OPEN HYBRID CLOUD
ENABLING A COMPETITIVE MULTI-VENDOR MARKET
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Round Table Report
Open Hybrid Cloud
Enabling a competitive multi-vendor market

**SPEAKERS**

Pierre Chastanet  
Head of Unit, Cloud Unit  
DG Connect, European Commission

Daniel Melin  
Senior Procurement Officer  
Swedish Public Procurement Agency

Clark Parsons  
Managing Director  
Internet Economy Foundation

**MODERATOR**

Graham Taylor  
Chairman  
OpenForum Europe
FOREWORD

Cloud has matured from a buzzword to a fully realised operational reality. It can offer numerous advantages for those adopting cloud computing, such as reduced costs, greater flexibility, efficiency and security, especially in flexible ‘hybrid’ cloud environments. However, the lack of cloud interoperability is a barrier to cloud-computing uptake, because organisations fear vendor lock-in.

Lock-in leads to the situation that once an organisation has selected a cloud provider, either it cannot move to another provider or it will incur a substantial cost in doing so; this is because either the economic or technical offer has become inadequate, or the vendor has ceased operations. A common mechanism for enabling interoperability is the use of open standards. In this round table event, we want to explore how open standards and interoperability can enable a competitive multi-vendor cloud market.
Graham Taylor, Chairman of OpenForum Europe, opened the event, welcoming speakers and participants. After a tour de table, Graham Taylor introduced OFE’s history on Cloud. OFE has held a number of round tables, emphasising the impact of Cloud and the need for Open Standards to facilitate interoperability and a competitive multi-vendor Cloud ecosystem.

Cloud has become a huge business, with annual revenue estimates in the case of Hybrid Cloud running up to 80 billion Euro. With Cloud becoming the operating system of interconnected devices, how can costly lock-in be prevented? In other areas, Open Standards solved the lock-in issue, but it might come back through cloud.

The speakers invited to the discussion were:

Pierre Chastanet  
Head of Unit, Cloud Unit  
DG Connect, European Commission

Daniel Melin  
Senior Procurement Officer  
Swedish National Procurement Services

Clark Parsons  
Managing Director  
Internet Economy Foundation

Following this, Graham Taylor introduced the questions on the lines of which the discussion would be organised:

• How could interoperability create a level playing field in the cloud market?
• What is the impact of Hybrid Cloud, both on the marketplace and on interoperability requirements?
• What actions would be fruitful for national and European institutions under the new mandate?
• What lessons can we learn from the procurement of Cloud software?

Lastly, Graham Taylor gave the word to the speakers for their introductory remarks.
Pierre Chastanet opened his remarks by highlighting the great cooperation which the Commission has enjoyed with OFE over many years. He agreed with the need to mitigate vendor lock-in, stating that this is a core aim of the Free Flow of non-personal Data Regulation ("FFoD") which was adopted last year. Hybrid Cloud solutions and porting of data are at the centre to enable a good functioning of the FFoD.

To achieve porting of data, the Commission took a light touch approach in its proposal, mandating the development and adoption of Codes of Conduct by the Cloud industry. This has now become the Cloud Switching and Porting Data (SWIPO) Working Group. These codes are currently being developed by industry (both service providers and users) and should be operational by November 2019. Industry will then have 6 months to implement them. The Commission will then evaluate their effectiveness. Pierre also emphasised that the process is open and inclusive and the Commission will be glad to facilitate the joining of any interested party to the development and adoption of the codes.

Turning to the Cloud market, Pierre pointed out the immense changes the sector has undergone. When the Commission started with its European Cloud Computing strategy in 2012, it was a very fragmented market. Today, the market is more concentrated. Whilst this offers customers the possibility of quickly scaling up, it also introduces potential competition issues – something that SWIPO is intended to tackle.

He asked what the blended Hybrid model will mean for companies. Each company will need to assess what a Hybrid Cloud setup will offer them. Pierre highlighted the level of security that some cloud services can provide. Cloud providers have highly specialised teams through centralisation of resources. It is important to provide visibility to cloud users of the level of security provided by cloud services, through European certification. Another working group lead by industry and facilitated by the Commission is currently working at elaborating a proposal for what could later become a European cloud security certification scheme under the Cybersecurity Act.

To take full advantage of the digital transformation, public institutions should develop Cloud strategies. For instance, Norway and France have recently adopted a dedicated Cloud computing strategy. The European Commission is leading by example through major steps in public procurement. Pierre saw the energy and automotive sectors needing policy, technical and legal effort to drive digital transformation. The Hybrid Cloud will be at the centre of digital transformation.
Clark Parsons firstly introduced the Internet Economy Foundation ("IE.F") as an independent think tank to advise EU governments on how to help the EU digital economy to grow. He highlighted that the European Union has enjoyed great success with pro-competitive regulation in the telecommunications market, and should keep these lessons in mind.

According to Clark, the Cloud market has doubled in recent years and Hybrid multi-vendor Cloud environments have become the de-facto standard, with 80% of businesses which employ Cloud using Hybrid Cloud. This is thanks to a highly innovative Cloud market.

Clark highlighted that there are parallels between the Cloud and Platform economies, also taking into account increasing concentration in both cases. It would still not be too late to prevent real market dominance by a single vendor in the Cloud market. To prevent this, interoperability will be key to the enablement of an open and competitive market in which new and smaller companies could compete. Interoperability means more than just making code interact, it means that the code must also be ready to work with future products. Europe should aim to create its own champions in the long term.

He closed his remarks by pointing to the “Signalwirkung”, the ripple effects, that a government contract can have on the whole market. A government contract is a stamp of approval and opens new opportunities for those who get it. Clark pointed toward the practice in government contracts in the area of defence, where governments generally do not just take the lowest bid, but agree on contracts with multiple vendors, to make sure that there are a range of companies that are able to innovate. This should be an important lesson for the Cloud market.

The IE.F will soon publish a study on Cloud Computing and the Public Sector; you can learn more here: www.ie.foundation
To begin his remarks, Daniel Melin introduced the Swedish National Procurement Services as the entity in Sweden which procures framework agreements which public institutions can in turn use to procure solutions. In this role, he is in constant contact with market players and public administrations, and specialises in ICT and Cloud procurement.

The Swedish National Procurement Services recently published a report on web-based office solutions (download here) and the legal implications of procuring this kind of software. He firstly clarified that there are a variety of solutions which are grouped under the Cloud name, such as Software as a Service (SaaS) and Infrastructure as a Service (IaaS). SaaS are usually ready-to-use online solutions, while IaaS offerings provide infrastructure which can be used by customers to build their own services on.

Specifically on SaaS offerings, Daniel identified the issue that moving between different SaaS providers is very difficult for public administrations, and that lock-in effects are consequently very strong in this area. Vendors have employed mechanisms and features that make it difficult to move between providers. As each market segment (e.g. web-based office solutions) is very concentrated, there are only few providers, meaning that public administrations feel forced in choosing a specific offering.

Two issues which Daniel raised in relation to Cloud solutions were data protection, and data security. Many countries have intelligence and data retention laws that can sometimes be in conflict with the GDPR, leading to legal issues when procuring Cloud solutions that are not European. Examples are the United States CLOUD Act and Australia’s law on decryption (the Telecommunications and Other Legislation Amendment (Assistance and Access) Act 2018).
DISCUSSION

The ensuing discussion, which was conducted under the Chatham House Rule, circled around three main themes:

1. How to achieve an open and interoperable cloud?
2. What is the nature of the data protection and what are the security issues relating to Cloud products?
3. How to enable EU uptake of cloud offerings?

The discussion focused on the practical steps which could be taken to enable interoperability while still encouraging innovation. In this discussion, it was suggested that the market on the IaaS and PaaS side is very vibrant and there are great opportunities for Europe's diverse set of SMEs to be integrated into niche solutions or be connected via Open Standards. One participant added that many new technologies are developed in Open Source, and that technologies like Docker and Kubernetes makes it very easy to switch and mix cloud providers. It was also added that full technical interoperability might not be required to achieve a competitive multi-vendor market. To support interoperability, exist costs should also be taken into account when considering Cloud offerings.

Another topic of discussion was the rising concerns about data protection and data security when employing Cloud products. One participant introduced the concern that the US CLOUD Act gives US law enforcement authorities access to data of US based companies providing Cloud services. This reveals issues with such products. Countries around the world increasingly adopt similar legislation, as is the European Union with the proposed E-evidence proposal. This could lead to increased data localisation. It was posited that Europe needs to decide where it stands in the possible coming “cold tech war” - i.e., does Europe support the United States, or China - or will Europe try to go the “Switzerland route”?

On the question how to enable uptake of (European) Cloud offerings, it was reflected that solutions need to be fit for purpose – both for businesses and for public administrations. Such solutions are not a uniform piece of software. In addition, funding for European start-ups should be increased massively, so that they do not get bought by bigger overseas companies. Europe has the issue of doing very good basic research, but then not commercialising it. One avenue that could be well suited for Europe could be digitising European industry, which would have enormous advantages. All big European industrial companies are looking toward turning their hardware into software platforms; a good example is IoT, an area which is still developing and could have heavy involvement from European companies.
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