



lyit

Institiúid Teicneolaíochta Leitir Ceannainn
Letterkenny Institute of Technology

Legal Issues surrounding Data Storage on the Cloud

Authors: A Fitzpatrick, M McGrath and R G Lennon

Presented by: Valerie Smyth



Background

- Although there are various laws, not made for Grid and Cloud Computing but still pertaining to them, more laws specific to Grid and Cloud computing are urgently needed.
- Grid and Cloud Computing are becoming more commercially accepted faster than laws can be made to govern appropriate use.
- There is a push by governments to collaborate on the cloud with projects such as Helix Nebula.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

EU Collaboration

- Where EU collaboration in a cloud is required it is necessary for each partner to assess that each partner evaluate the system for their functionality, legal and security requirements.
- An evaluation of which countries law applies to an established grid/cloud network must be carried out.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Multi-tenancy in the Cloud

- Multi-tenancy.
 - Can other businesses access your data?
 - Do you have an SLA governing security?
 - Do you have an SLA governing the responsibility of each partner?
 - Who monitors the SLA?
 - How can they be monitored?
 - What exit strategies are in place?



lyit

Institiúid Teicneolaíochta Leitir Ceanaínn
Letterkenny Institute of Technology

Data Protection

- The European Data Protection Regulation 2012 regulates data protection throughout Europe.
- A Data Protection Commissioner during an investigation can ask where a piece of data was being kept throughout it's entire hosting on the grid or on the Cloud.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Data Transfer

- Data transferred outside of the EU is no longer subject to EU laws.
- If a business processes its data but it has it stored on the cloud in some of the countries that the Data Protection Act labels as a prohibited country for data transferal, it can be seen as violating EU law .
- It is important to know the extent of the Grid or Cloud network.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

The right to be forgotten

- Any person may request all data relating to himself be permanently removed.
 - *le droit à l'oubli*
- Data processed on the grid or stored on the cloud must have it's location recorded at all times.
- Any backups of the data must be recorded so that they may be appropriately destroyed as required.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Data Retention

- The laws on data retention vary from country to country and is dependant on the type of data stored.
- For this reason it may be necessary to include a descriptor on all files as to the type of data it pertains to.
- These descriptors also increase the storage requirements.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Breaches

- In some countries there is a legal requirement to implement appropriate security to avoid system breaches.
- The definition of appropriate security measures changes frequently.
- The minimum requirement for security is again dependant on the country in which the data resides/is processed.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Additional laws on Grid Computing

- Evaluate if the network infrastructure of the Grid qualifies as an “electronic communications network”.
 - As per Article 2 (a) of Directive 2002/21/EC on a common regulatory framework for electronic communications networks
 - If the direct communication between the grid service provider and the recipient of such services is established through the use of an underlying network that belongs to a third operator, the grid network is not considered as an “electronic communications network”, since it cannot autonomously convey electronic signals between the grid provider and the business-customer, or between the latter and the consumer.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

- Grid middleware is primarily software code, it benefits from the Council Directive 91/250/EEC on the legal protection of computer programs
- The grid middleware must be assessed to see if it's specific activity falls under the regulatory scope of “information society services” or that of “electronic communications services”.



lyit

Institiúid Teicneolaíochta Leitir Ceanaínn
Letterkenny Institute of Technology

Additional laws on Cloud

- The relevant directive is Directive 95/46/EC, specifically articles 25 and 26 .
- This essentially states that data cannot be transferred to third party states which do not have an equivalent level of protection (article 25) unless the subject gives permission (article 26).



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

New Laws

- The Article 29 Working Party of the EU are promoting new Cloud based Laws.
 - Many of which are equally applicable to the grid.
- These laws are not focused enough in that they do not clarify the position where non-eu cloud providers provide a service within the EU.
- The laws are also vague enough, as previously mentioned, to enable regulators from different EU countries to apply different rulings.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Summary

- The new laws (directives and regulations) mandated by the EU provide concepts rather than solid definition and direction.
- The regulators will be the final judges as to how the regulations should be interpreted.
- Penalties for non-compliance is reducing the commercial take-up of both Grid & Cloud solutions.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Conclusions

- Each of EU project directors must ascertain which specific directives apply to their project.
- Strict regulations must be applied in the service level agreement to ensure compliance with EU law.
- Monitoring should be carried out regularly, but will prove difficult.
- No defined solution exists as yet to this problem.



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology



lyit

Institiúid Teicneolaíochta Leitir Ceanainn
Letterkenny Institute of Technology

Thank you.

Questions?

Valerie Smyth

