

Cloud Standards Coordination

Cloud Forum Romania
Bucharest, 19 February 2014

EC Cloud Strategy (09/2012)

“Faster adoption of cloud computing throughout all sectors of the economy to boost productivity, growth and jobs”.

Roadblocks (EC Communication)

Fragmentation of the digital single market

- ≠ legal frameworks in MS
- Contractual issues (SLA, data ownership & portability, security, etc)
- A jungle of standards

Request on ETSI

“Promote trusted and reliable cloud offerings by tasking ETSI to coordinate with stakeholders in a transparent and open way to identify by 2013 a detailed map of the necessary standards (inter alia for security, interoperability, data portability and reversibility)”

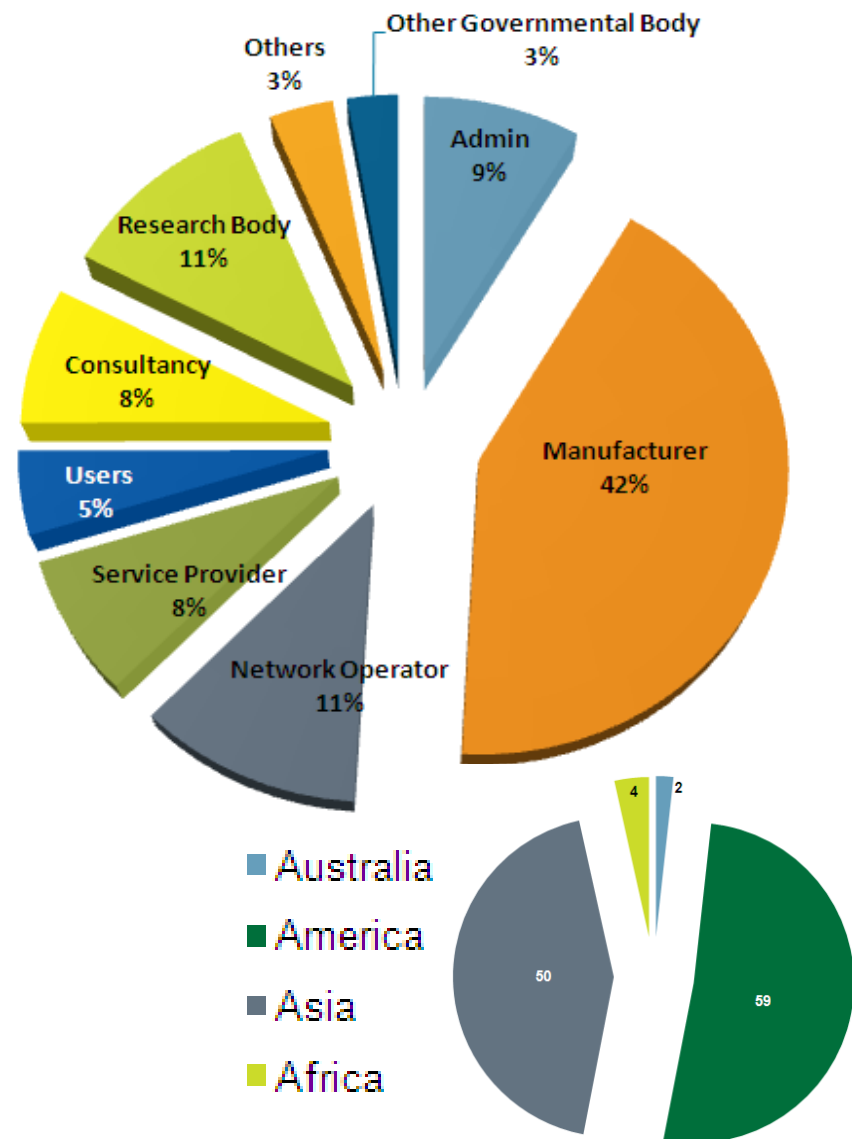
Let's do it

- Cloud Standards Coordination
- Open & inclusive <http://csc.etsi.org>
- Focusing on the (standards) map
- Reusing existing results (models, list of standards, mappings, etc.)
- Fast (early results end Q2 2013, final results end Q4 2013)

« Why ETSI? »



- ICT standards organization based in France
- Global membership (750 Members/62 countries) with direct participation
- Public sector on a par level w/industry
- Global network of partners
- Interop at the core (Centre for Testing & Interoperability)
- Enabled a number of market hits
- Sector specific (e.g. IT security)
- “ICT inside” (e.g. ITS, smart cities...)

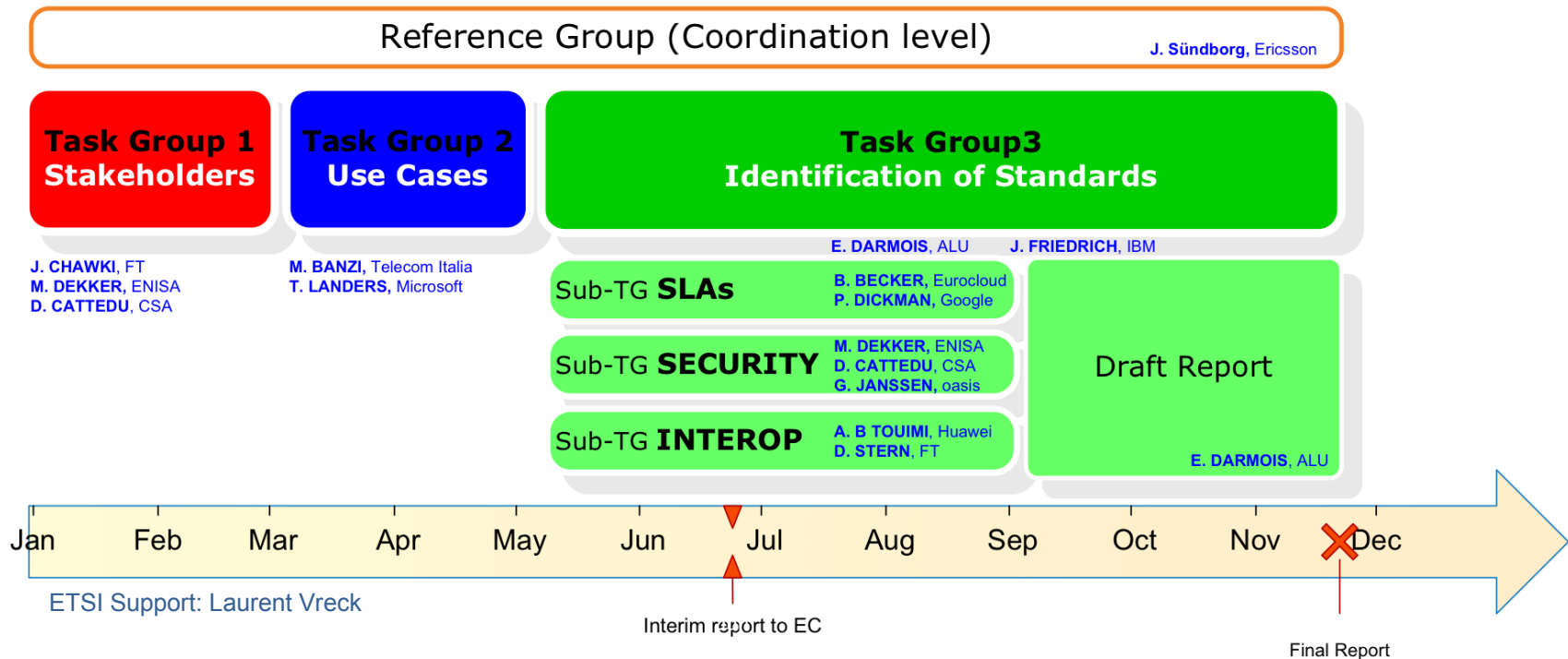


A little bit of organization



Launched in December 2012

- Workshop in Cannes, co-organized by EC, 200+ participants
- 3 TGs, a coordination group ('reference')
 - TG1 for definition of Roles and TG2 for collection of Use Cases
 - TG3 in charge of Use Case Analysis and Production of the Report



Model based on Roles (and sub-roles) and Parties

- Main sources: DMTF, ITU-T, NIST

Main roles identified

Cloud Service Customer

- consuming one or more cloud services from a Cloud Service Provider

Cloud Service Provider

- providing cloud services to one or more Cloud Service Customers

Cloud Service Partner

- providing support to the provisioning of cloud services by the Cloud Service Provider, or the consumption of cloud service by the Cloud Service Customer (e.g. service integration).

Government authority

- The government authority role consists of interacting with providers, customers and partners for the purpose of regulation, law enforcement, inspection, economic stimulation, et cetera.

Collecting Use Cases from Organizations including

- DMTF, ENISA, CSCC, EC, GICTF, ISO/IEC JTC 1/SC 38/WG 3, ITU-T, NIST, ODCA, OPTIMIS, The NL IT Policy of Central Gov. Dept, Trust IT & IDC.

Selection of 110 Use Cases

- Categorized according to operational criteria i.e. Data Security and Privacy, Service Level Agreements, Interoperability, Data Portability, Reversibility, Support EU Policies, Based on Real life situations
- Ranked and filtered

Definition of High-Level UCs

- They cover the main phases of the Cloud Services life-cycle
- With a smaller list of 21 UCs that can be mapped with the HLUCs.

A database of Use Cases

- <http://csc.etsi.org/Application/documentapp/downloadLatestRevision/?docId=185>

Identification of Cloud Roles (TG1)

Collection of Use Cases (TG2)

A Use Case-based map of the Cloud landscape (TG3)

- Definition of a list of cloud-relevant Standards Organizations
- Definition of a list of cloud-relevant documents from these organizations
- A few use cases have been selected or derived from the list of TG2
 - A relevant basis on which the mapping of standards has been done
- The analysis of the selected use cases has provided a table of generic or specific activities across the Cloud Services Life-Cycle
- This list of activities has been mapped with
 - The list of Standards & Specifications (possibly empty for a given activity)
 - The list of Reports and White Papers
- For each activity, this gives an indication of
 - standards maturity and
 - the possible existence of gaps.

Identification of Standards and Specifications (and other relevant documents)



To address the detailed map of the standards, the new European Standards Regulation has been the reference:

- A Standard is an output from a formally recognized SDO (ETSI, ITU-T ...)
- A Specification is a standard from any other form of SDO.

Around 150 documents from relevant SDOs identified:

- Standards & Specifications (S&S)
- Reports & White Papers (R&WP)

Used in the definition of the standards map

- Existing Standards & Specs versus Related Work

More
Specifs
than
Standards

Growing
flow of
S&S
Published

Cloud-relevant Standards Organizations



ATIS	Alliance for Telecommunications Industry Solutions
CEN	Comité Européen de Normalisation
CSMIC	Cloud Services Measurement Initiative Consortium
CSA	Cloud Security Alliance
CSCC	Cloud Standards Customer Council
DMTF	Distributed Management Task Force
ENISA	European Union Agency for Network & Information Security
ETSI	European Telecommunications Standards Institute
GICTF	Global Inter-Cloud Technology Forum
IEC	International Electrical Committee
IEEE	Institute for Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
ISO	International Standards Organisation
ITU-T	International Telecommunications Union – Telecom Sector
NIST	National Institute of Standards and Technology
OASIS	Organization for the Advancement of Structured Information Standards
ODCA	Open Data Center Alliance
OGF	Open Grid Forum
QuEST	Quality Excellence for Suppliers of Telecommunications
SNIA	Storage Networking Industry Association
TIA	Telecommunications Industry Association
TMF	TeleManagement Forum
TOG	The Open Group

Global
&
Regional

SDOs
&
Fora

Matching
Market
Dynamics

“Good...can you please speed up?

Focus on security issues - the recent PRISM revelations require a fast and adequate response.

Voices of users of cloud services must be factored in at an early stage.

Bring together the views of CIOs public sector/ private sector

Will the final mapping be comprehensive? How will it be tested? How will it be maintained/updated?”

Activities mapped with Standards and Specs (and other documents)



Analysis of 5 Use Cases have identified activities through the Cloud Service Life-Cycle phases

- 3 phases: Acquisition, Operation, Termination

Relevant documents from selected SDOs mapped with the activities

- Standards & Specs (and related R&WP)
- Identification of standards needed

Generic
& Specific
Activities

Only a
few S&S
per
activity

Activity	Short Summary	Related Standards & Specifications	Related work	Remark
GEN_1.0	Requirements specification	None at this time. Standards needed.	This is on-going work at TMF, OGF, OASIS, ODCA, ... FP7 projects results: SLA*, SLAware, ... see [FP7-SLA].	Such standards may help comparison of providers.
GEN_1.0a	Security & Privacy Requirements specification		[CSA2] Security Guidance Certification created by the FP7 Europrise project.	Europrise specifications is a standard of privacy requirements compliant with DP legislation.

The final Report provides the following technical results

- A definition of the roles in Cloud
- The collection and classification of over 100 Cloud Use Cases
- A list of relevant organizations in Cloud Standardization and a selection of around 150 documents, Standards & Specifications as well as Reports & White Papers
- A classification of activities that need to be undertaken by Cloud Service Customers or Providers over the whole Cloud Service Life-Cycle;
- A mapping of the selected Cloud documents (in particular Standards & Specifications) on these activities.

Plus some conclusions on the status of Cloud Standardization

- general aspects (fragmentation, etc.)
- specific topics of Interoperability, Security & Privacy and SLA.

NO
Jungle of
Standards

Enough
Standards
to start with

Despite new
standards
coming, gaps
identified

Foster
collaboration
to ensure no
fragmentation

A diagram showing four colored circles arranged in a 2x2 grid. The top-left circle is blue and contains the text "SLAs". The top-right circle is red and contains the text "Security". The bottom-left circle is purple and contains the text "IOP". The bottom-right circle is green and contains the text "Legal Framework".

SLAs

Security

IOP

Legal
Frame-
work

What's next ?



During December Workshop, EC hinted at possible follow-up

Some topics could be addressed in a new phase, e.g.

User
priorities
(SMEs, ...)

Standards
and Open
Source
interplay

Security

Snapshot
2

Discussion on-going with EC (still in early phase)

Objective would be a quick start and work in 2014

Made sense because

- Link policy/regulation/standards
- « Convergence » between domains that used to operate separately
- No jungle but kind of populated
- Base standards/engineering interoperability ex-post

Requirements, requirements and requirements

« Proving the movement by walking »

Another approach to standardization

Thank you

European Commission Cloud strategy

<https://ec.europa.eu/digital-agenda/en/european-cloud-computing-strategy>

Portal CSC

<http://csc.etsi.org>

margot.dor@etsi.org

 [@margotdor](https://twitter.com/margotdor)