

Federal Data Center Consolidation Initiative (FDCCI)

FAQs

May 2012

1. What is the Federal Data Center Consolidation Initiative (FDCCI)?

The Federal CIO Vivek Kundra established the FDCCI in a memo dated February 26, 2010, to the Chief Information Officers, indicating the following main drivers and key benefits from the initiative:

“ The reported number of Federal data centers grew from 432 in 1998 to more than 1,100 in 2009. This growth in redundant infrastructure investments is costly, inefficient, unsustainable and has a significant impact on energy consumption. In 2006, Federal servers and data centers consumed over 6 billion kwh of electricity and without a fundamental shift in how we deploy technology it could exceed 12 billion kwh by 2011. In addition to the energy impact, information collected from agencies in 2009 shows relatively low utilization rates of current infrastructure and limited reuse of data centers within or across agencies. The cost of operating a single data center is significant, from hardware and software costs to real estate and cooling costs.

The Federal Data Center Consolidation Initiative aims to address these challenges by leveraging best practices in the public and private sector. The focus of this initiative is to:

- Promote the use of Green IT by reducing the overall energy and real estate footprint of government data centers;
- Reduce the cost of data center hardware, software and operations;
- Increase the overall IT security posture of the government; and
- Shift IT investments to more efficient computing platforms and technologies.”

2. What is the Data Center Consolidation Task Force (DCCTF)?

In February, 2011, the Federal CIO Council launched a government-wide Data Center Consolidation Task Force to help meet the overall Federal target of a minimum of 800 data center closures by 2015, and to share progress toward individual agency goals. The Task Force comprises data center program managers, facilities managers, and sustainability officers from 24 agencies.

The Task Force meets monthly to review the progress of each consolidation project and ensure government-wide alignment between agency efforts, where appropriate. As its work evolves, the Task Force will serve as a “community of practice” for agency CIOs and data center program managers to share best practices and enhance consolidation effectiveness.

The DCCTF Co-Chairs are Richard Spires, Chief Information Officer, Department of Homeland Security and Bernard Mazer, Chief Information Officer, Department of the Interior.

The signed charter can be viewed on cio.gov at cio.gov/pages-nonnews.cfm/page/FDCCI

3. What is 'Industry Day' and the 'White Paper Repository'?

Industry Day was a half-day Industry Outreach Forum sponsored by the Federal Data Center Consolidation Task Force (DCCCTF), Office of Management and Budget, and the Federal Cloud Computing PMO in the Office of Citizen Services and Innovative Technologies, General Services Administration (GSA).

Industry and agencies were invited on August 30, 2011, to attend presentations given by members of the DCCTF covering high priority challenges that agencies are facing in consolidating and closing data centers. Two panels of agency representatives outlined challenges that agencies need to address in the following key areas. A question and answer session followed the presentations:

- Data Center Efficiency
- Leveraging Cloud Services as Consolidation Targets
- Migration, Planning, and Execution
- Preparing Receiving Data Center for Consolidation
- Tools for Mapping Applications
- Tools for Tracking and Managing Inventory

Attendees were invited to submit short (5 pages maximum) white papers within 30 days of the Forum that addressed one or more of the topics discussed. White papers must contain a case study from a completed (or mostly completed) federal, state, local or Fortune 500 company implementation that addressed one of the challenges presented at the Forum. The case study should describe the vendor's best practices and lessons learned, address success measures, and provide a POC for any agency requesting additional information. Marketing and promotional items were not accepted. White Papers were accepted from September 1 through September 30, 2011.

White Paper Repository: The White Papers were categorized into the six groups above in addition to Case Studies and General, and then distributed to Federal CIOs and DCCTF members through a secure repository. Access to this repository is limited to Federal CIOs and their staff.

4. What is the definition of a 'data center'?

As defined in Budget Data Request (BDR) No. 09-41 from August 10, 2009, requesting an inventory of all Federal data centers:

A data center is a repository (closet, room, floor or building) for the storage, management, and dissemination of data and information. This repository houses computer systems and associated components, such as telecommunications and storage systems. It generally includes redundant or backup power supplies, redundant data communications connections, environmental controls (air conditioning, fire suppression, etc.), and special security devices housed in leased, owned, collocated, or stand-alone facilities.

In the context of modernization, an agency data center is defined as any automated information processing and data storage operation that performs one or more of the following functions:

processes agency-approved automated applications systems, affords time-sharing services to agency personnel, provides office automation and records management services through a centralized processor, and/or provides network management support for agency wide area networks. (Link to memo http://www.cio.gov/documents/CIO_Memo_FDCCI_Deliverables_Van_Roekel_3-19-12.pdf)

5. When identifying data centers to close by year are we talking calendar year or fiscal year?

Previously agencies were directed to report closings by Calendar Year. Effective March 2012 agencies have been directed to report in Fiscal Year. Please also identify the quarter targeted for closure. (Link to memo http://www.cio.gov/documents/CIO_Memo_FDCCI_Deliverables_Van_Roekel_3-19-12.pdf)

6. On the Inventory tab, we are having some difficulty interpreting the definition of the field for number of FTEs related to data center operations. The “or” is throwing us off.

“Defined as government and contracted personnel associated with the operations and maintenance of the Data Center at or below the operating system level. If the responsibilities are a fraction of a person or several person's time, estimate the hours per year attributed to data center operations and divide by 2080 (workable hours per year).”

Our objective is to capture the personnel associated with providing infrastructure services equivalent to those that would be provided by a Cloud or hosting provider. This will allow us to build an accurate “apples to apples” cost comparison for all the various infrastructure options.

For the OS, this is just the provisioning of the OS and making it available. Everything below would be the hypervisor management and all of the activities associated with the physical systems, including the servers, network, storage systems and the mechanical data center systems (UPS, CRAC units, power conditioners, fire suppression and security systems...). Activities such as account management, patch management, applications, etc. would not be offloaded if moving to IAAS or an OS hosting provider, so the associated personnel/time should not be included.

7. What are the phases for consolidating a date center?

OMB has prescribed 6 phases for review of consolidation opportunities:

Phase 1 - Inventory

Phase 2.- Application Mapping

Phase 3 - Migration Planning

Phase 4 - Migration Execution

Phase 5 - Equipment Removal

Closed

8. If several agency components collocate at a shared data center should this be reported as one data center or many?

Collocation of a single data center occupied by components within a single agency should count as a single data center. Ownership should be assigned to the primary user/owner of the facility.

Agencies that collocate at a provider need to report their Ownership Type = Collocate and indicate the Provider and their piece of the space (sq ft., servers, racks, and storage.)

9. Is it necessary to update the inventory (energy, servers, virtualization, and storage) for data centers we plan to close by end of FY?

Yes. However, agencies should not incur costs to report data (eg. agencies should not install metering in a closing data center).

10. How should I indicate that a data center is not closing?

Leave the 'Target Date for Closure' and 'Phase of Closure' blank. Using the considering option allows agencies to flag a data center but it will not be counted as closing.

11. Should test labs, scientific computing equipment, servers under desks or in field offices that have 2-3 servers be counted in the Data Center Consolidation Initiative?

Yes, all instances should be counted. They should be coded as either 'Server Room/Closet' or 'Lab' in the inventory database.

12. What is the definition of a 'closed' data center?

A closed data center is defined as follows:

- Data Center related operations are no longer conducted in facility and transformation of the facility/room to its final disposition state is underway. Excess Air Conditioning units, Uninterruptible power Supplies (UPS), and Switch gear/load centers/Power Distribution Units (PDU's) are shut down.
- Excess Internet Service Provider (ISP) lines not required for normal facility end user activity should also be terminated. Data Center Operations include hosting of production services, applications, databases or data stores.
- If a portion of the facility/room will be designated as a telecommunications and infrastructure equipment room, equipment such as print servers, domain controllers, firewalls, or network switches are not required to be removed for the facility to be considered closed.

13. How is an FTE defined?

An FTE is defined as government and contracted personnel associated with the operations and maintenance of the Data Center at or below the operating system level. If the responsibilities are a fraction of a person or several person's time, estimate the hours per year attributed to data center operations and divide by 2000 (workable hours per year).

To ensure we are capturing just the manpower directly tied to the data center, "at or below the operating system level" is further defined as the activities related to:

- Facilities: maintaining the physical building and mechanical systems (power, cooling, fire suppression, physical security, etc.), Installation or removal of racks, cabling, power, etc.,
- Hardware: Installation, removal, or repair of physical servers, storage/storage controllers, Telcom/network backbone equipment, etc. Also include the activities related to receiving and disposing of equipment.
- Operations: Physical swapping of backup media, configuring, monitoring, and administering the virtualization environment, building & maintaining pre-configured virtual images, and any activities related to provisioning of an operating system before placing into production (Installing, patching, loading standard software, SCAP testing, etc.), monitoring of the production server environment. Network and IT security personnel where the data center network is their responsibility should be counted.
- Back office: Contract / SLA managers, Business office personnel, reception/access control, etc.
- Other: Any other personnel that are directly tied to the data center and any portion of their job would go away if the data center was closed.

Personnel not to include:

- Personnel not directly tied to the data center (Any portion of a person's job that would not be directly affected if the data center was closed)
- Developers, Data base administrators, Server and application account managers, End User support personnel
- Facilities that use the building or campus WAN and have no dedicated network or IT security personnel should not include the enterprise personnel.

How to count:

Count only the portion of their time related to data center activities. Example, if the work is ½ time for 10 people then it would be 5 FTE's.