

## Massachusetts Department of Environmental Protection

### A green approach cuts costs and raises efficiency through server consolidation and virtualization

Server and storage consolidation and virtualization can help the environment. They also improve an organization's bottom line and enable greater efficiency and better service for customers. Streamlined server and storage environments also bring opportunities for other enterprise-wide improvements.

It's certainly worked well for the Massachusetts Department of Environmental Protection (MassDEP). Working with EMC, MassDEP recently cut its number of servers from 84 to 10. The project was completed in June 2008 after just 10 weeks of work. And it's already paying off for MassDEP, the regulated entities it deals with, and the public.

EMC had the right solution with its NS82 unified storage platform. With a VMware<sup>®</sup> virtualization solution, EMC<sup>®</sup> CLARiiON<sup>®</sup> storage, and new blade servers, EMC consolidated the department's storage and lowered its costs.

MassDEP now has a simplified IT environment that's easier and less costly to manage. Along with consolidating and virtualizing servers, EMC helped MassDEP use storage space more efficiently. Backing up data is accomplished much more quickly. And server and storage resources are more flexible, enabling the department to be better prepared for future growth.

Current capacity is 150 terabytes, and it's scalable to 300, providing the department with enough storage for the next several years. The tiered storage set up by EMC allows the department to maximize efficiency; data goes to the appropriate server, depending on how that data will be used. And the department can now perform de-duplication, so the same data is not saved in numerous locations, further lowering cost and increasing efficiency. It's all done while reducing the department's carbon footprint.

#### Virtualization is the "real deal"

"Virtualization is certainly the way to go," according to Deborah Quinn, CIO of MassDEP. "It's a hot topic today and for good reason. Beyond the hype, there's something there. It just makes sense to do it. We've reached the point where the technology is mature enough that people don't have to wonder if this is the latest fad. It's the real deal. It can make it easier to manage your IT environment and your network."

Quinn hadn't worked with virtualization before, so she did a lot of up-front analysis, research, and planning. Then she selected EMC for the project. The positive results have made her and her staff believers.

The improvements mean better service for Massachusetts citizens. For example, now that MassDEP has more storage space, it can put much more information online. Citizens can access the information online instead of driving to government offices to view important documents.

Prior to the deployment, MassDEP had outgrown its storage capacity. Its network and applications were getting bigger, but its staff was not expanding at the same rate. The amount of data within the department was growing rapidly, especially with environmental inspectors and other field staff creating more photo



Massachusetts  
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and video files. Accommodating this growth with MassDEP's old environment would have been difficult, expensive, and disruptive.



Deborah Quinn  
CIO, Massachusetts Department of  
Environmental Protection

Server consolidation and virtualization was the answer. EMC took on the challenge despite the tight time-frame, which was necessary because it was nearly the close of the department's fiscal year. "Our own project manager and the EMC project manager talked daily," says Quinn. "There were weekly meetings to make sure that the project plan was followed."

### Better for the environment—and for the big picture

"We're excited about projects like this, because we can really help organizations operate more efficiently in a number of ways," says Jennifer Axt, EMC's Vice President for State and Local Government. "Lower energy costs are important, but that's just one aspect. It's critical to look at the larger picture and find opportunities for managing things better across an entire enterprise in a cost-effective way."

EMC has seen increased interest for these kinds of projects. "A lot of state agencies have focused on green initiatives, mostly related to eliminating equipment that's not being efficiently utilized," says Axt. "Servers today tend to have a 5 to 10 percent utilization rate. By using virtualization tools, you can really consolidate the number of applications you run on a single server and leverage the capacity on the different servers to their full potential. And you can reduce the amount of energy consumed."

**"We're hoping to achieve a 30 percent reduction in energy use.  
That's a big part of this project."**

Deborah Quinn  
CIO, Massachusetts Department of Environmental Protection

MassDEP gathers a lot of information from the companies it regulates; information such as reports, permit applications, and other important documents. And the department needs to provide access to this information for environmental groups, municipalities, citizens, and more. The EMC solution lets the department save, retrieve, and share documents much more easily and efficiently.

EMC also helped MassDEP improve its information lifecycle management. That's a key factor since the value of data changes over time.

Another benefit is better technological agility. For example, the time it takes the department to deploy a server from scratch dropped from a day and a half to 30 minutes. Quinn says her staff has been impressed. "My network managers are saying, 'Are you kidding? It's now taking us about half an hour.' And they look at each other and they say, 'This is unbelievable.' That is a massive reduction in time and effort," says Quinn.

"The installation went smoothly," Quinn says. "My network managers took the technology transfer and the training and have just taken to it so well. They love it. They just find it easier to manage."

With all the benefits that can be derived from virtualization—for the environment, the enterprise, customers, and the public—Quinn recommends it to other agencies. She sees no need to wait. "Do some sound planning around how you approach it, and attack it."



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