

Cloud Computing and data protection

A review on the technological base of Cloud
Computing and the primary international legislation,
including the proposed Data Protection Regulation
of the European Union

Luise Schulze



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ISBN: 9789462403383

Published by:

Wolf Legal Publishers (WLP)

PO Box 313

5060 AH Oosterwijk

The Netherlands

E-Mail: info@wolfpublishers.nl

www.wolfpublishers.com

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This study was finalised in February 2016.

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Index of abbreviations

BMWi	Bundesministerium für Wirtschaft und Energie (Federal Ministry for Economic Affairs and Energy)
CCTV	closed-circuit television (also known as video surveillance)
CoE	Council of Europe
D. f.	decision from
DuD	Datenschutz und Datensicherheit (German law journal)
ECHR	European Convention on Human Rights
ECtHR	European Court of Human Rights
ed./eds.	editor/editors
et seq.	et sequentes (means 'and the following')
EU	European Union
EUCJ	European Court of Justice
EuroCom.	European Commission
EuroParl.	European Parliament
i.c.w.	in connection with
IaaS	Infrastructure as a Service
Ibid.	ibidem (means 'in the same place/book/page')
IT	information technology
K&R	Kommunikation & Recht (German law journal)
LIBE	Committee on Civil Liberties, Justice and Home Affairs of the European Parliament
MAH	Münchener Anwaltshandbuch (German legal book)
MEPs	Members of the European Parliament
NIST	National Institute of Standards and Technology of the United States of America
No./Nos.	number/numbers
NSA	National Security Agency of the US
OECD	Organisation for Economic Co-operation and Development
p.	page
PaaS	Platform as a Service
rec.	recital
SaaS	Software as a Service
SME	small and medium enterprises
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
UN	United Nations
v.	versus
ZUM	Zeitschrift für Urheber- und Medienrecht (German law journal)

Preface

Data Protection is a sector of law of an extremely high relevance these days. The fast progressing technological development leads to a massive digitalisation of data, which again makes data much faster and easier accessible. Furthermore, new business models with a technological background are emerging that had certainly not been in peoples minds a few years ago. One of these models is Cloud Computing. Regarding Cloud Computing, the usage for instance in small enterprises in the US is said to increase from 37 to nearly 80 percent until 2020.¹ In the UK in 2014 already 75 percent of the SMEs used Cloud-services in some way, the numbers for bigger enterprises are probably even higher.² Germany, however, falls behind in numbers, only 44 percent of the businesses there where using Clouds in 2014.³ These numbers are still speaking for themselves: Cloud Computing is already of high importance in business-life and will in all probability be growing in the future, due to the fact that amongst others, it can safeguard expenses and facilitate especially international working alliances. Certainly though Clouds are not only used professionally. The use of Clouds in private menages in Norway amounts for instance to 43 percent, followed by Iceland (39 percent) and Great Britain (38 percent). In the European Union Clouds are used on an average of 22 percent.⁴ These numbers might be smaller than in fields of business but cannot be expected as a sign for decreasing numbers of use in private cases. Cloud Computing will therefore be of particular importance both in professional and private fields in the future.

Since Cloud Computing is a model completely dependent on technologies, it is also imperilled to dangers accompanied by technology. Failures of servers or networks are as well possible as the system can be hacked by people. Due to the dangers, it is essential to also have security measures available – therefore data protection law is necessary. Data protection law is predominantly supposed to secure the private data but also to ensure that the infringed person is compensated. Just as every law, data protection law is limited to the country that created it. In the cases of Cloud Computing, due to the necessary internet connection, this takes place on a transboundary level, national law alone can not help to secure the data. This is the reason why international and European law has to attract attention. This book is supposed to serve as a handbook on Cloud Computing that on one hand should give people who are not very familiar with technology a short and easy understanding of Cloud Computing itself. On the other hand it is supposed to also explain the main legal bases that are important for Cloud Computing, including the new data protection rules of the EU. These new rules contain two different instruments of which only one is

directly important for Cloud Computing: the new Data Protection Regulation. The Data Protection Directive for the police and justice sector however does not affect Cloud Computing immediately and will therefore be excluded in this book.

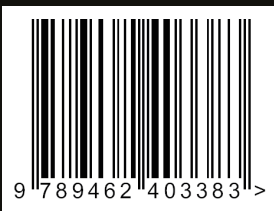
At the time of the publishing of this book the reform of the European data protection law was still work in progress. Therefore it was only possible to include the final version of the new regulation as she will be in force as Annex to this book. Due to that any development regarding laws, articles and further literature after February 2016 was excluded from this book.

To clarify the structure of this book it is also necessary to state that the included legal bases are mainly not arranged after the date of their promulgation but after the hierarchy of norms. Regarding European law that means that first will be primary law followed by secondary EU-law etc.

Data Protection is of extremely high relevance these days. The fast progression technological development leads to a massive digitalisation of data, which makes data much faster and easier accessible. Furthermore, new business models with a technological background have emerged, which was not foreseen not even two decades ago. One of these business models is Cloud Computing.

Cloud computing is ubiquitous. For example in the US, small enterprises is said to increase from 37 to nearly 80 percent until 2020. In the UK in 2014 already 75 percent of the SMEs used cloud services in some way, the number for bigger enterprises is probably even higher. Germany, however, falls behind in numbers, only 44 percent of the businesses using Clouds in 2014. These numbers are still speaking for themselves: cloud computing is already of high importance in business and will in all probability be growing in the future, due to the fact that amongst others, it can safeguard expenses and facilitate especially international commerce and trade. Clouds are furthermore not exclusively used professionally. The non-business use of Clouds in Norway for example, amounts for instance to 43 percent, followed by Iceland (39 percent) and Great Britain (38 percent). In the European Union clouds are used on an average of 22 percent. These numbers might be smaller than in fields of business but cannot be expected as a sign for decreasing numbers of use in private cases. Cloud computing will therefore be of particular importance both in professional and private fields in the future.

Since Cloud Computing is a model completely dependent on technologies, it is also imperilled to dangers accompanied by technology. Failures of servers or networks are as well possible as the system can be hacked by people. Due to inherent dangers, it is essential to also have security measures available – therefore data protection law is necessary. This book is supposed to serve as a handbook on cloud computing that on one hand should give people who are not very familiar with technology a short and easy understanding of cloud computing itself. On the other hand it is supposed to also explain the main legal bases that are important for cloud computing, including the new data protection rules of the EU. These new rules contain two different instruments of which only one is directly important for cloud computing: the new European Privacy Regulation. The Data Protection Directive for the police and justice sector however does not affect Cloud Computing immediately and will therefore be excluded in this title.



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