National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 10-027

February 4, 2010

Dear Colleague,

CISE and OCI announce an exciting new opportunity
(see http://www.nsf.gov/news/news_summ.jsp?cntn_id=116336&org=NSF&from=news) for the
science and engineering communities to conduct research and education activities in cloud
computing and data-intensive computing, and their applications.

Through an MOU between Microsoft Corporation and the National Science Foundation,
Microsoft will provide NSF supported-researchers access to Microsoft's Azure services platform,
complementing the computational platforms that NSF has made available to the research
community to date. In this letter we explain various funding mechanisms by which principal
investigators may request support to use the Azure services platform.

This new agreement between Microsoft and NSF continues in the line of CISE's and OCI's
support for data-intensive and cloud computing, and demonstrates our interest in promoting
government-academia-industry partnerships. Through the FY08 Cluster Exploratory (CluE)
program, CISE provided the NSF community access to a set of cloud-based software services
supported by Google and IBM and access to another cluster supported by HP, Intel, and Yahoo
housed at the University of Illinois at Urbana-Champaign. OCI's TeraGrid support includes a
Condor pool at Purdue University. In FY09 CISE created the cross-cutting Data-intensive
Computing Program to explore new ways to design, develop, use, and evaluate large cluster
platforms and systems, especially to support data-intensive applications that require very large-
scale clusters. OCI funded the Gordon system, an innovative platform for data-intensive
computation, at the San Diego Supercomputing Center, and FutureGrid at Indiana University to
conduct research in the area of grid and cloud computing.

The three cloud computing industry platforms and the FutureGrid platform that NSF is making
accessible to the community differ dramatically in the software environments offered to users and
the extent to which users can modify the software environment. The Microsoft platform adds to
software diversity. Unlike the Google/IBM and HP/Intel/Yahoo clusters, which support the open
source Hadoop programming interface, the Microsoft platform supports a Windows based
programming interface. Like the Google/IBM cluster (and unlike the HP/Intel/Yahoo platform)

users are not provided lower level access; users of the Microsoft platform will be limited to programming features supported by Azure.

With access to a new software infrastructure for cloud computing, we challenge the community to be creative in its use on its own right, in combination with other software and hardware infrastructure, and in the development of innovative applications that can exploit it. We encourage collaborations between computer scientists and other scientists and engineers, as many data intensive science and engineering applications can potentially benefit from new computing platforms such as the cloud.

CISE and OCI will offer funding for researchers to explore the use of the Microsoft Azure services platform via three mechanisms: **supplemental funding** to existing awards, **Early-concept Grants for Exploratory Research (EAGER),** and a forthcoming **new program solicitation.** All of these mechanisms will be used to support any kind of computing research and software development for any type of application associated with the Azure services platform, perhaps in combination with the use of other platforms.

Researchers may immediately submit a request for supplemental funding to any existing NSF award to the **CCF** division or to OCI, prefixing the title with "ASP: Supplement: ". Supplemental funding requests may request extension of an existing NSF award for an additional year. Supplemental funding requests should be submitted via FastLane no later than **April 15, 2010** to ensure consideration in the current fiscal year. PIs are cautioned that the existing award must still be open at the time the supplement is awarded (not submitted); awards that have concluded before the supplement is awarded will not be reopened. Additional information about requesting supplemental support is contained in Part II of the NSF Proposal and Award Policy and Procedures Guide (PAPPG) available at:
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp.

Researchers may also immediately submit EAGER proposals to the **CCF** division or to OCI and prefix the title with "ASP: EAGER: ". Proposals must conform to the guidelines for preparation of EAGER proposals as specified in Part I of the PAPPG. Please note that an EAGER submission should satisfy the EAGER submission guidelines and is limited to a total budget of **$300K** for a maximum of two years. Such proposals should be submitted no later than **April 15, 2010** to ensure consideration in the current fiscal year.

CISE and OCI (and possibly other NSF Directorates and Offices) also anticipate releasing a **new program solicitation** to support larger, longer duration projects that will exploit the Azure services platform. We are hopeful that this solicitation will be released shortly and posted on NSF's web site. PIs will have 90 days to respond.

We anticipate the release of an FAQ web page shortly, with additional details on the Azure services platform and the various funding mechanisms.

Questions concerning these opportunities should be addressed to the following program directors: **Chita Das** in CCF (cdas@nsf.gov), **Krishna Kant** in CNS (kkant@nsf.gov), **Frank Olken** in IIS (folken@nsf.gov), or **Manish Parashar** (mparasha@nsf.gov) in OCI.

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