Open**forum** Academy

'Certification' within Cloud Computing
Hero or Villain?

Report

Round Table: 'Certification' within Cloud Computing. Hero or Villain?

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Disclaimer:

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Foreword

Cloud Computing has the opportunity to dramatically impact efficiency and use of IT globally, but it also brings with it the potential to re-establish much of the dangers of lock-in prevalent in the past. This Round Table is the third in a series of OFA events where we debate the practical opportunities and challenges in respect of 'openness' within Cloud Computing.

The debate in this session stems from the recent Communication from the European Commission advocating voluntary certification programmes for cloud service providers. Few would doubt the Commission's good intentions and indeed the use of standards to avoid lock-in, but is certification the way to go? Could it perpetuate the lock-in to the closed vendors it is set up to avoid, and will compliance, instead, be a real hindrance to SMEs? Are we talking about a one size fits all approach, or could alternative approaches meet the need?

Speakers

Liam Maxwell - Deputy CIO and Director of ICT Reform for the UK Government.

Andy Burton - Chair of the Cloud Industry Forum, an industry group that seeks to provide transparency through self-certification to a Code of Practice.

Moderator: Graham Taylor, CEO of OpenForum Europe.

Rapporteur: Dr. Alea Fairchild, VP, Constellation Research and Docent, HUB.

Graham Taylor opened the event by welcoming everyone to the OpenForum Academy and this year's focus of putting 'openness' at the forefront of the 'Open Innovation' tagline with a focus on cloud issues. He introduced the concept of the OpenForum Academy (OFA) with its approximately 40 Research Fellows from industry and academia, with its purpose of creating new thought leadership and debates. He pointed out they had provided the First OFA conference proceedings on the table for each participant.

Graham then introduced the concept of the Round Table debates, and that Chatham House Rules will apply, in that the two speakers would be quoted, but no other participant in the debates would be quoted in their contributions.

Today's discussion is about cloud, which has a great potential for fundamental business change, but also provides a discontinuity and discomfort for users and suppliers as the marketplace changes. Cloud provides a big opportunity for Europe, and openness is the key attributed to provide opportunity for SMEs, with a concern that lock-in and barriers to entry could block that opportunity. Today's controversial area for discussion is certification, with the key issues around trust and confidence coming from certification, or if certification will create barriers to entry for SMEs to this market.

The title for our discussion for this Round Table is 'Certification within Cloud Computing – Hero or Villain?' This topic has already sparked very different opinions. The two invited speakers to frame today's debate are:

- **Liam Maxwell** is Deputy CIO and Director of ICT Reform for the UK Government. The UK has been a leader in introduction of Government Clouds and Liam has been vociferous in his criticism of the Commission's Communication, "It will enable the oligopoly that has driven IT for many years to police the cloud...and Governments will sleepwalk into buying into them. Not just here, but across Europe". Liam will discuss why open standards are important, and why needs in the cloud may be different.

- **Andy Burton** is Chair of the Cloud Industry Forum, an industry group that seeks to provide transparency through self-certification to a Code of Practice. He has also expressed concerns about the Commission's approach to Cloud Computing, arguing that it "risks unfairly excluding equally valid SME Cloud Service Providers (CSPs) from public sector contracts". Andy will discuss how trust and confidence can be achieved going from bigger to smaller companies.

Questions to be addressed in this debate include:

- What does the market need? What do the users need?

- How should certification be addressed?

Liam Maxwell opened his presentation with the point that this is a good opportunity to hear views across the spectrum on this difficult policy area. From his role as Executive Director of IT Reform in the UK government, they have been looking at IT and more effective use of this market. On November 1st, they published their '*Open Standards Principles*' policy after consultation with numerous contributors and from industry. They are now taking the next steps in strategy, both with the strategic and tactical arms of the government with the tactical side implementing the control aspects. He then spoke about competition, and how all of Europe making rules together and changes to the way of running IT. He started with the UK perspective on this, beginning with the UK Public Administration Select Committee (PASC) report entitled "*Government and IT - "a recipe for rip-offs": time for a new approach*: *Further Report, with the Government Response to the Committee's Twelfth Report of Session*" [1]published on 26 January 2012. They had identified an Oligopolyof providers that sold into the UK public sector market, creating inefficiencies and barriers to entry. They also identified a large number of broken transactions in public service delivery online ending with calls to call centres instead. The commercial model was built on making money for non-governmental institutions, and eighty percent of the contracts were with twelve companies, with black box contracts that had a lack of transparency, so one cannot see the licensing costs, etc. which therefore bakes in the complexity. The consequence is that the cost of running IT has gone up over time. But overall in the market, the cost of IT is dropping, and other industries are seeing efficiencies from IT.

Part One of their discussion was the open standards declaration, and Part Two was a focus on transactions. The top fifty transactions with the UK government made up ninety percent of the transaction volume. So with their focus on digital government, their slogan has become: "What does the user need?" Open government rules do impact SMEs, and since 2010, the UK government has enabled the percentage of SMEs in the supply chain to double. The push for SMEs to be suppliers for the UK government is driven by very the neeed for growth in the economy . Fast growth for the economy will come from SMEs, as shown by his example of the Silicon Roundabout with 1000 companies now involved.

In 2010, the UK government refocused their efforts on growth and innovation, with the creation of the Efficiency and Reform Group (ERG), with the three pillars: efficiency, reform and growth. When they came for renewal big IT contracts were disaggregated delivering an average forty percent was cut in IT spending, and they introduced competition tension into the market. They focused on having a diverse market, more open to small business and focused on technology availability. There was a push for the agenda for digital government, with the Gov.UK online presence created as a platform and a central point for public services with a simple and clean design that addresses the user need. It has been quoted to be the "bible for running electronic government".

In terms of the growth pillar, they identified how new business can grow, and tried to provide a better deal for small business and better service. He gave examples of their Cloud Store as well as examples where an SME offered a significantly lower cost than an established IT provider.

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[1] http://www.publications.parliament.uk/pa/cm201012/cmselect/cmpubadm/1930/193002.htm

He states that the UK government has been ripped off for years, and now tries to focus on reducing the cost of government. Barriers to this have been fundamental procurement processes and rules, outsourcing of expertise to other countries, "security" issues and other barriers used wrongly. They previously had focused on administrative simplicity, now focused on user simplicity. Their new policy is more open to users, not a cabal or committee, restricting views. They find the certification of cloud service providers a troubling issue, as it may create a barrier to entry and again create more administrative processes, bureaucracy, loss of control and sovereignty of market. Given their focus on growth, certification has the possibility of raising barriers and again creating administrative burdens, therefore impacting growth. He concluded with the point that the ERG was championing taxpayer's monies being spent efficiently, and their small team of spend controls people in the ERG stripped out UKP 1.5 Billion of cost by creating a more open marketplace with better service.

Andy Burton then presented the views of the Cloud Industry Forum (CIF), which is advocating cloud adoption. Andy started by setting the stage for his presentation by explaining that the CIF is non-profit and is investing is best practices and education, with no bought agenda. The CIF has been establishing research in cloud adoption, in order to create commonality in language and standards. They are trying to enable innovation in the marketplace, not restrict it.

He started with their research on cloud traits and trends, with the initial discussion point being on the use of language. He demonstrated that the cloud is plural and dimensional. He showed a cubic diagram with axis for accessibility (supply chain), exclusivity (deployment), and management (service model), with technology in the middle of the cube. The language used in describing cloud needs to be normalized for users and suppliers.

He then discussed the nascent market behavior of cloud, and the changes they have seen over the last eighteen months of their research. According to their studies, 61 percent of UK companies surveyed have adopted one or more cloud services. The statistics from his slide is summarised below:

61%	Number of UK companies who have adopted 1 or more cloud services
27%	The Growth rate of cloud adoption over the last 18 months
92%	The satisfaction level with the cloud experience
76%	The level of existing users who will expand cloud use in next 12 months
77%	The volume of cloud users who see cloud as a part of their IT strategy
12%	The volume that will adopt their first cloud service in the next 12 months
4%	Those who would never adopt a cloud service

Cloud is typically adopted first for a task, resource or other business reason for flexibility or innovation, but not for savings. Primary user concerns exist, but they appear not to halt adoption. These concerns are mainly data related issues, such as security, privacy, sovereignty and portability, followed by access and control issues. These Concerns are compounded by lack of transparency and trust. Cloud is part of the IT spectrum as an option, and given the relationship trade-off between complexity and service delivery options, cloud is only part of the options available.

Now that he had set the scene, Andy began his discussion on certification of cloud service providers. He comments on Liam's presentation in that he believed the UK government is correct, but more organizations joining initiatives such as G Cloud make the process of choice. Users need clarity on the relevance of any potential CSP to achieve a rational and informed decisions.

A key question for users considering cloud options is: **"Who is it that I trust?"** Andy then gave several considerations for cloud certification, in order to create more transparency. These included being fit for purpose to be accessible, to enable rational and informed decisions on choice, to evolve best practices, to promote open standards and to retain agility and innovation via either self or independent certification.

Andy then explained the CIF Code of Practice. The CIF aims to provide transparency amongst Cloud Service Providers (CSPs), to assist Cloud Service Users (CSUs) in determining the core information necessary for decisions on adoption of Cloud services, and to acknowledge where appropriate current standards and frameworks (e.g. ISO 9001, ISO 14001 and ITIL®) requiring provision of organizational, commercial and operational information which are formally compiled, digitally signed and submitted and open to spot check or audit review.

The discussion then moved to the certification and building of trust, which went over the concept of self-evaluation. The CIF proposes an annual self certification process for CSP's, which would be an online submission based on offline review. The three pillars that provide the scope and framework for certification would be:

1. **Transparency:** Of the organisation, its structure, location, key people and services. This has to be reflected on your website.
2. **Capability:** The processes and procedures in operation to support the delivery of services and customer experience. This does not have to be publicly declared on your website.

3. **Accountability:** Commitment of senior executive to the Code of Practice and behaviour with customers.

Results (if successful) would lead to an approval to use certification mark and listed on the CIF site as a self certified vendor.

He then provided five examples of CSPs who have gone through the certification process. In the ensuing discussion on trust and certification, Andy gave some thoughts on the certification process, showing that it should have multiple checkpoints:

- Business reference submitted with all applications
- Basic data verified on all applications
- Public data has to be visible on the Users website and independent reference site for validation
- Spot check percentage of applications for quality assurance.
- Documentary evidence has to be electronically signed and approved by an Executive
- All anomalies and complaints are fully investigated by an independent Governance Board. Mis-use will result in public withdrawal of Certification Mark.

Andy then showed a screenshot of the CIF website with the COP, and concluded his remarks with a summary of his presentation, stating these points:
- Cloud is a nascent, innovate, non-standard market
- Adoption is occurring despite ambiguity
- Cloud is a part of IT strategy, not whole IT strategy
- Must sort wheat from the chaff, allowing rational informed decisions, based on the three pillars and driving best practices
- Certification is a straightforward way to enable transparency in the market. Cost of certification should not preclude the SMB participating.

The final point was that the key for certification is to have signposts of trust and transparency.

Discussion

> *Disclaimer: These comments were taken from the general part of the meeting and do not necessarily represent any of the speakers' views or those of their organisations.*

The first comment was regarding organizations that are spreading fear, uncertainty and doubt (FUD) about cloud services, but are also pushing for more certification and regionalization / localization, trying to create a "superbubble" of cloud.

Andy responded that in the CIF, it was one member had one vote, and the same challenges exist for all, with the members driving the strategies.

Liam stated that for the UK government, they do not have an issue with people setting up certification organizations because they feel there is a market for certification, but do not ask the government to "bless" these organizations as they create administrative work to enforce and a mistaken view that they are government backed..

One of the main points of contention in the discussion was the recent communication of the European Commission advocating voluntary certification. European Commission's recently released strategy to boost adoption of cloud computing services throughout Europe had a statement was that 'cloud certification should be voluntary and industry driven, building on current and emerging international standards to foster global compatibility of cloud computing offerings'. But the concern with the wording of this communication was the role of the European Commission let alone national governments in the uptake of this certification, and the implication that certification is good for the market, backed by consultation.

Questions regarding national government participation included:

- Is there a risk of national governments creating their own certification scheme? And it becoming mandatory to business with that government?
- Why should the government be involved with certification? What role should they play?

It was clear from our UK government presenter that they felt they should not be directly involved. One participant commented that cloud is by nature cross-border, and if national governments got involved, it would create regional complexity and not simplifying matters but creating regional barriers to entry.

Some of the main user-oriented questions that were discussed during the debate session included:

- Why have a certification badge if professionalism got them the business?
- What does the user need (in terms of certification)? Has anyone done a research study to prove that an IT user needs cloud certification?

- If cloud adoption is going so well, why is there a need for certification?

From these questions, it is clear that more substantial data is required to define what elements the buyer / user requires to make certification a valuable resource for their decision making.

It is clear that a drive towards certification at this stage in the market could only support the exiting providers and that the barrier to entry for newcomers would be institutionalised and high. This would lock in the big players, lock out the small firms who will deliver most economic growth and take us back to the parlous situation of 2010 with an oligopoly in charge.

One critical element was the discussion of self-certification, especially with the question on how certification schemes create trust and transparency. It was pointed out by two participants that these criteria are essentially lists of things procurement personnel should be looking for, and certification is the education of buyers, bringing both sides together with ability to make informed decisions. It can also lead to prequalification of standards, perhaps creating a more level playing field. One valid point is that for certification it is difficult to define openness, and much easier to define what is closed.

There were additional comments on both sides of the certification discussion:

Pro

- Certification should remove complexity
- Certification should provide transparency on issues of relevance
- Certification should focus on service delivery and guidelines for buyers, not on certification compliance. It is better for the buyer to ask the more informed questions.

Con

- Some believe that large players will still dominate, as certification becomes its own business. Large corporate have the money and resources to adopt to criteria, and preferential treatment will be given to those suppliers. And for some large providers, their proprietary technologies are part of their added value to the customer, and are unlike to be stripped out to become certified for a scheme.
- Big audit firms will jump into this business as third party evaluators. Different types of certification will evolve, with a push to have all the different certifications (e.g. ISO standards). Certification does not imply quality.

The debated ended with the two presenters providing some last words from their respective viewpoints.

Liam Maxwell: Role of government is to provide effective public services to citizens, governments should buy properly and do not feel the need to "bless" certification around cloud. Government should not create barrier for SMEs, as they need the growth of the SME to get out of this current recession. The European Commission should think again about voluntary certification as it creates lock-in against their will.

Andy Burton: Not endorsing the contentious wording of the European Commission communication. This dynamic market involving SMB's does not have the luxury of a common knowledge base or consistent understanding to work from, we are trying to ensure everyone has a fair shot in the marketplace, by requiring CSP's to provide relevant information for CSU's to make rational and informed selection decisions. The three pillars we have mentioned in our certification COP will help the user buy and build technology and provide better services. In a market of increasing choice, Buyers should think about those certification tags to help inform selection and ask similar questions of those not Certified.

Graham Taylor closed the proceedings with the next steps to be taken in this discussion, including the Commission following through its communication with ENISA, following up with other briefings and circulation of this White Paper. He concluded with four points:

- Certification seems an emotive word and covered a wide area, from a formal process through to code of practice. It may better be associated with user understanding and education.
- For Government there would be no support for any process that impeded or presented a barrier for SMEs.
- For SMEs 'trust and confidence' by users was a perceived issue , and support mechanisms as outline by CIF could be beneficial.
- For OFE the subject remained 'work in progress', but formal certification seemed not the way to go, but all other options were open.