Cloud computing and big data intersect at NIST

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Combining cloud computing and big data could hasten valuable scientific discoveries in many areas including astronomy. (NASA image of nebula N76 in a bright, star-forming region of the Small Magellanic Cloud.) Credit: NASA

Two major new technologies come together for the Cloud Computing and Big Data Workshop, hosted by the National Institute of Standards and Technology (NIST) at its Gaithersburg, Md., campus Jan. 15-17, 2013.

Cloud computing offers an on-demand access to a shared pool of

configurable resources; big data explores large and complex pools of information and requires novel approaches to meet the associated computing and storage requirements. The workshop will focus on the intersection of the two—the meeting is part of the traditional semi-annual cloud computing forum and workshop series with the additional dimension of big data and its relation with and influence on cloud platforms and cloud computing.

"Cloud computing and big data are each powerful trends. Together they can be even more powerful and that's why we're hosting this workshop," said Chuck Romine, director of the NIST Information Technology Laboratory. "The cloud can make big data accessible to those who can't take advantage today. In turn, big data opens doors to discovery, innovation, and entrepreneurship that are inaccessible at conventional data scales."

The January conference will bring together leaders and innovators from industry, academia and government in an interactive format that combines keynote presentations, panel discussions, interactive breakout sessions and open discussion. Patrick Gallagher, Under Secretary of Commerce for Standards and Technology and NIST director, and Steven VanRoekel, the [Chief Information Officer](#) of the United States, will open the conference.

The first day's morning panels examine the convergence of cloud and big data, progress on the U.S. Government Cloud Computing Roadmap and international cloud computing standards.

Two afternoon sessions focus on progress made on the Priority Action Plans (PAP)s associated with the 10 requirements described in the first release of the *USG Cloud Computing Technology Roadmap, Volume I* (NIST SP 500-293). Each requirement has associated PAPs related to interoperability, portability and security. The meetings will showcase the

voluntary, independent, cloud-related efforts on diverse PAPs underway by industry, academia and standards-developing organizations.

The second day of the workshop explores the unprecedented challenges posed by big data on storage, integration, analysis and visualization—demands that many cloud innovators are working to meet today. The workshop will explore possibilities for harmonizing cloud and big data measurement, benchmarking and standards in ways that bring the power of these two approaches together to facilitate innovation. Day three offers workshops on exploring the formation of new working groups at the intersection of cloud and big data, kicking off a Big Data Research Roadmap, discussing international cloud computing standards progress, and hearing the status of the *USG Cloud Computing Technology Roadmap Volume III*. Special topic briefings will be offered during lunch times.

  More information: www.nist.gov/itl/cloud/cloudbdworkshop.cfm
csrc.nist.gov/publications/nis … 00-145/SP800-145.pdf
www.nist.gov/itl/cloud/upload/ … 00_293_volumeI-2.pdf

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