

Next Steps

Volume I of the roadmap marks the completion of the first phase of the NIST Cloud Computing program and initiative to collaboratively build a *USG Cloud Computing Technology Roadmap*. This milestone is consistent with the strategy defined in the program planning phase, May through October 2010, and with the program time line presented in November 2010.

As described previously, this roadmap document is a practical mechanism to integrate and present analysis, findings, and useful technical artifacts generated through the NIST Cloud Computing program public and federal working groups, and internal NIST projects.

However, strategically, the roadmap publication also provides an opportunity, as intended, to assess progress and effectiveness. The NIST initial assessment is that the collaborative approach has been effective, and the initiative has met the goal of technically advancing the cloud computing model – particularly in its target area of interoperability, portability, and security standards, guidance, and technology requirements.

NIST bases its initial assessment on the 18-month continued level of engagement with the cloud community in public working groups and NIST Cloud Computing Forum and Workshop events. Hundreds of individuals and organizations are registered working group members, and the NIST-hosted cloud forum events have been registered to capacity. In terms of results, the “useful information for cloud adopters” available publically on the NIST Cloud Computing Web site and special publications produced from NIST projects and working groups are widely referenced and used. These are summarized in Volume II of the roadmap document. The most widely recognized work, after the *NIST Cloud Computing Definition*, SP 800-145(Draft), is the *NIST Cloud Computing Reference Architecture*, SP 500-292, which was issued in September 2011. It is currently being used as the basis for developing a standardized reference architecture by international standards bodies, and by US government agencies and industry for its intended purpose of categorizing cloud services so that government agencies and others can compare cloud services from different providers more easily.

NIST also bases its assessment on the review and support for the *US Government Cloud Computing Technology Roadmap Volume 1, Release 1.0, (DRAFT) High-Priority Requirements to Further USG Agency Cloud Computing Adoption* by the representatives designated by the US Federal CIO Council to participate in the Federal Cloud Computing Standards and Technology Working Group. Confirmation of the priorities presented here by a broad sample of representatives of USG organizations who are responsible for deploying IT to support agency missions reinforces the conclusion that “we” – NIST and its cloud community collaboration partners – “got it right” in terms of the objectives for the effort and the roadmap.

Given this assessment, the following section presents the current thinking, strategy, and plan for the NIST Cloud Computing program and USG Cloud Computing Technology Roadmap initiative to now leverage this initial roadmap going forward, and take our next steps toward the overall goal of supporting USG agencies in the secure and effective deployment of cloud computing.

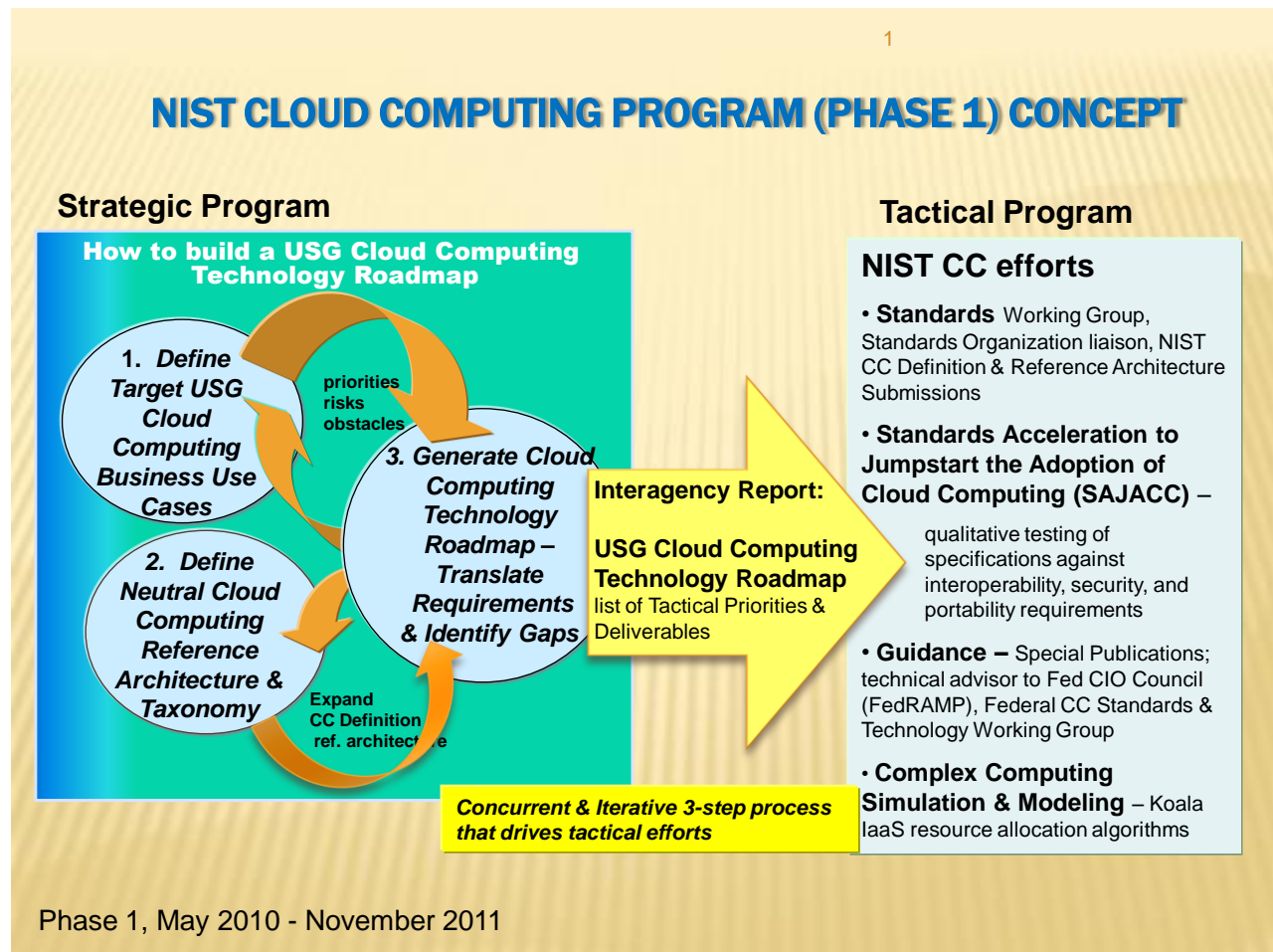
The expectation is that this initial strategy and plan for Phase 2 of the NIST Cloud Computing program and USG Cloud Computing Technology Roadmap initiative will be revised based on the insights and opinions received during the public comment period, as well as other factors, including but not limited to, US government national program priorities. The target for confirming the strategic scope of the second

phase of the NIST Cloud Computing program is the first quarter, calendar 2012. Tactical projects and working groups are planned to continue November through March 2012, as they were initiated in Phase 1, described below.

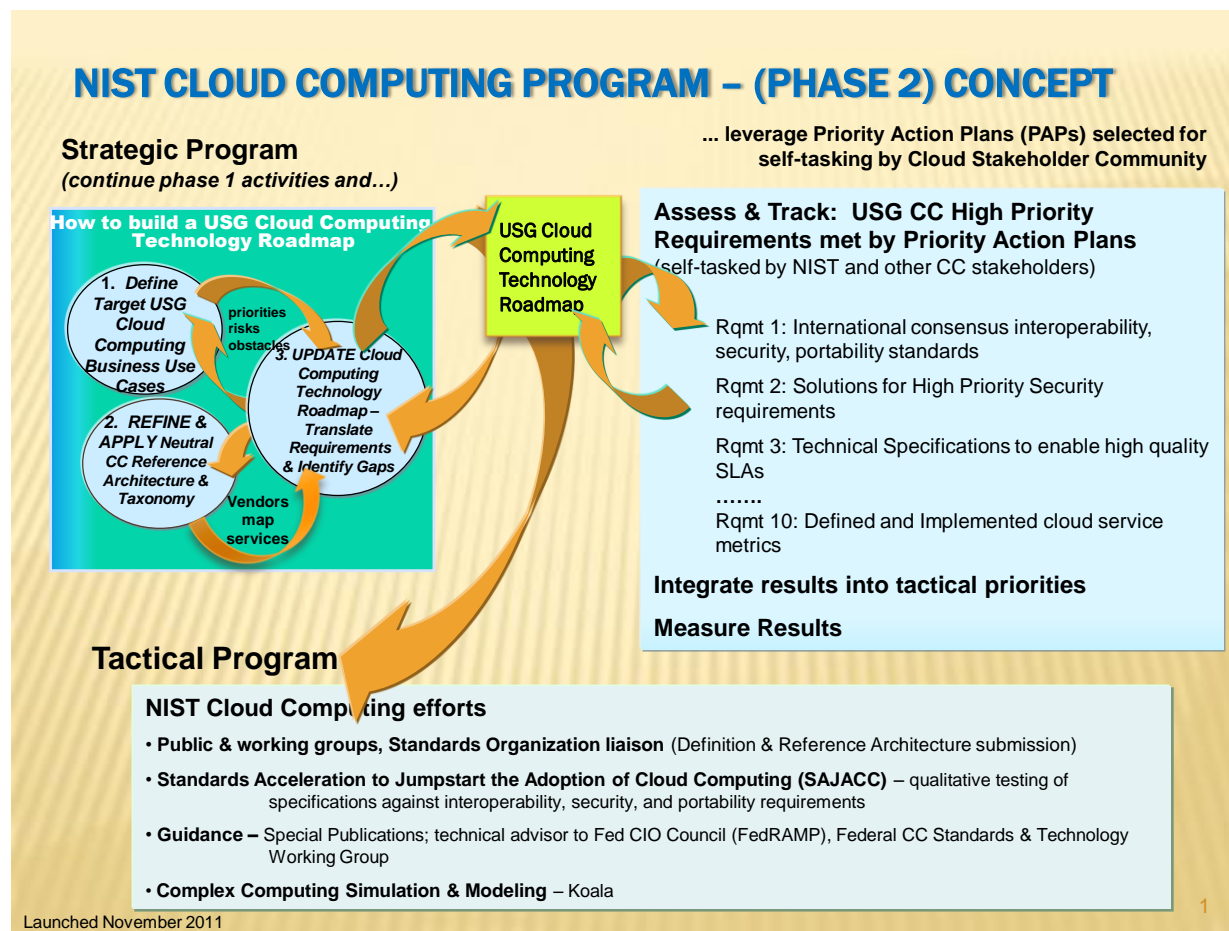
Regardless of the refined assessment and revised strategy for the NIST cloud computing program going forward, the expectation is that the program will continue to produce focused deliverables at measured six-month intervals, continue its presence through outreach activities and interactions with other USG and international stakeholders, and track progress towards the priorities presented in this document.

4.1 NIST Cloud Computing Program Phase II

Phase 1 of the NIST Cloud Computing program effectively established and integrated three strategic processes, public working groups, and NIST cloud efforts to develop the first USG Cloud Computing Technology Roadmap, and help NIST to prioritize its internal projects.



Phase 2 of the NIST Cloud Computing program continues the Phase 1 scope and activities. In addition, Phase 2 introduces new strategic activities to leverage the *USG Cloud Computing Technology Roadmap* produced in Phase 1.



Phase 2 is planned to include:

- Applying the USG Cloud Computing Business Use Case template to develop and make publically available a larger set of USG agency mission use cases;
- Leveraging this effort to complete and issue the roadmap Volume III: *Technical Considerations for USG Cloud Computing Deployment Decisions*;
- Validating the Phase 1 Reference Architecture (SP 500-292) through cloud service provider examples of categorized services, and working with cloud stakeholders to establish a repository of the mapped vendor services to support USG and others in comparing cloud service offerings;
- Continuing to identify high-priority interoperability, portability, and security requirements which must be met for USG agencies to accelerate the adoption of the cloud computing model; continuing to assess standards, guidance, and technology that must be in place to meet these requirements, and recommending Priority Action Plans (PAPs) for voluntary self-tasking by the cloud stakeholder community, to support standards, guidance, and technology advancement;

- Working with cloud stakeholders to identify efforts which satisfy the objectives of the PAPs, assessing and communicating the extent to which the requirements are satisfied, and defining processes to leverage these efforts to support the USG adoption of cloud computing;
- Identifying the subset of PAP objectives which are consistent with NIST core mission standards, guidance and research activities; developing NIST PAP plans, and executing those plans;
- Integrating these strategic activities with NIST tactical program projects and working groups; continuing to deliver special publications, technical guidance, and support collaborative Web-based tools to support these tactical efforts;
- Defining and tracking measures and metrics to assess program effectiveness;
- Continuing outreach activities including the NIST Cloud Computing Forum & Workshop series to calibrate and leverage NIST efforts with the broader stakeholder community; and
- Analyzing and assessing the technical work completed through these efforts, and applying this analysis to revise the *USG Cloud Computing Technology Roadmap* on a periodic basis.

4.2 Time Line and Deliverables

