

Results of Clouds SDO Survey (June 2010)

This document presents the results a survey of the formal and informal working groups/committees and standard development organizations (SDO) that are studying and/or exploring Cloud related work items. A reference to the Cloud standards Wiki is also included. This is the first draft of this document and it will be refined after discussion. It has been prepared to facilitate discussions in IETF Clouds bar BoF.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
A1	ARTS (The Association for Retail Technology Standards) http://www.nrf-arts.org/	<p>The ARTS is dedicated to creating an open environment where both retailers and technology vendors work together to create international retail technology standards and to reduce the costs of the technology.</p> <p>Recently, this group also started looking at researching cloud computing and developing white papers to address cloud issues.</p> <p>Cloud Computing team starts work on a "mini RFP(Request for Proposal)" to help retailers evaluate cloud strategies and solutions.</p> <p>ARTS is a separate council within the NRF(National Retail Federation) governed by a council of retailers and technology solution providers.</p>	<p>ARTS has four standards/Committees:</p> <ul style="list-style-type: none"> ● UnifiedPOS - Committee Chair Paul Gay, Epson ● Data Model - Committee Chair Lynn Myers, Lowe's Companies ● ARTS XML - Committee Chair Tim Hood, SAP ● Standard RFPs- Committee Chair Ann McCool <p>Special ARTS Educational Workshop Cloud Computing / SOA will be held on Thursday 24 June, 2010.</p>	<p>ARTS Cloud Computing for Retail White Paper - Best Practices Documents.</p> <p>This Cloud Computing for Retail whitepaper offers unbiased guidance for achieving maximum results from this relatively new technology. Version 1.0 represents a significant update to the draft version released in October 2009, specifically providing more examples of cloud computing in retail, as well as additional information on the relationship to Service Oriented Architecture (SOA) and constructing a Private Cloud.</p> <p>The June(2010) workshop will detail implementation success factors, such as:</p> <ul style="list-style-type: none"> ● Selecting the right applications for immediate ROI ● When to use Public and Private Clouds ● Keys to reliability and security ● Avoiding vendor lock-in ● The role of standards in successful Cloud and SOA implementations <p>Learn how you can increase customer satisfaction at lower costs by implementing Cloud in a SOA infrastructure.</p>	<p>Status: Active.</p> <p>Partnership/Coordination: NRF.</p> <p>Language: English.</p>

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A2	ATIS (Alliance for Telecommunications Industry Solutions) SON FG. http://www.atis.org/SON/index.asp	The SON Forum is addressing work to enable the interoperability and implementation of Service Oriented Network (SON) applications and services by developing standards, providing coordination for the development of standards and practices, and facilitating related technical activities. This forum is placing an emphasis on telecommunications industry needs in collaboration with regional and international standards development programs in the telecommunications, IT and Web industries. ATIS is accredited by the American National Standards Institute (ANSI).	WORK AREA1:Policy and Data Models Work Area (PDM) WORK AREA2:OSS/BSS and Virtualization Work Area (OBV) WORK AREA3:Service Delivery Creation and Enablers Work Area (SDCE) Andrew White, Qwest SON Forum Chair Gary Munson, AT&T Son Forum Vice Chair	Not available	Status: Active. Partnership/Coordination: <ul style="list-style-type: none"> ● ANSI ● 3GPP(TBC) Language: English.

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C1	CCF (Cloud Computing Forum, Korea) http://www.ccsf-kr.org/	1) Constitute National level CC Forum 2) Provide CC technology development and standardization activity 3) Sharing CC technology information 4) Study on CC adaptation method into Public sectors 5) Support international standardization activity of CC 6) Develop CC related Law and policy	Mr. Son seung-won 6 Working Groups: ● Group 1: Policy and Certification ● Group 2: CC Technology Framework ● Group 3: Media Cloud ● Group 4: Storage Cloud ● Group 5: CC Technology for Green IDC ● Group 6: Mobile Cloud	Document in Korean..	Status: Active. Partnership/Coordination: Not known. Language: Korean, with some titles in English.

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C2	CCIF, http://www.cloudforum.org/	<p>Goals The CCIF was formed in order to enable a global cloud computing ecosystem whereby organizations are able to seamlessly work together for the purposes for wider industry adoption of cloud computing technology and related services. A key focus will be placed on the creation of a common agreed upon framework / ontology that enables the ability of two or more cloud platforms to exchange information in a unified manner.</p> <p>Mission CCIF is an open, vendor neutral, open community of technology advocates, and consumers dedicated to driving the rapid adoption of global cloud computing services. CCIF shall accomplish this by working through the use open forums (physical and virtual) focused on building community consensus, exploring emerging trends, and advocating best practices / reference architectures for the purposes of standardized cloud computing.</p>	<ul style="list-style-type: none"> ● Standard and Interoperability Working Group ● Unified Cloud Interface Working Group <p>Mr. Reuven Cohen (Enomaly Inc.)</p> <p>Note: CCIF is <u>inactive</u> now.</p>	<p>CCIF comes up with a unified cloud interface (a.k.a. cloud broker) whose features are as follows: unify various cloud APIs and abstract it behind an open and standardized cloud interface, that is, create an API about other APIs. Proposed a UCI architecture.</p>	<p>Status: Inactive.</p> <p>Partnership/Coordination: Not known.</p> <p>Language: English.</p>

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C3	CloudAudit http://www.cloudaudit.org/	The goal of CloudAudit is to provide a common interface and namespace that allows cloud computing providers to automate the Audit, Assertion, Assessment, and Assurance (A6) of their infrastructure (IaaS), platform (PaaS), and application (SaaS) environments and allow authorized consumers of their services to do likewise via an open, extensible and secure interface and methodology.	Mr. Christofer Hoff Automated Audit, Assertion, Assessment, and Assurance API (A6 Working Group), officially launched in January 2010.	A6WG-Call-010810-Hoff.pdf, Feb 12, 2010. FedRAMP Executive Overview 20100414.pptx, Apr 26, 2010.	Status: Active. Partnership/Coordination: Not known. Language: English.

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C4	CCSA – Clouds http://www.ccsa.org.cn/	CCSA only follows up and evaluates the influence of cloud computing on telecommunication.	TC2 WG1 TC1 WG4	Study on Cloud Computing in Mobile Internet. Study on Cloud Computing with P2P technology. Resource Virtualization Application Mode and Operation Requirement.	Status: Early Stage. Partnership/Coordination: Not known. Language: English.

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C5	Cloud Computing Use Cases Group http://groups.google.com/group/cloud-computing-use-cases	The goal of this group is to bring together cloud consumers and cloud vendors to define common use cases for cloud computing. The use cases will demonstrate the performance and economic benefits of cloud computing, and will be based on the needs of the widest possible range of consumers. The ToC of the latest version (V3) of the white paper includes <ul style="list-style-type: none"> ● Definitions and Taxonomy ● Use Case Scenarios ● Customer Scenarios ● Developer Requirements ● Security Scenarios ● Security Use Case Scenarios 	No information in the website.	Cloud_Computing_Use_Cases_Whitepaper-3_0.pdf, Feb 2, 2010.	Status: Active. Partnership/Coordination: OCM Language: English.

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C6	China Institute of Electronics. http://www.ciecloud.org/	The goal of the CIA is to solve the emerged problems with the rapid development of Cloud Computing, follows up the latest development of technologies related to Cloud Computing, strengthen communication and cooperation in the domain of Cloud Computing, prompt the research and application on the technology of Cloud Computing, and draw up industry specification on Cloud Computing.	Cloud Computing Experts Association. Mr. Li Deyi	January 2010, CCCTIA (China Cloud Computing Technology and Industry Alliance) established in Beijing. Feb 2010, Cloud Computing Whitepaper released. March 2010, seminar on virtualization was held in Beijing.	Status: Active. Partnership/Coordination: Not known. Language: Chinese, with some titles in English.

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C7	Cloud Operations and Security Japan http://www.meti.go.jp/english	<p>Information Security Awareness Campaign to be jointly launched by the public and private sectors</p> <p>The Ministry of Economy, Trade and Industry (METI), Symantec Corporation, Trend Micro Incorporated, McAfee, Inc., and the Information-Technology Promotion Agency, Japan, will jointly launch the following campaign to strengthen information security measures.</p> <p>As information technology (IT) penetrates further into people's lives and socio-economic activities, Internet users face higher risks of becoming victims of computer viruses, unauthorized access or other security breaches. This campaign is aimed at preventing such risks and increase people's awareness and knowledge of precautions for the safe use of IT.</p>	No information in the website.	<p>- Seminar on information security measures A seminar will be held on March 9 under the theme of "Challenges and a Vision for Corporate Information Security." Presenters invited from various fields will give lectures on issues such as security in cloud computing and the latest trends in security measures overseas, which would help companies deal with security problems they face.</p>	<p>Status: Active.</p> <p>Partnership/Coordination: Not known.</p> <p>Language: English.</p>

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C8	CSA (Cloud Security Alliance) http://www.cloudsecurityalliance.org/	<p>The Cloud Security Alliance is a non-profit organization formed to promote the use of best practices for providing security assurance within Cloud Computing, and provide education on the uses of Cloud Computing to help secure all other forms of computing.</p> <p>The CSA is mainly focus on:</p> <ul style="list-style-type: none"> ● Promoting a common level of understanding between the consumers and providers of cloud computing regarding the necessary security requirements and attestation of assurance. ● Promoting independent research into best practices for cloud computing security. ● Launching awareness campaigns and educational programs on the appropriate uses of cloud computing and cloud security solutions. ● Creating consensus lists of issues and guidance for cloud security assurance. 	<p>Mr. Jim Reavis (Executive Director), Mr. Christofer Hoff (Technical Director)</p> <p>8 Working Groups:</p> <ul style="list-style-type: none"> ● Group 1: Architecture and Framework ● Group 2: Governance, Risk Management, Compliance, Audit, Physical, BCM, DR ● Group 3: Legal and eDiscovery ● Group 4: Portability & Interoperability and Application Security ● Group 5: Identity and Access Mgt, Encryption & Key Mgt ● Group 6: Data Center Operations and Incident Response ● Group 7: Information Lifecycle Management & Storage ● Group 8: Virtualization and Technology Compartmentalization 	<p>Top Threats to Cloud Computing White paper V1.0, 2010-03. Security Guidance for Critical Areas of Focus in Cloud Computing White paper V2.1, 2009-12</p>	<p>Status: Active.</p> <p>Partnership/Coordination: Not known</p> <p>Language: English.</p>

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C9	CSA/TCI (Cloud Security Alliance / Trusted Cloud Initiative) http://www.trusted-cloud.com/	The Trusted Cloud Initiative will help cloud providers develop industry-recommended, secure and interoperable identity, access and compliance management configurations, and practices. We will develop reference models, education, certification criteria and a cloud provider self-certification toolset in 2010.	Mr. Liam Lynch (eBay), Mr. Nick Nikols (Novell) The TCI hopes to publish the industry's first cloud security certification by the end of 2010.	Domain 12: Guidance for Identity & Access Management White paper V2.1, 2010-04. TCI hopes to publish the industry's first cloud security certification by year's end	Status: Active. Partnership/Coordination: CSA(TBC). Language: English.

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D1	DMTF, http://www.dmtf.org/about/cloud-incubator/	<p>DMTF's Open Cloud Standards Incubator will focus on standardizing interactions between cloud environments by developing cloud resource management protocols, packaging formats and security mechanisms to facilitate interoperability. Initiative within DMTF</p> <p>The Open Cloud Standards Incubator addresses the following aspects of the lifecycle of a cloud service:</p> <ul style="list-style-type: none"> ● description of the cloud service in a template ● deployment of the cloud service into a cloud ● offering of the service to consumers ● consumer entrance into contracts for the offering ● provider operation and management of instances of the service ● removal of the service offering <p>The most recent version of DSP4003 v1.3.0 (the Alliance Partner Work Register Process document) approved by the DMTF board of directors on June 8th, 2006 defines how an alliance partner work register is created and the sequence of steps that are required before a work register is approved and the alliance partnership is established.</p>	Mr. Winston Bumpus (President, DMTF)	DSP_IS0101_1.0.0(Interoperable Clouds White Paper).pdf	<p>Status: Active.</p> <p>Partnership/Coordination:</p> <ul style="list-style-type: none"> ● CSA ● CompTIA(Computing Technology Industry Association) ● ECMA(Ecma International) ● OGF(Open Grid Forum) ● TGG(The Green Grid) ● TOG(The Open Group) ● OMG(Object Management Group) ● PWG(Printer Working Group) ● SNIA ● TMF(TeleManagement Forum) ● TCG(Trusted Computing Group) ● UEFI(Unified Extensible Firmware Interface) <p>Language: English.</p>

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D2	DMTF VMAN Initiative (Distributed Management Task Force, Virtualization Management Initiative) http://www.dmtf.org/initiatives/vman_initiative/	<p>DMTF's Virtualization Management Initiative (VMAN) includes a set of specifications that address the management lifecycle of a virtual environment. VMAN's OVF (Open Virtualization Format) specification provides a standard format for packaging and describing virtual machines and applications for deployment across heterogeneous virtualization platforms. VMAN's profiles standardize many aspects of the operational management of a heterogeneous virtualized environment.</p> <p>The key properties of the format are as follows:</p> <ul style="list-style-type: none"> ● Optimized for distribution ● Optimized for a simple, automated user experience ● Supports both single VM and multiple ● Portable VM packaging ● Vendor and platform independent ● Extensible - OVF is immediately useful — and extensible. ● Localizable - OVF supports user-visible descriptions in multiple locales 	Mr. Winston Bumpus (President, DMTF)	<ul style="list-style-type: none"> ● DSP0243_1.0.0(Open Virtualization Format Specification).pdf, <p>For complete list of DMTF VMAN standards and profiles, see</p> <ul style="list-style-type: none"> ● DSP2013 Common Information Model System Virtualization White paper V1. 0 2007-11 DSP2017 ● Open Virtualization Format White paper V1.0 2009-02 ● Enabling Portability & Simplified Deployment of Virtual Appliances Technical note V1.0 2008-09 ● Virtualization MANagement (VMAN) Initiative Technical note V1.0 2008-09 ● Virtualization MANagement (VMAN): A Building Block for Cloud Interoperability Technical note V1.0 2009-08 	<p>Status: Active.</p> <p>Partnership/Coordination: DMTF.</p> <p>Language: English.</p>

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E1	ENISA(European Network and Information Security Agency) http://www.enisa.europa.eu/	<p>ENISA is carrying out a risk assessment of cloud computing with input from 30 experts from major companies and academic institutions. The paper should provide an assessment of key risks and their mitigation strategies in cloud computing.</p> <p>ENISA Cloud Computing Risk Assessment</p> <p>ENISA is carrying out a risk assessment of cloud computing with input from 30 experts from major companies and academic institutions. The paper should provide an assessment of key risks and their mitigation strategies in cloud computing which will allow:</p> <ul style="list-style-type: none"> --European Policymakers to decide on research policy (to develop technologies to mitigate risks) --European Policymakers to decide on appropriate policy and economic incentives, legislative measures, awareness-raising initiatives etc... vis-a-vis cloud-computing technologies. --Business leaders to evaluate the risks of adopting such technologies and possible mitigation strategies. Individuals/citizens to evaluate the cost/benefit of ----using the consumer version of such applications. 	<p>Executive Director, Dr Udo Helmbrecht</p> <p>2nd Workshop on the establishment of a European Public-Private Partnership for Resilience (EP3R).</p>	<p>Cloud_Identity_Hogben.pdf, http://www.enisa.europa.eu/act/it/oar/cloud-computing/Cloud_Identity_Hogben.pdf/view.</p> <p>Cloud Computing Security Risk Assessment.pdf, http://www.enisa.europa.eu/act/rm/files/deliverables/cloud-computing-risk-assessment.</p> <p>SURVEY_An SME perspective on Cloud Computing.pdf, http://www.enisa.europa.eu/act/rm/files/deliverables/cloud-computing-sme-survey.</p> <p>Cloud Computing Information Assurance Framework.pdf, http://www.enisa.europa.eu/act/rm/files/deliverables/cloud-computing-information-assurance-framework.</p>	<p>Status: Active.</p> <p>Partnership/Coordination: EP3R(European Public-Private Partnership for Resilience), http://ec.europa.eu/information_society/policy/nis/strategy/activities/ciip/impl_activities/index_en.htm</p> <p>Language: English.</p>

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E2	ETSI STF 331 (Specialist Task Force on ICT GRID Technologies Interoperability and Standardization) http://portal.etsi.org/STFs/STFHomePages/STF331/STF331.asp	The Specialist Task Force (STF) addressed, in general, IT-Telecom (Information Technology and Telecommunications) convergence and, in particular, the lack of interoperable GRID solutions built by IT in conjunction with the Telecom industry. At the request of TC GRID, this scope was extended to include "cloud computing".	Mr. Geoffrey Caryer (STF 331 team leader)	White paper: Grid and Cloud Computing Technology: Interoperability and Standardization for the Telecommunications Industry, 2009. Technical Report: ETSI TR 102 659-1 Study of ICT GRID interoperability gaps; Part 1: Inventory of ICT Stakeholders V1.2.1, 2009-10 ETSI TR 102 659-2 Study of ICT GRID interoperability gaps; Part 2: List of identified Gaps V1.2.1, 2009-10 ETSI TR 102 766 ICT GRID Interoperability Testing Framework and survey of existing ICT Grid interoperability solutions V1.1.1, 2009-10 Technical Specification: TSI TS 102 786 ICT GRID Interoperability Testing Framework V1.1.1, 2009-10	Status: Active. Partnership/Coordination: ETSI. Language: English.

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E3	ETSI TC GRID (Technical Committee Grid) http://portal.etsi.org/portal/serve.pt/community/GRID/310	Responsible for producing test specifications and standards to integrate the use of telecommunications infrastructures in networked computing, including both Grid computing and Cloud computing. ETSI's Grid Technical Committee (TC GRID) is addressing issues associated with the convergence of Information Technology (IT) and telecommunications, paying particular attention to scenarios where connectivity goes beyond the local network. This includes not only Grid computing but also the emerging commercial trend towards Cloud computing which places particular emphasis on ubiquitous network access to scalable computing and storage resources. The vision is to evolve towards a coherent and consistent general purpose infrastructure, made up of interoperable elements ranging from small devices up to supercomputers, connected by global networks and capable of supporting communities ranging from individuals to whole industries, and with applications in business, public sector, academic and consumer environments.	Mr. Michael Fisher (BT Group Plc) Grid and cloud computing Memorandum of Understanding with the Open Grid Forum (OGF)	Technical Specification: ETSI TS 102 811 GRID; Grid Component Model (GCM); Interoperability test V1.1.1 , 2010-03 ETSI TS 102 828 GRID; Grid Component Model (GCM); GCM Application Description V2.1.1, 2010-03 ETSI TS 102 830 GRID; Grid Component Model (GCM); GCM Fractal Management API Technical Specification V1.1.1, 2010-03	Will be renamed to TC Cloud shortly started work on standardization requirements for cloud services (ETSI TR 102 997) Status: Initiating TC Cloud. Partnership/Coordination: <ul style="list-style-type: none"> ● ETSI TC TISPAN ● ETSI TC MTS ● ETSI CTI (Centre for Testing & Interoperability) ● ETSI Plugtests Events ● ITU-T ● Open Grid Forum, with which a Memorandum of Understanding has been signed ● European Commission DG INFSO, DG ENTR ● NESSI European Technology Platform Language: English.

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G1	GICTF (Global Inter-Cloud Technology Forum, Japan) http://www.gictf.jp/index_e.html	GICTF aims to promote standardization of network protocols and the interfaces through which cloud systems interwork with each other, and to enable the provision of more reliable cloud services than those available today. Main activities and goals 1. Promote the development and standardization of technologies to use cloud systems; 2. Propose standard interfaces that allow cloud systems to interwork with each other; 3. Collect and disseminate proposals and requests regarding organization of technical exchange meetings and training courses; 4. Establish liaison with counterparts in the U.S. and Europe, and promote exchange with relevant R&D teams.	Prof. Tomonori Aoyama (Keio Univ.) General Assembly Board of Directors Technology Task Force Application Task Force	No specifications output Plan for fiscal 2009 1. Research Research on cloud system usage technology, cloud system interworking technology, technical trends in cloud network protocols, and trends in standardization activities 2. Provision of the basic architecture needed for establishing standard interfaces. Provision of the basic architecture needed for establishing standard interfaces related to interworking between cloud systems, and cloud network protocols 3. Development of awareness 3.1 Compilation of proposals and user requirements with a view to achieving early implementation of interworking between cloud systems 3.2 Holding of lectures and symposiums on cloud system usage technology, cloud system interworking technology, etc. 3.3 Information dissemination using the Internet	The 1st General Assembly Meeting of the GICTF (Kickoff Meeting, 2009.07.17). Status: Active. Partnership/Coordination: Not known. Language: English.

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I1	IEEE SA (Standards Association) http://standards.ieee.org/	CLOUD 2009 is created to provide a prime international forum for both researchers and industry practitioners to exchange the latest fundamental advances in the state of the art and practice of Cloud Computing, identify emerging research topics, and define the future of Cloud Computing. http://www.thecloudcomputing.org/2009/2/ CLOUD 2010 tries to attract researchers, practitioners, and industry business leaders in all the following areas to help define and shape cloud computing, and its related modernization strategy and directions of the services industry. http://www.thecloudcomputing.org/2010/	General Chairs Stephen S. Yau, Arizona State University, USA Liang-Jie Zhang, IBM T.J. Watson Research, USA Program Chairs Wu Chou, Avaya Labs Research, Avaya, USA Adrezaj M Goscinski, Deakin University, Australia Application and Industry Track Chairs Claudio Bartolini, HP Labs, USA Min Luo, IBM Software Group, USA	IEEE SA collaborated with CSA in a cloud security standards survey, and in some events related to cloud standards. A number of existing IEEE standards is indirectly linked to cloud computing. Cloud Security Alliance and IEEE Join Forces to Identify Cloud Security Standards Requirements For IT Practitioners	Status: Active. Partnership/Coordination: CSA Language: English.

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I2	IETF/APP Decade https://datatracker.ietf.org/wg/decade/	<p>Decoupled Application Data Enroute (decade)</p> <p>The Working Group (WG) will have three primary tasks.</p> <p>First, the WG will identify target applications to appropriately scope the problem and requirements. P2P applications are the primary target, but suitability to other applications with similar requirements may be considered depending on additional complexity required to support such applications.</p> <p>Second, the WG will identify the requirements to enable target applications to utilize in-network storage. Requirements will include the ability for an application to (1) store, retrieve, and manage data, (2) indicate access control policies for storing and retrieving data suitable to an environment with users across multiple administrative and security domains (e.g., in a P2P environment), and (3) indicate resource control policies for storing and retrieving data.</p> <p>Third, the WG will develop an architecture within which the DECADE protocol can be specified. This architecture will identify DECADE's relationship to existing IETF protocols and where (if any) new protocol is needed or extensions to existing protocols need to be made.</p> <p>The architecture will not specify a protocol or extension; if development of a new protocol is needed, <u>the WG will seek to recharter for this purpose or might ask an existing WG to work on such extensions.</u></p> <p>The WG will focus on the following work items:</p> <ul style="list-style-type: none"> - A "problem statement" document. This document provides a description of the problem and common terminology. - A requirements document. This document lists the requirements for the in-network storage service (e.g., supported operations) and the protocol to support it. The service will include storing, retrieving, and managing data as well as specifying both access control and resource control policies in the in-network storage pertaining to that data. - A survey document. This document will survey existing related mechanisms and protocols (e.g., HTTP, NFS, and WebDAV), and evaluate their applicability to DECADE. - An architecture document. This document will identify DECADE's relationship with existing IETF protocols. Existing protocols will be used wherever possible and appropriate to support DECADE's requirements. In particular, data storage, retrieval, and management may be provided by an existing IETF 	<p>Chairs: Richard Woundy <Richard_Woundy@cable.comcast.com> Haibin Song <melodysong@huawei.com></p> <p>Area Director: Alexey Melnikov <alexey.melnikov@isode.com></p>	<p>Discussion Topics:</p> <p>[decade] Using NFS 4.1 in DECADE, Jun 01 2010</p> <p>[decade] Naming mechanism, May 30 2010</p> <p>[decade] WG Action: DEcoupled Application Data Enroute (decade), Apr 27 2010</p>	<p>Status: Active.</p> <p>Partnership/Coordination:</p> <ul style="list-style-type: none"> ● IRTF, ● IASA/IAOC/Trust IANA. <p>Language: English.</p>

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		<p>protocols. The WG will not limit itself to a single data transport protocol since different protocols may have varying implementation costs and performance tradeoffs.</p> <p>However, to keep interoperability manageable, a small number of specific, targeted, data transport protocols will be identified and used.</p> <p>- An document describing the integration of DECADE with existing P2P applications (e.g., integration with BitTorrent).</p> <p>If new protocol development is deemed necessary, the WG will be rechartered. It is not expected that all work items will be ready for IESG review by that point, but WG consensus must show that documents directing eventual protocol development (Requirements and Architecture document) have stabilized. This permits adjustments to such documents as necessary to maintain consistency as protocol development is done.</p> <p>The following issues are considered out-of-scope for the WG:</p> <ul style="list-style-type: none">- Specification of policies regarding copyright-protected or illegal content.- Locating the "best" in-network storage location from which to retrieve content if there are more than one location can provide the same content.- Developing a new protocol for data transport between P2P applications and in-network storage.			
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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
I3	IETF/TSV/nfsv4 http://tools.ietf.org/wg/nfsv4/charter	<p>NFS Version 4 is the IETF standard for file sharing. To maintain NFS Version 4's utility and currency, the working group is chartered to</p> <p>(1) maintain the existing NFSv4, NFSv4.1 and related specifications, such as RPC and XDR, (2) progress these specifications along the standards track, (3) develop a protocol to create a federated namespace using NFSv4's existing referral mechanisms.</p> <p>Goals and Milestones:</p> <p>Done - Issue strawman Internet-Draft for v4 Done - Submit Initial Internet-Draft of requirements document Done - Submit Final Internet-Draft of requirements document Done - AD reassesses WG charter Done - Submit v4 Internet-Draft sufficient to begin prototype implementations Done - Begin Interoperability testing of prototype implementations Done - Submit NFS version 4 to IESG for consideration as a Proposed Standard. Done - Conduct final Interoperability tests Done - Conduct full Interoperability tests for all NFSv4 features Done - Update API advancement draft Done - Form core design team to work on NFS V4 migration/replication requirements and protocol Done - Submit revised NFS Version 4 specification (revision to RFC 3010) to IESG for consideration as a Proposed Standard Done - Strawman NFS V4 replication/migration protocol proposal submitted as an ID Done - WG Last Call for RPC and NFS RDMA drafts Done - WG Last Call for rfc1831bis (RPC version 2) Done - WG Last Call for NFSv4.1 Object-based layout Done - WG Last Call for NFSv4 minor version 1 Done - WG Last Call for NFSv4.1 block/volume layout Done - Submit NFS Minor Version 1 to IESG for publication as a Proposed Standard Done - Submit Object-based pNFS Operations to IESG for publication as a Proposed Standard Done - Submit pNFS Block/Volume Layout to IESG for publication as a Proposed Standard May 2009 - WG Last Call for Requirements for Federated File Systems draft-ietf-nfsv4-federated-fs-reqts-01 Sep 2009 - WG Last Call for rfc3530bis (NFS version 4)</p>	<p>Chairs: Brian Pawlowski <beepy@netapp.com> Spencer Shepler <spencer.shepler@gmail.com></p>	<p>Active:</p> <p>draft-ietf-nfsv4-federated-fs-admin 2010-01-21 draft-ietf-nfsv4-federated-fs-dns-srv-namespace 2010-05-25 draft-ietf-nfsv4-federated-fs-protocol 2010-01-21 draft-ietf-nfsv4-rfc3530bis-dot-x 2010-03-05 draft-ietf-nfsv4-rfc3530bis 2010-03-05</p> <p>Published:</p> <p>draft-ietf-nfsv4-designconsider 1999-05-03 RFC 2624 draft-ietf-nfsv4-federated-fs-reqts 2009-10-22 RFC 5716 draft-ietf-nfsv4-minorversion1-dot-x 2008-12-16 RFC 5662 draft-ietf-nfsv4-minorversion1 2008-12-16 RFC 5661 draft-ietf-nfsv4-nfs-rdma-problem-statement 2008-02-21 RFC 5532 draft-ietf-nfsv4-nfsdirect 2008-04-17 RFC 5667 draft-ietf-nfsv4-nfssec 1999-01-12 RFC 2623 draft-ietf-nfsv4-pnfs-block 2008-12-23 RFC 5663 draft-ietf-nfsv4-pnfs-obj 2008-12-15 RFC 5664 draft-ietf-nfsv4-rfc1831bis 2009-03-05 RFC 5531 draft-ietf-nfsv4-rfc1832bis 2005-05-05 RFC 4506 draft-ietf-nfsv4-rfc3010bis 2002-11-07 RFC 3530 draft-ietf-nfsv4-rpc-netid 2009-01-30 RFC 5665 draft-ietf-nfsv4-rpcrdma 2008-12-04 RFC 5666 draft-ietf-nfsv4-rpcsec-gss-v2 2008-10-09 RFC 5403</p>	<p>Status: Active.</p> <p>Partnership/Coordination: IRTF.</p> <p>Language: English.</p>

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		<p>Oct 2009 - WG Last Call for Administration Protocol for Federated Filesystems draft-ietf-nfsv4-federated-fs-admin-00.txt Oct 2009 - WG Last Call for NSDB Protocol for Federated Filesystems draft-ietf-nfsv4-federated-fs-protocol-00.txtwith IPv6. Additionally, it will create an IANA registry for RPC program numbers and seed it with a registry Sun has been maintaining.</p>			
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Results of Clouds SDO Survey (June 2010)

No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
14	IETF/OPS/netconf http://datatrack.ietf.org/wg/netconf/	<p>The NETCONF Working Group is chartered to produce a protocol suitable for network configuration, with the following characteristics:</p> <ul style="list-style-type: none"> - Provides retrieval mechanisms which can differentiate between configuration data and non-configuration data - Is extensible enough so that vendors will provide access to all configuration data on the device using a single protocol - Has a programmatic interface (avoids screen scraping and formatting-related changes between releases) - Uses a textual data representation, that can be easily manipulated using non-specialized text manipulation tools. - Supports integration with existing user authentication methods - Supports integration with existing configuration database systems - Supports network wide configuration transactions (with features such as locking and rollback capability) - Is as transport-independent as possible - Provides support for asynchronous notifications. <p>The NETCONF protocol is using XML for data encoding purposes, because XML is a widely deployed standard which is supported by a large number of applications.</p> <p>The NETCONF protocol should be independent of the data definition language and data models used to describe configuration and state data.</p>	<p>Personnel Chairs: Bert Wijnen <bertietf@bwijnen.net> Mehmet Ersue <mehmet.ersue@nsn.com></p> <p>Area Director: Dan Romascanu <dromasca@avaya.com> Tech Advisor: Charlie Kaufman <charliek@microsoft.com></p>	<p>Active Internet-Drafts: draft-ietf-netconf-4741bis-02 Network Configuration Protocol (NETCONF) 2010-02-04 draft-ietf-netconf-monitoring-14 YANG Module for NETCONF Monitoring 2010-06-01 draft-ietf-netconf-rfc4742bis-01 Using the NETCONF Configuration Protocol over Secure Shell (SSH) 2010-06-01 draft-ietf-netconf-with-defaults-08 With-defaults capability for NETCONF 2010-05-20</p> <p>RFCs: RFC 4741 (draft-ietf-netconf-prot) NETCONF Configuration Protocol 2006-12 RFC 4742 (draft-ietf-netconf-ssh) Using the NETCONF Configuration Protocol over Secure Shell (SSH) 2006-12 RFC 4743 (draft-ietf-netconf-soap) Using NETCONF over the Simple Object Access Protocol (SOAP) 2006-12 RFC 4744 (draft-ietf-netconf-beep) Using the NETCONF Protocol over the Blocks Extensible Exchange Protocol (BEEP) 2006-12 RFC 5277 (draft-ietf-netconf-notification) NETCONF Event Notifications 2008-07 RFC 5539 (draft-ietf-netconf-tls) NETCONF over Transport Layer Security (TLS) 2009-05 RFC 5717 (draft-ietf-netconf-partial-lock) Partial Lock Remote Procedure Call (RPC) for NETCONF 2009-12</p>	<p>Status: Active.</p> <p>Partnership/Coordination: ● IASA/IAOC/Trust IANA ● IRTF</p> <p>Language: English.</p>

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
I5	IRTF/P2PRG http://www.irtf.org/charter?gtvpe=rg&group=p2prg	Overall, the field of P2P technologies presents a number of interesting challenges which includes new methods for optimizing P2P application overlays, performing routing and peer selection decisions, managing traffic and discovering resources. Areas of interest are also new techniques for P2P streaming and interconnecting distinct P2P application overlays. Other challenges for P2P are related to storage, reliability, and information retrieval in P2P systems. Yet another challenging area is security, privacy, anonymity and trust. Finally, it is challenging to examine P2P systems that are deployed, for example, to measure, monitor and characterize P2P applications. In addition to these areas of research, it is of interest to investigate the requirements of new applications (e.g., real-time P2P applications or P2P applications for wireless networks) on the P2P technologies used. The P2P RG will collaborate with academia and industry on making progress addressing these challenges.	Chairs: Volker Hilt volkerh@bell-labs.com Stefano Previdi sprevidi@cisco.com	Microsoft provides the Cloud Computing Solution Report on how to enhance Productivity & Efficiency While Maximizing Resources. draft-marocco-p2prg-mythbusting-01 (Enrico Marocco) draft-kamei-p2p-experiments-japan-01 (Satoshi Kamei)	Status: Active. Partnership/Coordination: IETF. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
I6	IRTF/VNRG, http://www.irtf.org/charter?gtvpe=rg&group=vnfg	<p>The Virtual Networks Research Group (VNRG) provides a forum for interchange of ideas among a group of network researchers with an interest in network virtualization in the context of the Internet and also beyond the current Internet.</p> <p>The VNRG will consider the whole system of a VN and not only single components or a limited set of components; we will identify architectural challenges resulting from VNs, addressing network management of VNs, and exploring emerging technological and implementation issues.</p> <p>Initial set of work items:</p> <ul style="list-style-type: none"> ● concepts/background/terminology ● common parts of VN architectures ● common problems/challenges in VN ● descriptions of appropriate uses ● some solutions (per-problem perhaps) 	Chairs: Joe Touch touch@isi.edu Martin Stiemerling stiemerling@nw.neclab.eu	draft-shin-virtualization-meta-arch-01.txt	Status: Active. Partnership/Coordination: IETF. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
17	ISO/IEC JTC1 SC38 SGCC http://www.iso.org/iso/standards_development/technical_committees/list_of_iso_technical_committees/iso_technical_committee.htm?commid=601355	Study Group on Cloud Computing(SGCC) 1. Provide a taxonomy, terminology and value proposition for Cloud Computing. 2. Assess the current state of standardization in Cloud Computing within JTC1 and in other SDOs and consortia. 3. Document standardization market/business/user requirements and the challenges to be addressed. 4. Liaise and collaborate with relevant SDOs and consortia related to Cloud Computing. 5. Hold workshops to gather requirements as needed. 6. Provide a report of activities and recommendations to SC38.	SC38 Chairman: Dr. Donald Deutsch (USA) SGCC Convenor: Dr. Seungyun Lee (Korea)	No concrete output at present.	The first meeting was held on 12-14 May 2010 in Beijing (China). Status: Active. Partnership/Coordination: <ul style="list-style-type: none"> ● IEEE ● IETF Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
18	ITU-T FG Cloud (Focus Group Cloud Computing) http://www.itu.int/ITU-T/focusgroups/cloud/	<p>The Focus Group will, from the standardization view points and within the competences of ITU-T, contribute with the telecommunication aspects, i.e., the transport via telecommunications networks, security aspects of telecommunications, service requirements, etc., in order to support services/applications of “cloud computing” making use of telecommunication networks; specifically:</p> <ul style="list-style-type: none"> ● identify potential impacts on standards development and priorities for standards needed to promote and facilitate telecommunication/ICT support for cloud computing ● investigate the need for future study items for fixed and mobile networks in the scope of ITU-T ● analyze which components would benefit most from interoperability and standardization ● familiarize ITU-T and standardization communities with emerging attributes and challenges of telecommunication/ICT support for cloud computing ● analyze the rate of change for cloud computing attributes, functions and features for the purpose of assessing the appropriate timing of standardization of telecommunication/ICT in support of cloud computing <p>The Focus Group will collaborate with worldwide cloud computing communities (e.g., research institutes, forums, academia) including other SDOs and consortia.</p>	Mr. Vladimir Belenkovich, chair.	FG Cloud computing ToR revised clean.doc	<p>Status: Initiating (first meeting on 14-16, June 2010).</p> <p>Partnership/Coordination: TBC.</p> <p>Language: English.</p>

Results of Clouds SDO Survey (June 2010)

No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
K1	KCSA (Korea Cloud Service Association) http://www.kcsa.or.kr/index.jsp	1. Create demand of Cloud service 2. Create Cloud service activation framework and its environments 3. Disseminate and promote Cloud service to public sectors	Mr. Choi Do-Hwan	No concrete output at present	Was established in June 2009. Status: Active. Partnership/Coordination: Not known. Language: English.

Results of Clouds SDO Survey (June 2010)

No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
L1	Liberty Alliance / Kantara Initiative http://www.projectliberty.org/ , http://kantarainitiative.org/	As of June 2009, the work of the Liberty Alliance is transitioning to the Kantara Initiative. The vision of Liberty Alliance is to enable [a networked world] web services based on open standards where consumers, citizens, businesses and governments can more easily conduct online transactions while protecting the privacy and security of identity information. <ul style="list-style-type: none"> ● Build open standard-based specifications for federated identity and identity-based Web services. ● Drive global identity theft prevention solutions. ● Provide interoperability testing. ● Offer a formal certification program for products utilizing Liberty specifications. ● Establish best practices, rules, liabilities, and business guidelines. ● Collaborate with other standards bodies, privacy advocates, and government policy groups. ● Address end user privacy and confidentiality issues. Kantara Initiative: Bridging and harmonizing the identity community with actions that will help ensure secure, identity-based, online interactions while preventing misuse of personal information so that networks will become privacy protecting and more natively trustworthy environments.	Mr. Joni Brennan (Managing Director, Kantara Initiative)	No concrete output at present	Status: New Initiative. Partnership/Coordination: Not known. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
N1	NCOIC (Network Centric Operations Industry Consortium) https://www.ncoic.org/about/	The Network Centric Operations Industry Consortium is a global, not-for-profit organization dedicated to advancing interoperability via network centric operations. NCOIC has formed a Cloud Computing Working Group that will investigate ways to leverage clouds to support global interoperability. NCOIC's 90 member organizations from 19 nations will advocate for open standards and, on reaching consensus, will make voice of industry recommendations about their applicability. Further, NCOIC will develop operational and capability patterns that can enable our customers—in military, aviation, emergency response and cyber security—to achieve portability of information and services from cloud to cloud.	NCOIC Cloud Computing Working Group (CCWG), TBD.	No related output.	Status: Initiating. Partnership/Coordination: Not known. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
N2	NIST, http://csrc.nist.gov/groups/SNS/cloud-computing/	NIST's role in cloud computing is to promote the effective and secure use of the technology within government and industry by providing technical guidance and promoting standards.	Mr. Peter Mell(mell@nist.gov) <ul style="list-style-type: none"> ● Cryptographic Technology ● Systems & Emerging Technologies Security Research ● Security Management & Assurance ● CMVP & CAVP - (now part of Security Management & Assurance) 	cloud-def-v15.doc NIST definition of Cloud Computing Definition V15, 2009-10 Effectively and Securely Using the Cloud Computing Paradigm Presentation V26, 2009-10	Status: Active. Partnership/Coordination: Not known. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
O1	OASIS, http://www.oasis-open.org	OASIS is a not-for-profit consortium that drives the development, convergence and adoption of open standards for the global information society. The consortium produces more Web services standards than any other organization along with standards for security, e-business, and standardization efforts in the public sector and for application-specific markets. OASIS sees Cloud Computing as a natural extension of SOA and network management models. Related standards are: <ul style="list-style-type: none"> ● Security, access and identity policy standards -- e.g., OASIS SAML, XACML, SPML, WS-Security Policy, WS-Trust. ● Content, format control and data import/export standards -- e.g., OASIS ODF. ● Registry, repository and directory standards -- e.g., OASIS ebXML and UDDI. ● SOA methods and models, network management, service quality and interoperability -- e.g., OASIS SOA-RM, and BPEL. OASIS specifications are available here. http://www.oasis-open.org/specs/	OASIS Committees by Category <ul style="list-style-type: none"> ● Adoption Services ● Computing Management ● Document-Centric Applications ● e-Commerce ● Law & Government ● Localisation ● Security ● SOA ● Standards Adoption ● Supply Chain ● Web Services ● XML Processing 	CMIS v1.0, May 2010 WebCGM v2.1, March 2010 Cross-Enterprise Security and Privacy Authorization (XSPA) Profile of Security Assertion Markup Language (SAML) for Healthcare Version v1.0, November 2009 Cross-Enterprise Security and Privacy Authorization (XSPA) Profile of XACML v2.0 for Healthcare Version v1.0, November 2009 DocBook v5.0, November 2009 Devices Profile for Web Services (DPWS) v1.1, July 2009 Technical specification SAML Security Assertion Markup Language V2.0, 2005-03 XACML eXtensible Access Control Markup Language V2.0, 2005-02 Service Provisioning Markup Language V2.0, 2006-04 WS-Security Policy WS-Security policy V1.2, 2007-07 WS-Trust WS-Trust V1.3, 2009-02 Open Document Format for Office Applications V1.1, 2007-02 ebXML ebXML Registry Information Model V2.0, 2002-04 UDDI Universal Description, Discovery and Integration v3.0.2, 2005-02 Reference Model Reference Model for Service Oriented Architecture V1.0, 2006-10	Status: Active. Partnership/Coordination: Not known. Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
O2	OCC, http://opencloudconsortium.org L	The OCC is a member driven organization that supports the development of standards for cloud computing and frameworks for interoperating between clouds, develops benchmarks for cloud computing, and supports reference implementations for cloud computing. The OCC also manages testbeds for cloud computing, such as the Open Cloud Testbed, and operates clouds computing infrastructure to support scientific research, such as the Open Science Data Cloud.	<ul style="list-style-type: none"> ● Working Group on Standards and Interoperability For Large Data Clouds ● The Open Cloud Testbed Working Group ● The Open Science Data Cloud (OSDC) Working Group ● Intercloud Testbed Working Group 	<p>malstone-googlecode-0_8_2.tar.gz, Jun 2009 (MalStone code v 0.8.2 accompanying malstone-TR-09-01)</p> <p>malstone-TR-09-01.pdf, Jun 2009 (MalStone Technical Report-TR-09-01)</p> <p>MalGen_v0.9_Overview.pdf, Apr 2009 (Project Documentation for v0.9)</p> <p>malgen-v0.9-googlecode-20090429-r495.tar.gz, Apr 2009 v0.9 with fixed-width fields and an option for following the distribution or generating exactly n records</p>	<p>Status: Active.</p> <p>Partnership/Coordination: Contributing Members and Partners</p> <ul style="list-style-type: none"> ● Calit2 ● Johns Hopkins University ● National Lambda Rail ● University of Chicago <p>Language: English.</p>

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
03	OGF, OCCI http://www.ogf.org/ http://www.occi-wg.org/doku.php	<p>OGF is an open community committed to driving the rapid evolution and adoption of applied distributed computing. Applied Distributed Computing is critical to developing new, innovative and scalable applications and infrastructures that are essential to productivity in the enterprise and within the science community. OGF accomplishes its work through open forums that build the community, explore trends, share best practices and consolidate these best practices into standards.</p> <p>The purpose of the OCCI group is the creation of a practical solution to interface with Cloud infrastructures exposed as a service (IaaS). We will focus on a solution which covers the provisioning, monitoring and definition of Cloud Infrastructure services. The group should create this API in an agile way as we can have advantages over other groups if we deliver fast. Overlapping work and efforts will be contributed and synchronized with other groups.</p>	<p>Open Cloud Computing Interface WG (occi-wg), Thijs Metsch Chair, Andy Edmonds Chair, Alexis Richardson Chair, Sam Johnston Secretary</p> <p>Areas of work of the OGF Standards Function</p> <ul style="list-style-type: none"> ● Applications ● Architecture ● Compute ● Data ● Infrastructure ● Liaison ● Management ● Security 	<p>GFD.162 Open Cloud Computing Interface - Use cases and requirements for a Cloud API, 2010-04-19.</p> <p>150 informational documents, guidelines, and recommendations available at http://www.ogf.org/gf/docs/?final</p>	<p>Status: Active.</p> <p>Partnership/Coordination:</p> <ul style="list-style-type: none"> ● IETF ● W3C(World Wide Web Consortium) ● OASIS ● DMTF ● SNIA ● WS-I(Web Services Interoperability Organization) <p>Language: English.</p>

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
O4	OMG(Object Management Group), http://www.omg.org/	The Cloud Standards Coordination Group is committed to development of a joint resource on cloud computing strategies, standards and implementations. Different SDOs are bringing together different but complementary abilities: storage, execution models, deployment models, service level agreements, security, authentication, privacy. Specific cloud-related specification efforts have only just begun in OMG, focusing on modeling deployment of applications & services on clouds for portability, interoperability & reuse. Relevant committees include Analysis & Design Task Force (ADTF) and SOA Special Interest Group (SOA SIG)	Mr. Richard Soley (OMG), Mr. Robert Marcus <ul style="list-style-type: none"> ● Architecture Board ● Platform Technology Committee ● Domain Technology Committee 	Business Modeling Specifications Middleware Specifications Language Mappings Modeling and Metadata Specifications Modernization Specifications Platform Independent Model (PIM), Platform Specific Model (PSM) and Interface Specifications. Presentation OMG Cloud Computing Standards - Building a Multi-View Specification, 2009-07 Cloud Standards: Opening the Clouds, 2009-07 Organized workshops on “Strategies and Technologies for Cloud Computing Interoperability (SATCCI)” (2009-03), and Cloud Standards Summit (2009-07). See presentations at http://www.omg.org/news/meetings/GOV-WS/css/Program.htm	Status: Active. Partnership/Coordination: <ul style="list-style-type: none"> ● ASC X12 ● ASC T1M1 ● CEN/ISSS (Information Society Standardization System) ● DICOM (Digital Imaging and Communications in Medicine) ● DMTF (Distributed Management Task Force) ● ECMA (European Computer Manufacturers Association.) ● FIPA (Foundation for Intelligent Physical Agents) ● HL7 (Health Level Seven) ● ICT-SB (Information and Communications Technology Standards Board) ● IEEE 1226 ● ISO ● ITU-T Standardization Sector ● NCPDP (National Council for Prescription Drug Programs) ● Parlay ● SDRF - Software Defined Radio Forum ● SWIFT (The Society for Worldwide International Financial Telecommunication) ● TMForum (TeleManagement Forum) ● 3GPP Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
05	OCM (Open Cloud Manifesto http://www.opencloudmanifesto.org/	<p>The Open Cloud Manifesto establishes a core set of principles to ensure that organizations will have freedom of choice, flexibility, and openness as they take advantage of cloud computing. While cloud computing has the potential to have a positive impact on organizations, there is also potential for lock-in and lost flexibility if appropriate open standards are not identified and adopted.</p> <p>To open the cloud computing, the rules specified by the OCM need be referenced.</p>	No membership, manifesto has large industry support.	Open Cloud Manifesto 2009 Q1	<p>STATUS: Active.</p> <p>Partnership/Coordination: CCIF(Inactive).</p> <p>Language: English.</p>

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06	OGC WG (Open Group Cloud Work Group) http://www.opengroup.org/cloudcomputing/	The Open Group Cloud Work Group exists to create a common understanding among buyers and suppliers of how enterprises of all sizes and scales of operation can include Cloud Computing technology in a safe and secure way in their architectures to realize its significant cost, scalability and agility benefits.	Mr. David Lounsbury (VP Government Programs, The Open Group)	White paper W104 Building Return on Investment from Cloud Computing V1.0, 2010-04 Workshop report Cloud Computing Business Scenario Workshop V1.0, 2009-08	Status: Active. Partnership/Coordination: Not known. Language: English.

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S1	SNIA, http://www.SNIA.org	SNIA Mission: Lead the storage industry worldwide in developing and promoting standards, technologies, and educational services to empower organizations in the management of information.	SNIA's Forums and Initiatives include <ul style="list-style-type: none"> ● the Cloud Storage Initiative, ● the Data Management Forum, ● the Green Storage Initiative, ● the Ethernet Storage Forum, ● Storage Management Initiative, ● Solid State Storage Initiative, ● the Storage Security Industry Forum ● the XAM Initiative 	Architecture The Cloud Data Management Interface (CDMI) V1.0, 2010-04 White paper Cloud Storage for Cloud Computing V1.0, 2009-09 Managing Data Storage in the Public Cloud V1.0, 2009-10	Status: Active. Partnership/Coordination: <ul style="list-style-type: none"> ● ARMA (Association of Records Managers and Administrators) International ● DMTF ● Eclipse Aperi Storage Management Project ● FCIA (Fibre Channel Industry Association) ● OGF (Open Grid Forum) ● The Green Grid Language: English.

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No.	SDO Name and Status (Website)	Main Mission and Scope	Working Groups and Leads	Major Deliverable and Dates (published and scheduled)	Comments (including Status, Partnership/Coordination, Language, etc.)
S2	Study group on Smart Cloud, Japan http://www.soumu.go.jp	Ministry of Internal Affairs and Communications of Japan holds study group meetings on smart cloud collecting key people from the academia and the industry in Japan. They surveyed the current status of cloud computing and identified important issues from the viewpoints of technologies, standardization and international cooperation.	Chairman: Professor Emeritus Hideo Miyahara, Osaka University key people from the academia and the industry	Study group interim report on Smart Cloud (in Japanese only), 2010-02	Status: Active. Partnership/Coordination: Not known. Language: Japanese.

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T1	<p>TM Forum http://www.tmforum.org/</p>	<p>The primary objective of TM Forum’s Cloud Services Initiative is to help the industry overcome the barriers and assist the growth of a vibrant commercial marketplace for cloud based services. The centerpiece of this initiative is an ecosystem of major buyers and sellers who will collaborate to define a range of common approaches, processes, metrics and other key service enablers.</p> <p>TM Forum’s vision is to ensure acceleration of service standardization and commoditization in an effective and efficient marketplace of cloud computing services in all global geographies, through alignment with the needs of the world’s largest IT buyers.</p> <p>Enterprise Cloud Buyers Council Goals are:</p> <ul style="list-style-type: none"> ● to foster an effective and efficient marketplace for cloud compute infrastructure and services across all industry verticals and global geographies; ● Accelerate standardization and commoditization of cloud services, and identifying common commodity processes best consumed as a service; ● Solicit definition for standardized core and industry-specific SKUs for cloud services; ● Achieve transparency of cost, service levels and reporting across the ecosystem; ● Enable benchmarking of services across service providers and geographies; ● Enable vendor measurement against normalized and agreed service level metrics; ● Radically reduce cost of acquisition and operations for commodity compute & services. 	<p>Enterprise Cloud Leadership Council</p> <p>James Warner, head of Cloud computing TM Forum.</p>	<p>Discussions and related topics can be found the link below: http://www.tmforum.org/community/groups/cloud_computing_services/forum/default.aspx#aMenuBottom</p>	<p>Status: Active.</p> <p>Partnership/Coordination: Not known.</p> <p>Language: English.</p>

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Cloud Standards Wiki

http://cloud-standards.org/wiki/index.php?title=Main_Page

This Wiki Website documents the coordination activities of the various SDOs working on Cloud standards. You can find related Cloud SDOs the Wiki Website addressed here.

- CloudAudit
- Cloud Security Alliance
- Distributed Management Task Force (DMTF)
- ETSI(The European Telecommunications Standards Institute)
- NIST(National Institute of Standards and Technology)
- Open Grid Forum (OGF)
- Object Management Group (OMG)
- Open Cloud Consortium (OCC)
- OASIS(Organization for the Advancement of Structured Information Standards)
- SNIA(Storage Networking Industry Association)
- OG WG(The Open Group)
- ARTS(Association for Retail Technology Standards)