



PSC Europe

**Public Consultation on Cloud Computing
PSCE Position**

PREPARED BY: PSCE Secretariat
VERSION: Final version
DATE: 31-08-2011
PSC Europe: Information

Your Profile

1 Are you responding for a Company?* (compulsory)

Yes
No

- Are you a public Administration?

Yes
No

- If you are not a company nor a public administration, are you...

Academic
Individual
Other

- If other, please explain

Public Safety Communication Europe Forum (PSCE) is a permanent autonomous organisation aiming at improving provision of public safety communications and information management systems and the safety of the citizens during crisis and emergency situations. PSCE provides a unique common platform for researchers, industry and users enabling regular exchange of ideas, information, experiences and best practices.

11 If you are a user of cloud services: Please describe your current use of cloud computing. What kind of problems do you encounter when using cloud computing solutions in the EU? Elsewhere?

(optional) (between 1 and 2000 characters)

12

If you are a potential user but not active yet: What are the main reasons for not (or not yet) using Cloud Computing? (optional) (between 1 and 2000 characters)

13 If you are a provider of cloud services: Please describe your offer.

What kind of barriers do you face in providing your cloud computing services within the EU? Elsewhere? (optional) (between 1 and 2000 characters)

14 If you are not a user, nor a potential user, nor a provider: Please describe your interest in this topic and the source of your knowledge.

(optional) (between 1 and 2000 characters)

Clouds for users

1 Do you feel that in the cloud services you are currently using or have been evaluating (or are providing), the rights and responsibilities of both user and provider are clear? (optional)

Yes

No

2 Please comment. (optional) (between 1 and 2000 characters)

In the Cloud services we are using the terms of service which describes the rights and responsibilities of both parties. What has to be clear especially for the user is that the cloud provider cannot take all responsibility for the user. For example, the user has to think about business continuity also when using cloud services.

3 Are you aware of the applicable jurisdiction in different types of disputes that could arise during your provision or use (or potential future use) of specific cloud offerings? (optional)

Yes

No

4 Is there an alternative approach to the determination of jurisdiction that may work better both for users and providers? (optional)

Yes

No

Don't know

6 Please comment. (optional) (between 1 and 2000 characters)

7 Do you feel that the question of liability in cross-border situations is clear for cloud users and cloud providers? (optional)

Yes

No

8 Why? (optional) (between 1 and 2000 characters)

The recent discussions regarding the situation of US operating cloud data centres located in Europe have shown that there is high dissatisfaction from the legal point of view. However, this is not a cloud-specific problem, as in our understanding the same would apply also to any other processing of data in data centres of US companies (like classical outsourcing). Cloud computing just makes this problem more obvious and transparent.

The data has to be handed over to the US government if requested – even if it is hosted in the EU. It is because the provider (Amazon, etc) is a US based corporation and as a result has no choice but to comply.

Legislative Framework

1 Do you think there are updates to the current EU Data Protection Directive that could further facilitate Cloud Computing while preserving the level of protection? (optional)

Yes

No

Solving the above mentioned problems for cross-jurisdiction handling of data (e.g. Europe and US) would be necessary.

3 Are you aware of specificities in Member State data protection rules, or other legislation, that prevent you from using/providing cloud services within the EU? (optional)

Yes

No

Don't know

5 From your perspective, would it be useful if model Service Level Agreements or End User Agreements existed for cloud services so that certain basic terms and conditions could easily be incorporated into the contractual agreements? (optional)

Yes

No

Embracing interoperability

1 Please describe interoperability or (data) portability issues you have encountered when using/providing cloud services or are otherwise aware of. (optional) (between 1 and 2000 characters)

This is very dependent on the type of service that is used. For IaaS solutions interoperability and data portability issues are more often not a big problem, as standardized interfaces (like "an x86 computing environment") are used and virtual machines can be ported between different vendors with little effort. For SaaS solutions it depends on the type of service - if the service provides standardized interfaces (like WebDAV, database dump, etc.) portability can be achieved with some effort. Interoperability and portability is more complex on PaaS solutions, as different PaaS cloud platforms are currently very heterogeneous and require a complete redesign of applications (e.g. Google AppEngine, MS Azure, Salesforce). In order to extract the maximum features from a provider (XaaS) it is usually a matter of adopting their API – alas you are walking down the road of vendor-lockin before you realise it.

2 Which existing or emerging standards support interoperability across clouds and portability of data (from one cloud to another)? Please list and describe.
(optional) (between 1 and 2000 characters)

OVF (Open Virtualization Format) for IaaS portability of virtual machines, WebDAV for accessing files in SaaS environments, IEEE is working on cloud interoperability standards (working group P2301, P2302)

3 Which are the most important standards that are currently missing but which you feel are necessary to ensure interoperability and portability? Please describe in detail the aspects they should cover.
(optional) (between 1 and 2000 characters).

System Configuration and Management, also covering security aspects and constraining resources are currently handled not well enough, and also not interoperable.

There is no clear standard for migration between cloud providers. Both in terms of moving your business or even moving a VM (follow the sun scenario) – these are all vendor specific at the moment. So there is no real marketplace.

Public sector clouds

1 What can the public sector do as a cloud user to support the emergence of best practices? (optional) (between 1 and 2000 characters)

Support the development of best practices and consistently apply these best practices when procuring services. Public Service is probably the ultimate user in terms of compliance. They are forced to comply with the legal rules rather than a hap-hazard approach.

2 Please elaborate in particular on public procurement of cloud services. (optional) (between 1 and 2000 characters)

3 In particular, can the deployment of eGovernment and eScience infrastructures by the public sector act as an example for other sectors? (optional) (between 1 and 2000 characters)

See point 1.

4 Please list Member State initiatives in the area of Cloud Computing that you are aware of. (optional) (between 1 and 2000 characters)

5 Do you think they are: (optional)
adequate
go too far
not far enough

6 Please elaborate. (optional) (between 1 and 2000 characters)

7 How can Member States best cooperate to create interoperable solutions and shared best practices? (optional) (between 1 and 2000 characters)

Future Research and Innovation programmes

1 Which are the most important technical aspects of cloud computing that researchers are currently working on? Please explain the importance of each concrete example. (optional) (between 1 and 2000 characters)

Vendor lock in - portability issues between different cloud providers, Risk management in cloud environments - moving services from in-house to cloud environment changes the risk landscape dramatically, and this has to be understood better.

Security and the ability to support compliance with the legal side. Enablers.

2 Beyond these, do you see technical problems/limitations of current cloud service offerings that will require further research in the coming years? (optional)

Yes

No

3 Please elaborate. (optional) (between 1 and 2000 characters)

Security of virtualization environments is still in question, as security vulnerabilities are found regularly that could possibly impact cloud environments.

The hypervisors themselves are usually cut-down operating systems but are treated as black box – the spotlight of security also needs to be applied here. Also the networking aspects of data movement needs to be controlled for legal requirements.

4 Should public R&I funding be used to establish prototypes of new cloud infrastructures? (optional)

Yes

No

Global solutions for global problems

1 What are the most important Cloud Computing problems that have to be discussed at global level? Please list and explain. (optional) (between 1 and 2000 characters)

Security related aspects in cloud computing environments are currently not well understood and has to be researched in more depth.

2 Which would be the right fora/approaches to tackle them? Please expand.

(optional) (between 1 and 2000 characters)

Collaborative research with industry - there have to be many more practical implementations of cloud computing scenarios with accompanying research investigating the security problems and developing solutions.