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Executive summary

Cloud computing provider Penta makes the following observations and recommendations in response to the European Commission's European Cloud Partnership's[1] report on cloud computing in Europe, published on 18 March 2014 and titled *Establishing a Trusted Cloud Europe[2]*.

Security and data protection

The report notes in passing the severe reputational damage caused by the recent revelations of government data privacy invasions, but places this important threat to the public's trust in cloud computing beyond the scope of the European Cloud Partnership. In order to foster trust in cloud services, harmonised legislative change strengthening privacy and data protection in all countries needs to be actively pursued.

Competitiveness

The European Cloud Partnership favours comprehensive industry certifications and broad standardisation. While the report stresses *voluntary* certification, officially sanctioned certifications and standards risk introducing de-facto mandatory certifications and standards in the eyes of the consumer. Meeting these requirements as an order qualifier may be prohibitively expensive and hamper innovation, particularly for SMEs.

Industry representation

Large corporations are disproportionately represented on The European Commission's European Cloud Partnership Steering Board. In order to foster confidence, broad-based support and the widest knowledge base, a better representation of the industry's SMEs and consumers is needed.

Private v. public cloud

The report favours public cloud over private cloud solutions. While economies of scale make public cloud a more interesting proposition for large providers and the general public, private cloud can be a more appropriate solution for certain consumers who place a premium on privacy, security and flexibility. The difference between public and private cloud solutions needs to be more clearly defined and the benefits of each acknowledged.

About Penta

Penta is a private cloud-based information system management company founded in 1996 and headquartered in Geneva, with offices in Dubai's DIFC. Its clients are predominantly in the financial sector and other sensitive industries that require high reliability, data security, regulatory compliance and ensured business continuity. Penta's approach is to partner with clients to supply a complete IT package in order to add value to operations and ensuring a better return on IT investments. Additional information is available at www.penta.ch.

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[1] http://ec.europa.eu/digital-agenda/en/european-cloud-partnership
[2] Available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4935

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Introduction

The European Cloud Computing Strategy aims to maximise the potential of the European cloud computing industry. The latest report by the European Commission's European Cloud Partnership titled *Establishing a Trusted Cloud Europe[3]* proposes an initial action plan to realise this objective.

Penta believes that concerted action across the proposed areas will help achieve this objective. The following observations and recommendations aim to further the discussion and help establish a viable, productive and dynamic cloud computing sector in Europe.

Security and data protection

Consumer concerns about security and data protection are rightly highlighted as key issues hampering cloud adoption. Ensuring the highest standards from a technical stand-point is one of the main aims of most of the industry.

However, one of the central consumer concerns with regards to cloud security and data protection does not stem from technical security aspects, but legislative safeguards.

Few privately-held companies or individual hackers have the resources to seriously threaten sophisticated encryption and other security measures in place, even to compromise cloud providers where the priority is not data protection. State-sponsored hacking by security services is a real threat to consumer confidence in cloud services.

We note that the report purposely avoids calling for meaningful and widely adopted legislative protection against state-sponsored intrusion[4].

Recommendations
- Harmonised and transparent data protection legislation across the EU territory
- Legislation modelled on countries with the strongest privacy protection and not watered down by weaker jurisdictions
- Limit the reach of national security bodies to judicially-mandated and -supervised monitoring

Competitiveness

Building trust and transparency in this relatively new industry is essential to its success. The proposed certifications and regulations will help achieve this broad recognition.

We recognise that the proposal emphasises voluntary adherence to the standards. While voluntary, it risks introducing a de-facto mandatory standard in the eyes of consumers. The standards proposed are indeed necessary for certain segments of the market, but may be out of proportion for the majority of users.

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[3] Available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4935
[4] *Trusted Cloud Europe*: page 20, "…surveillance by national security bodies…" "… exceed the remit of the European Cloud Partnership".

The complex nature of cloud computing and security means that the average consumer may place disproportionate weight to officially sanctioned standards and make choices that are be more expensive than necessary for their needs.

De-facto mandatory standards also risk reducing differentiation within the industry and encourages competition solely on price rather than innovative and tailored value-added services.

Achieving certifications can be an onerous task. It is a concern that introducing such certifications as an industry standard will hamper SMEs seeking to enter the market or innovate. The cost of maintaining and auditing for certifications may also be prohibitively expensive.

Recommendations
- Multiple-level certifications
- Transparent certification naming with clear end-use purpose
- Careful selection and frequent regular review of standards criteria to allow innovation and differentiation
- Transparent and agile standards review process to adapt to changing technology

Industry representation

We recognise the composition of the Steering Board as including key industry players as well as skilled experts. However, we also note that industry representatives on the board are almost entirely from large well-established corporations with only one SME representative (Appendix 1: composition of the European Cloud Partnership).

The value chain involved in providing cloud services is long and complex. In Europe, the majority of the present-day back-office and front-line services involved are supplied by SMEs. The innovation and nimbleness of the industry relies on small agile suppliers that provide the technical expertise, innovation and implementation of new technologies.

Recommendations
- Better representation of SMEs on the Steering Board from the complete cloud computing value chain
- Establishing an industry association charged with representing cloud SMEs

Private v. public cloud in the debate

We recognise that the distinction between private and public cloud is increasingly blurred. However, there is a clear distinction between publicly available 'mainstream' cloud services and exclusive-use clouds that are either run by internal IT departments or by third party IT services specialising in private clouds.

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The report favours public cloud adoption by alluding that private cloud is somehow inferior or does not accomplish the task as effectively as a public cloud[567].

We highlight the distinction between public and private cloud services and that they achieve very specific objectives. Public cloud is indeed more effective at leveraging many cloud advantages, but it falls short when it comes to data security, privacy protection, auditing, industry compliance, and – crucially – peace of mind.

Recommendations

- Establish and define the differences between private and public cloud solutions
- Objectively analyse and recognise the distinctions and benefits of both private and public cloud
- Recognise private cloud services as a viable and sometimes preferable solution

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[5] *Trusted Cloud Europe*: page 11, *Use case: IP-intensive sectors and cloud services*

[6] *Trusted Cloud Europe*: page 11, *Use case: science data in the cloud*

[7] *Trusted Cloud Europe*: page 13, "… there is a strong tendency to use only private clouds…" "… this is a problem that needs to be resolved."

Appendix 1: composition of the European Cloud Partnership

Company	Industry	Revenue
Amazon	Cloud	€53.8 billion (2013)[8]
Dassault	Conglomerate	€2.1 billion (2013, Dassault Systèmes only)[9]
EuroCIO	Association	"…representative for the large IT-users (demand side of IT), both private and public. With far over 600 organizations as members, represented by their highest IT-manager or CIO and representing over 500.000 IT workers…"[10]
Daimler	Automotive	€114.3 billion (2012)[11]
Software AG	Software	€972.7 million (2012)[12]
Telefonica Digital	Telecoms	€62.4 billion (2012) [13]
Accenture	Management consulting	€20.2 billion (2012)[14]
ATOS	IT services	€8.8 billion (2012)[15]
Ericsson	Communications	€25 million (2012)[16]
F-Secure Corporation	Cloud and security	€157.2 million (2012)[17]
Memset	Cloud	€5 million (2013)[18]
SAP	Software	€16.8 billion (2013)[19]

Table 1: members of the European Cloud Partnership Steering Board

[8] http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-SECText&TEXT=aHR0cDovL2FwaS50ZW5yd2l6YXJkLmNvbS9maWxpbmcueG1sP2lwYWdlPTkzNTA2ODQmRFNFUT0wJlNFUT0wJlNRREVTVQz1TRUNUSU9OX0VOVElSRSZzdWJzaWQ9NTc%3d

[9] http://www.3ds.com/fileadmin/COMPANY/Investors/Annual-Reports/PDF/2013-3DS-Annual-Report-EN.pdf

[10] http://www.eurocio.org/

[11] http://www.daimler.com/Projects/c2c/channel/documents/2287152_Daimler_Annual_Report_2012.pdf

[12] http://www.softwareag.com/epaper/annualreport/en_EN/report/2013/ausgabe.1/index.html#/2

[13] http://annualreport2012.telefonica.com/pdf/FINANCIERO_2012_ENG.pdf

[14] https://newsroom.accenture.com/news/accenture-reports-fourth-quarter-and-full-year-fiscal-2012-results-with-record-annual-revenues-eps-operating-margin-free-cash-flow-and-new-bookings.download

[15] https://atos.net/content/dam/global/documents/investor-financial-reports/atos-registration-document-2012.pdf

[16] http://www.ericsson.com/res/investors/docs/q-reports/2011/12month11-en.pdf

[17] http://www.f-secure.com/en/web/corporation_global/investors/financials/financial-key-figures

[18] http://www.memset.com/press/memset-revenue-growth-surges/

[19] http://www.google.com/finance?q=NYSE:SAP&fstype=ii