

Ensuring a thriving cloud services market: Why interoperability matters for business and government

Policy Recommendations

In its white paper, ECIS aims to highlight the importance of interfaces and data formats in the development of cloud services, and raise awareness around the exit and migration issues that should be considered. Standards, compatibility and interoperability are key to the wide-spread adoption of enterprise cloud computing, and to assure that its potential is fully realised globally.

ECIS underscores the importance of informing cloud computing customers – governments, enterprises and individuals – about the exit and migration issues that may arise in the future, and about the benefits of standards, compatibility and interoperability to ensure a competitive cloud computing market. Conscious evaluation of exit and migration issues for cloud services as part of a procurement process can diminish unforeseen consequences in the future.

To this end, ECIS calls for the following initiatives and recommendations to be considered by policy makers:

- ***Use public procurement as a means to advocate adoption of open cloud services, and to raise awareness of the risk for lock-in.*** Such an initiative should be two-fold:
 - Inform governments about the importance of including an exit and migration strategy in their purchasing considerations prior to making any final procurement decisions. In addition, raise awareness of the risks associated with closed or proprietary solutions, which can limit the ability to transfer efficiently data or applications in the future, or require them to use new software when migrating away from proprietary interfaces;
 - Inform public administrations about the benefits of open standards,¹ so that they are able to determine whether a proposed offering is open or not in procurement situations.
- ***Promote coordination among the various stakeholders at a global level.*** Cloud computing cannot be fragmented in regions. Similar to the Internet, the value of cloud computing lies in its global nature, and in it being offered universally in a seamless manner. For that reason, any standards implemented in cloud computing solutions

¹ ECIS agrees with the definition of open standards provided under Regulation (EU) No 1025/2012 (see Annex II, available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:316:0012:0033:EN:PDF>), as well as the definition of open standards according to the UK Corporate Report – Open Standards Principle, Updated 26 September 2013, available at: <https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles#open-standard---definition>.

should be global, not regional, and cloud services should not be subject to any limitations that would inhibit the global nature of cloud computing.

- **Ensure that cloud computing providers comply with EU competition rules.** We consider that at this stage there is no need for *ex-ante* regulation on data portability or interoperability of cloud services. However, cloud computing providers should comply with EU competition rules, and promote competition on the merits in the sector.
- **Establish sets of criteria that help customers analyse and evaluate migration and exit concerns before adopting and deploying cloud computing solutions.** Users of cloud services should be in a position to evaluate those services, and their potential for lock-in, and also to set out in advance an effective exit and migration strategy. While recognising that there is no “one size fits all”, users of cloud services should have in hand lists of questions against which to consider any available cloud services in order to make sure that they are able to migrate information and functionality in view of the ever-changing business climate. Some example questions that can be built upon include:
 - *With respect to IaaS cloud services:* Are the virtual machine packaging formats based on open standards? Are any lock-in concerns mitigated by source code access or use of open source components? Is it possible for existing workloads to be migrated between cloud services?
 - *With respect to PaaS cloud services:* Does a PaaS service allow you to write applications and move them to another platform, including back to a more traditional platform? Do the applications running on the PaaS system rely on open packaging, deployment and run-time management interfaces? Are any lock-in concerns mitigated by source code access or use of open source components?
 - *With respect to SaaS cloud services:* What format(s) can customer data be provided in? Are the formats based on open standards? Can cloud service customer data be retrieved from the cloud service in a standard format through an open interface?
 - *For all cloud services:* Are common security requirements addressed through standard or open interfaces – for example, Identity and Access Management?