

NASA Seeks Industry Guidance on Data Center Solutions

Posted At : August 6, 2014 10:44 AM | Posted By : Kyra Fussell

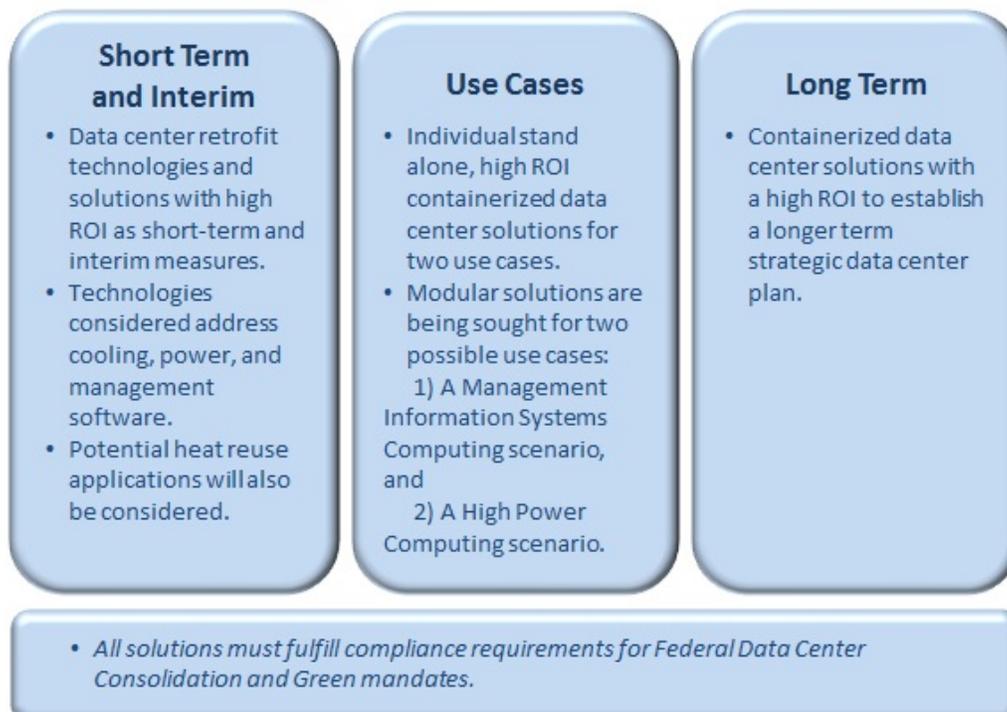
Related Categories: Consolidation, Efficiency Initiatives, National Aeronautics and Space Administration, Big Data/Analytics, Efficiency, Data Center, Contract Opportunities

Mid July 2014, The National Aeronautics and Space Administration's Goddard released a request for information on data center consolidation strategies for near-term, interim, and long-term strategies to address federal mandates for reducing IT footprint and improving energy efficiency.

Although federal agencies they've continued monitoring progress, agencies have not publicly released any recent updates to their data center consolidation plans. As part of the Federal Data Center Consolidation Initiative (FDCCI), NASA initially reported 79 data centers, closed 14 centers and revised the count to 58 after a physical inventory. The target is to retain 22, and at the end of 2014, NASA is expected to have 16 data centers to close before reaching its goal.

Along with the request for information around the Data Efficiency and Containerization effort, NASA GSFC [released details](#) regarding the several approaches under consideration. The first approach targets retrofitting technologies and solutions with a high return on investment (ROI) as short term and interim measures. A number of technologies to address cooling, power, and software management are under consideration. Approaches for cooling include rear door heat exchanger, direct liquid cooling, and application of water-side economizers. For power, NASA is looking at transformer-free uninterruptible power supply (UPS), power distribution units (PDU) that convert power from AC to DC, and fuel cells. Management software technologies being explored include remote power monitoring, power management based on the impact on energy consumption, and server utilization management. The potential for heat reuse applications is also on the table for deliberation. The second approach for data center consolidation targets standalone, containerized solutions for two possible use cases. One use case involves a management information systems computing scenario with power requirement up to 10 kW per rack. The other user case scenario involves high power computing with power requirements up to 30 kW per rack. The third approach aims to establish a long term strategic data center plan leveraging containerized data center solutions with a high return on investment. All of the approach must meet compliance requirements for Federal Data Center Consolidation and Green mandates.

NASA GSFC Approaches to Data Center Consolidation



Beyond the efforts at Goddard, NASA's consolidation of Agency and Center-specific data centers will continue through efforts to simplify IT architecture by reducing duplication within the IT footprint. Some of the savings

expected to result from these efficiencies will be reinvested to support mission programs and projects. NASA intends to reinvest a portion of these savings to fund critical IT innovations in order to drive further efficiencies and cost savings. Candidate investments to drive efficiencies include standardization of mobile and collaboration capabilities, continued consolidation of IT security tools and computing services, and shifting web services to a cloud platform. Analytics will be one significant area that will benefit from data center improvements. NASA's vision for big data includes improving the capability to extract value and insight from the data it already has. To this end, NASA may explore the potential for creating a new, virtual mission to examine the data it possesses. With the vast volume and variety of data on its systems, NASA will need to overcome storage and accessibility challenges to ensure timely availability of information.

Originally published in the [GovWin FIA Analysts Perspectives Blog](#). Follow me on Twitter [@FIAGovWin](#) .