

## Data center consolidation promises improved performance

Fewer facilities will rely on the cloud to handle a growing workload

- By John Edwards
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Looking to increase IT efficiency and slash costs, the military is consolidating the number of data centers it operates. In August, the Defense Department CIO's office confirmed there will be fewer military data centers by the close of the fiscal year as part of a larger federal IT reform plan started by the Obama administration.

"We have closed eight data centers since the IT reform plan was published, and we intend to close another 44 by the end of fiscal 2011," wrote Teri Takai, DOD's CIO, in an Aug. 9 [blog entry](#) on the CIO.gov website. "DOD remains committed to identifying candidates for data center closure and consolidation in support of the [Defense] Secretary's efficiency efforts and the IT reform plan goal of closing 800 Federal data centers by 2015."

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As the military's data center footprint shrinks and information is concentrated into fewer locations, increasing attention is being paid to the way data is being stored and protected at a time when potential attackers have better and more powerful access and retrieval tools.

### Targeting goals

DOD's data center downsizing strategy dovetails with a larger governmentwide data center reduction program, the Federal Data Center Consolidation Initiative (FDCCI). Launched in 2010, the mandate from the federal CIO requires agencies to reduce the overall energy and real estate footprint of their data centers, with the targeted goals of reduced costs, increased security and improved efficiency.

Officials at the Office of Management and Budget "have given us a target, by 2015, of 432 data centers for DOD across the board," said a senior DOD official who requested anonymity. "Right now, we have, based on our submission to OMB last August, 772 data centers in the department," he said. "So we're looking at nearly a 40 percent reduction over the next several years."

DOD's data center downsizing program predates FDCCI. "We don't even really talk about FDCCI internally; that's just a reporting requirement to OMB," the DOD official said.

The department realizes that upcoming budget constraints mean that it can no longer afford the luxury of running underused IT facilities. "Our statistics pretty well indicate that the utilization of our processing capacity at most data centers is less than 50 percent," the official said. He added that the department is looking for savings in floor space, energy consumption, labor, hardware and software.

In addition to generating cost savings, data center consolidation is also expected to lead to a number of other benefits. “It really is about better information sharing, improved security of information...and better utilization of our resources across the board,” the DOD official said.

DOD is using its current data center reduction process as an opportunity to closely examine technologies that can potentially help it enhance services, bolster security and cut costs. Just about everything is on the table: “server virtualization, new storage technologies, certainly the transport technologies and how we move information around on the network,” the DOD official said. “When you consider what’s in a data center — its mission-critical applications, its large databases, its data archives — all of the technologies and all the products that support those requirements are under consideration.”

Downsizing is also providing an opportunity to focus IT operations on the best data centers, said Terry Halvorsen, the Navy’s CIO. “One of the things we will do in the department is to look at what are the best operating data centers in terms of mission sustainment, cost of operations and security, and those are the data centers that we will move stuff into,” he said.

### **Capturing the cloud**

Cloud computing is a key component in DOD’s consolidation plan, the agency official said. “Our objective is to establish a DOD-wide core of data centers, and at that core will be cloud computing services so that the [branch services] don’t have to host things locally,” he said.

The data center consolidation work is closely tied to the Obama administration’s [Federal Cloud Computing Strategy](#), said Gigi Schumm, vice president and general manager of Symantec Public Sector. “They’re really kind of hand and glove,” she said. “As DOD is consolidating, they’re looking for innovative and new ways of doing things.”

John Garing, a former Defense Information Systems Agency CIO and now vice president of ViON, said distributed cloud computing will lower costs and enhance security “by breaking the culture of having your own data on your own box.” In other words, cost and security benefits will be achieved by limiting data storage to a fewer number of tightly controlled servers.

Garing added that he believes that cloud capabilities will help DOD organizations function more effectively in today’s world of irregular warfare and asymmetric challenges. Garing recalled that during his DISA days, he often found himself pressed to help users who needed to react instantly to actions occurring in unpredictable places and in step with schedules set by opponents. “We had to do it quickly and agilely, and we had to be able to do information sharing in ways we never thought of,” he said. “Operational imperatives were driving us toward the cloud concept.”

Garing noted that by enabling seamless data sharing across different platforms, cloud services give users at the tactical edge a powerful new information access and communication resource. “The cloud enables a military unit — a fighting force — to connect to the network, identify itself, discover and share information, collaborate with whomever it has to for the mission at hand, and to do it safely and securely,” he said.

On the other hand, Garing said cloud computing will place additional planning and management demands on DISA and departmental data center operators. “It’s not a thing that’s shrink-wrapped and you can just buy,” he said. Those burdens could be eased by turning some or all cloud operations over to commercial providers, something DOD organizations have so far been reluctant to do. Yet this attitude may now be changing.

Dan Duenkel, director of technology of Thundercat Technologies, said military IT officials and data center providers will need to work together to ensure that encryption, access controls and other security measures are strong enough to meet stringent military requirements. “The security thing needs to be addressed first and then cloud storage is going to grow tremendously,” he said.

## **A continuing process**

Halvorsen said DOD data center consolidation is likely to continue for the foreseeable future, perhaps even well beyond the IT Reform Plan's 2015 time frame. "We will constantly re-evaluate where we are with our current set of data centers," he said. "Twenty years ago, you could not have consolidated as much as we have today, [and] I suspect that in another two or three years, there will be new technologies that will let us consolidate and virtualize even more things."

## **About the Author**

John Edwards is a contributing writer for Defense Systems.



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