

National Aeronautics and  
Space Administration

**Headquarters**

Washington, DC 20546-0001



Reply to Attn of:

**Office of the Chief Information Officer**

**TO:** Deputy CIO for Architecture and Infrastructure

**FROM:** Deputy CIO for Information Technology Security

**SUBJECT:** Recommendation to Fund and Deploy Agency Data-at-Rest (DAR) Solution

Based on an evaluation of NASA's requirements for encryption of data at rest and of the solutions currently available, I recommend that your office fund the implementation and deployment of an integrated, interoperable NASA DAR solution in the amount of \$2.0M for Fiscal Year 2008. Details of the recommended solution, based on McAfee's Safeboot product suite, and the evaluation that produced this recommendation are in the attached presentation.

Background

NASA has a requirement to protect all sensitive information, whether in transit or at rest. OMB Memorandum M-06-16, Protection of Sensitive Agency Information, specifies that all sensitive data on mobile computers/devices be encrypted. Additionally, because of NASA's diverse computing environment, the Agency requires an encryption solution that is interoperable on PC and Macintosh devices.

NASA's current encryption solutions only partially address these requirements. File encryption using Entrust on PC devices can be very cumbersome and requires much user training and effort. As NASA transitions its PC devices to Windows Vista, this solution will become even less viable. File encryption on Mac computers is not FIPS-140-2 compliant and not interoperable with Entrust. NASA currently has no Agency-wide solution for full-disk encryption or for encrypting other devices such as USB drives.

The NASA CIO chartered an Agency Encryption Team to identify federally-mandated and NASA-unique encryption requirements and recommend a solution which met these requirements. The team reported its findings, vendor recommendation, acquisition and implementation strategy, and concept of operations to the Office of the CIO (OCIO) on January 25, 2008.

Note that in an effort to ensure compatibility across the Agency IT infrastructure, a procurement freeze was placed against all DAR solution purchases on November 15, 2007. Centers were asked to wait for an Enterprise solution, with the implicit expectation that once the Encryption Team completed its work, a consolidated DAR solution would be made available through the OCIO.

In September 2007, the OCIO released the Information Resources Management (IRM) Strategic Plan which established October 2009 as the target completion date for implementing encryption solutions to protect data at rest (NASA IRM Strategic Plan, pg. 8, section 2.2 "Encryption of sensitive information"). To meet this date, it is recommended that the Encryption Team's DAR Implementation Proposal (attached) be funded in Fiscal Year 2008 to provide ample time for infrastructure design, implementation, and deployment.

References

OMB M-06-16, Protection of Sensitive Agency Information:

<http://www.whitehouse.gov/omb/memoranda/fy2006/m06-16.pdf>

NASA IRM Strategic Plan:

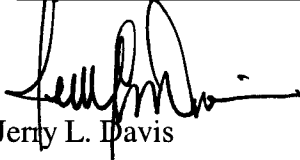
[http://insidenasa.nasa.gov/ocio\\_lib/pdf/1013514main\\_OCIO\\_IRM\\_Strategic\\_Plan-Sep\\_2007.pdf](http://insidenasa.nasa.gov/ocio_lib/pdf/1013514main_OCIO_IRM_Strategic_Plan-Sep_2007.pdf)

CIO DAR Procurement Freeze Memo:

[http://desktop-standards.grc.nasa.gov/ERT/Encryption/Data\\_at\\_Rest\\_Freeze\\_Signed\\_11\\_15\\_07-2](http://desktop-standards.grc.nasa.gov/ERT/Encryption/Data_at_Rest_Freeze_Signed_11_15_07-2)

Safeboot:

<http://www.safeboot.com>



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Enclosure