetts

### KEY CHALLENGES

- Spinning up a new database was too complex and time consuming, involving 14 teams and seven phases.
- IT staff couldn't respond to business needs, and ongoing management was cumbersome.
- Lines of business were turning to public clouds, with higher cost and less accountability.

### SOLUTION

By automating database provisioning and management with VMware vRealize Suite and other VMware products, EMC was able to slash the time for database provisioning and enable IT personnel to respond quickly to business needs.

### BUSINESS BENEFITS

- Accelerated database deployment, slashing delivery times by 99 percent.
- Avoided costly and less secure solutions from external IT providers.
- Enabled IT staff to fully support business objectives by quickly and effectively responding to the lines of business.
- Enforced standardization, significantly reducing errors.

## VMWARE CASE STUDY

***“With our database-as-a-service framework built on the VMware solutions, the business can get what it needs, when it needs it.”***

Darryl Smith,  
Chief Database Architect, EMC

### VMWARE FOOTPRINT

- VMware vRealize Suite
  - VMware vRealize Automation
  - VMware vRealize Orchestrator
  - VMware vRealize Operations
- VMware consulting

### APPLICATIONS VIRTUALIZED

- Oracle Database
- Microsoft SQL Server
- PostgreSQL

### PLATFORM

- 11,000 virtual machines
- 500 applications and tools
- 22PB of data storage

have some other capability we need.” What’s more, because all of EMC’s virtualization was based on VMware technology, “we wanted a solution native to VMware,” Smith says.

EMC’s IT organization created a framework it calls Enterprise Cloud Automation Lifecycle Management, or eCALM. At the core of the framework are several solutions that are part of VMware vRealize Suite. “When it comes to creating virtual machines, VMware solutions are first-in-class,” Smith says.

VMware vRealize Automation™ software provides the automated governance and control that enables EMC’s IT department to accelerate delivery and ongoing management of database servers while increasing overall efficiency. The solution automates end-to-end service delivery, including leveraging Puppet Labs configuration management software to deploy and configure the database software.

VMware vRealize Orchestrator™ software simplifies and accelerates the fine-tuning of processes to meet EMC’s unique needs. VMware vRealize Operations™ software provides insight into the performance, capacity, and health of EMC’s IT infrastructure, offering the guidance necessary to optimize performance.

VMware vRealize Suite, combined with EMC’s existing tools, processes, and best practices, enables the IT organization to successfully deploy its eCALM framework for DBaaS. The VMware solution even provides database administrators with a self-service portal where they can configure new database servers requested by the lines of business or make changes required to respond to performance or capacity issues. The portal automates the process, so administrators can create new or modify existing databases quickly and easily.

Finally, EMC took advantage of VMware consulting expertise to configure and set up vRealize Suite. “They helped us with the initial coding till we were up to speed and could handle it ourselves,” Smith explains.

### Business Benefits

The VMware solution has accelerated deployment of virtualized databases. EMC’s IT department was able to slash the time it took to spin up a new database server by 99 percent, from two days to under an

hour. It eliminated 14 to 24 hours of manual effort for each provision operation, improving employee productivity and freeing up resources to work on more strategic business initiatives.

Administrators now use a self-service portal to create new databases, without the need to involve numerous IT functions. Just as important, databases are configured based on best practices, avoiding manual errors. Every new database is built identically, providing stability and reliability.

What’s more, IT personnel can more effectively manage databases. “We can do all the day-two operations such as adding CPU, memory, or data storage as business requirements change, and we can do it with significantly less effort,” Smith says. “That’s important at a time when IT needs to do more with less.”

Finally, the solution positions IT personnel to be more responsive to the business. “Some departments were beginning to look at public clouds because they couldn’t wait for IT to provision databases,” Smith explains. “But we’re directly responsible to the business in a way an external cloud provider isn’t.”

Today, EMC’s IT organization can exceed the service levels of external providers. It can also hold down costs—for example, by monitoring inactive servers and quickly taking them offline, reducing server sprawl.

“With our database-as-a-service framework built on the VMware solutions, the business can get what it needs, when it needs it,” Smith concludes. “They can say, ‘We need a new database and a couple of application tiers,’ and we can reply, ‘Give us 30 minutes, and you’ll have it.’ And then if their needs change later, we can respond just as quickly.”

### Looking Ahead

EMC’s DBaaS is just the first phase of its overall goals for IT as a service. The IT department has ambitious plans for infrastructure as a service, backup as a service, big data analytics, and more. “The VMware solutions act as a service foundation for many aspects of IT,” Smith says. “Ultimately, this platform will provide a self-service framework for every IT administrator. It could even be extended to the lines of business,” further enabling IT staff to support business needs.

