



*Cloud Security Alliance Italy Chapter*

Cloud Computing Standard Contractual Clauses:  
contractual standards as enabling factors for  
cloud computing services

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## Introduction

Cloud computing, widely acknowledged as one of the most important strategic technologies in the short and medium term<sup>1</sup>, is perhaps destined to radically change the way we think and operate most of the processes concerning on the line social relationships as well as the business world, intrinsically based on processing and sharing of information.

It is already present, often unknown to us, in our online activities for purposes of business or entertainment or relationships with the public bodies and this trend is rapidly growing.

Cloud computing can be seen at the same time as an enabling factor and a consequence of globalization and the availability of network services, due to its features such as: its international nature, its ability to allow the processing of data in a delocalized context, virtual and almost independent of the user's resources, its undeniable potential to transform the CAPEX costs into OPEX<sup>2</sup> and, not least, its ability to affect deeply the roles and responsibilities of those concerned by its use.

Although it is too early for making assessments in terms of pros and cons for the national bounded interests (business and related income of a State in terms of tax revenue and costs for social services, the influences on political plans, citizens economic welfare, ...), it is undeniable that Cloud Computing is already able to soundly change from many points of view the context of processes related to the treatment of information.

Despite the extent and the international dissemination of its growing, however Cloud Computing cannot yet be regarded as a mature and consolidated phenomenon and has, in particular with regard to the aspects of security and contractual obligations between the parties of a service agreement, different points where trust has not reached the sufficient level.

The reliability of a Cloud Computing service may well benefit from the existence of appropriate standard, with the purpose to create the right reference for the design of such a service, in compliance with mandatory regulations or applicable business standards and to provide an effective basis for assessing and monitoring, formally recognized and applied by the bodies responsible for ensuring and assessing compliance with the rules in a given context (national, business sector, ...).

In this sense it is very important the CSA<sup>3</sup> organization and its work programs, included the CSA national chapters, with their efforts in set up appropriate guide lines, checklists and training programs, also with a view of a specific certification scheme<sup>4</sup>.

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<sup>1</sup> Cfr. Gartner 2012: <http://www.gartner.com/it/page.jsp?id=1826214>

<sup>2</sup> Cfr. [http://en.wikipedia.org/wiki/Operating\\_expense](http://en.wikipedia.org/wiki/Operating_expense)

<sup>3</sup> <https://cloudsecurityalliance.org/>

<sup>4</sup> CSA ANNOUNCES OPEN SECURITY FRAMEWORK FOR CLOUD PROVIDERS - Edinburgh (UK) – August 20, 2012:

In this context, it is envisaged that a further positive contribution may result from the definition of standard contractual clauses for Cloud Computing, consisting in the identification of a minimum set of clauses that must be present (with the required level of adequacy in specific service cases) in a contract governing the provision of a Cloud Computing service between a supplier and consumer of the service itself: the study here below presented suggests a possible method aimed at this purpose, based on the use of specific checklist.

The results so far achieved in this study are certainly not definitive and consolidated: conversely they are proposed as a starting point, open to discussion and comparisons, to stimulate interest in the problem of the standard contractual clauses and in order to propose the integration in existing guide lines and checklists (as in the CSA case) within the Cloud Computing context.

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[https://cloudsecurityalliance.org/csa-news/csa-announces-open-security-framework-for-cloud-providers/?goback=%2Egde\\_2932531\\_member\\_150081376](https://cloudsecurityalliance.org/csa-news/csa-announces-open-security-framework-for-cloud-providers/?goback=%2Egde_2932531_member_150081376)

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# Thanks to

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## 1.0 Proposed approach and goals

The study "Cloud Computing Standard Contractual Clauses " envisaged the determination of standards, as it is already made for quality and security in services operation, also for the contractual rules to be applied in Cloud Computing services.

Because in the reality there are various contexts of Cloud Computing services, a wide variety of factors characterize the resulting use cases and thus require the presence of certain rules in the contract.

Therefore, this study proposes the identification of a representative set of Cloud Computing Factors through which model/ outline the various Cloud Computing Service Profiles.

A Cloud Computing Service Profile then will characterize (and it will be for the purposes of the study) a specific use case (eg social networking service provided free of charges to consumers, or service for employees HR data processing for a small or medium enterprise, ...).

Furthermore, considering the specificity of a Cloud Computing service, the study proposes a minimum set of contract terms (titles and not, of course, the texts of the terms themselves) that should be present. Obviously this does not involve the identification of all the contractual terms that should be present in a given contract, but only the subset that is expressly linked to the fact that the service is operated in Cloud Computing mode, and consequently addressing the relative risks and / or the compliance of relevant regulations (for example, the regulations related to privacy).

Based on the experience of the study team, according to the main areas of relevant legislation (eg contractual aspects differ according to the user of the service is a consumer or an enterprise) and the needs arising from the nature of the service (example: type of data processed) it has been suggested a link between the different Cloud Computing Factors and contractual clauses in question; thus we can model and represent:

1. Contractual clauses proposed as standard for a specific Cloud Computing use case
2. Assessment of a real contract in terms of its appropriateness , featuring the service in subject in terms of Cloud Computing Factors

For this purpose, in terms of operative result of the study, it has been developed a checklist for Cloud Computing Standard Contractual Clauses, with "tailoring" functions in order to model a specific use case, by the selection of applicable Cloud Computing Factors.

The checklist can be used as:

- Basic guide line for preparing the applicable standard clauses text
- GAP Analysis support tool in evaluating real contracts

## 2.0 Cloud Clauses

The Contractual Clauses envisaged as specific for a Cloud Computing service are the following:

1. Applicable Law/ Legge Applicabile
2. Jurisdiction-Arbitration/ Giurisdizione-Arbitrato
3. Limits to Provider's power of contract terms modif./ Limiti alla capacità del Provider di modificare i termini del contratto
4. Acceptable use of the service-Breaches of contract/Usò accettabile del servizio - Violazioni contrattuali
5. Security/Sicurezza
6. Privacy
7. Data erasure/ Cancellazione dei dati
8. Data backdelivery/ Riconsegna dei dati
9. Access data after contract termination/Accesso ai dati dopo il termine del contratto
10. Customer liability-idemnification/ Responsabilità del Cliente e risarcimenti
11. Provider liability-idemnification/ Responsabilità del Fornitore e risarcimenti
12. Data Portability / Portabilità dei dati
13. SLA

In Appendix 1 the relevant master data, including a brief descriptions.



## 3.0 Cloud Profiles as a selection of N Cloud Factors

The Cloud Factors identified for this study are the following, expressed in terms of categories and details within each category:

Cloud factor category	Cloud factor detail
Type of Cloud Net	Private
Type of Cloud Net	Public
Type of Cloud Net	Community
Type of Cloud Net	Hybrid
Type of Cloud Service	SaaS
Type of Cloud Service	PaaS
Type of Cloud Service	IaaS
Type of Cloud Service	Multilayered
Type of Customer	Consumer
Type of Customer	Professional-SME
Type of Customer	Professional- Corporate
Type of Customer	Public Admin.
Type of Supplier	SME
Type of Supplier	Corporate
Contract chars	Negotiable
Contract chars	Not Negotiable
Contract chars	Not charged service
Contract chars	Charged service
Type of Data	Personal
Type of Data	Sensitive
Type of Data	Judicial
Type of Data	critical
Type of Data	Anonymous
Type of Data	Other
Type of Processing/Sector	HR
Type of Processing/Sector	administrative-accounting
Type of Processing/Sector	Tecnichs
Type of Processing/Sector	information society services
Type of Processing/Sector	VAS
Type of Processing/Sector	Purchasing
Type of Processing/Sector	Selling
Type of Processing/Sector	Other
Data Subject	Customer's subscribers
Data Subject	Customer's personnel
Data Subject	Social networks users and persons concerned

In Appendix 2 the relevant master data, including brief descriptions.

The selection of some Cloud Factors from the ones listed above represents the identification of a Cloud Profile.

A Cloud Profile in turn represents a real use case of a Cloud Computing service.

## 4.0 Relation between Cloud Factor and Cloud Clause

This study then envisages the existence of a Relation between the Cloud contractual clauses and Cloud factors. This Relation has been represented in a simple way without introducing special statistics (more or less complex, which should be adequately justified by a scientific point of view before to give them a greater degree of robust reliability).

As reported in para. “Introduction” the Relation used is based on the experience of the study team and as such it is empirical.

The Relation, for the purpose of the checklist, is represented in these terms:

based on the individual Cloud Factor, the presence of the single clause (and clearly its related adequacy to the specific case)

- is considered mandatory or highly recommended, or
- is considered appropriate (more than suitable), or
- is: don't care

*The checklist currently available allows to insert, as input, the choice of one or more of the Cloud Computing Factors in order to characterize a Cloud Computing service and to obtain, as output, an evaluation in terms of which standard contractual clauses should be present, according to the Relation implemented in the checklist itself.*

## 5.0 Example of checklist use

### 5.1 Cloud Computing Standard Contractual Clauses and specific use cases of Cloud Computing service

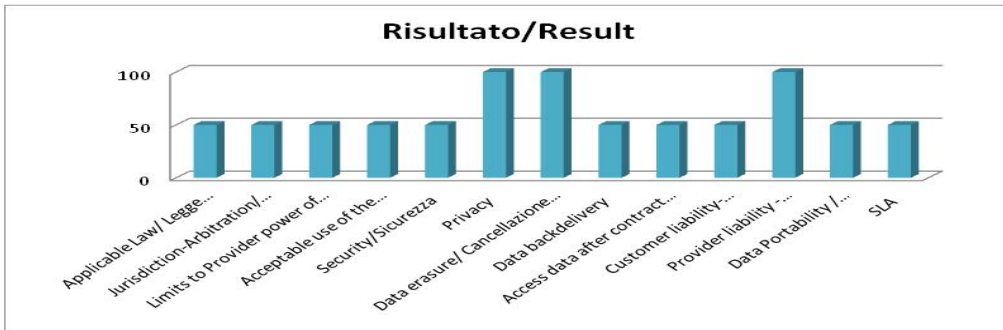
The following 5 examples, chosen as representative of some real cases of service based on Cloud Computing, highlight the Cloud Computing clauses that should be present, representing with:

100: clause is considered mandatory or highly recommended;

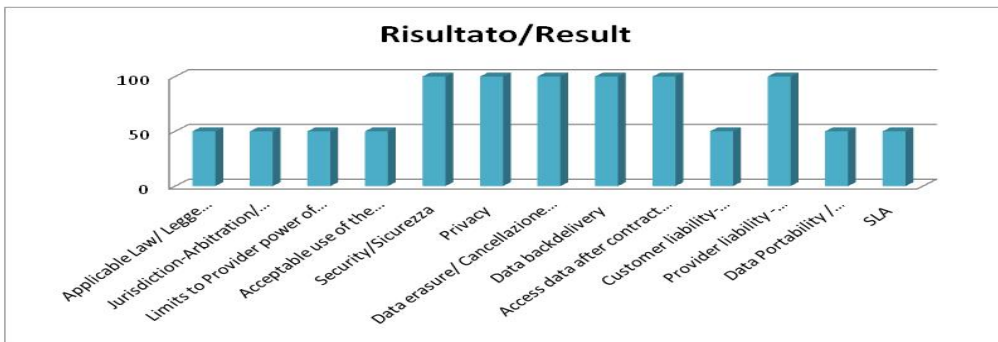
50: clause is considered appropriate (more than suitable)

0: dont'care

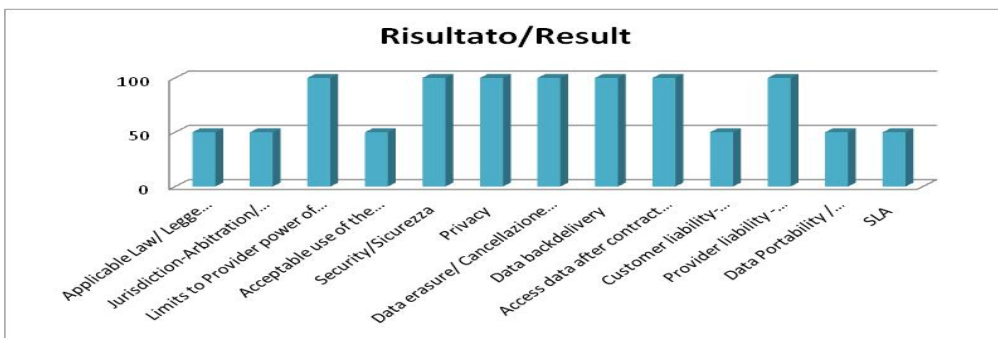
**Use case = Cloud Profile 1: Social network services for Consumers**



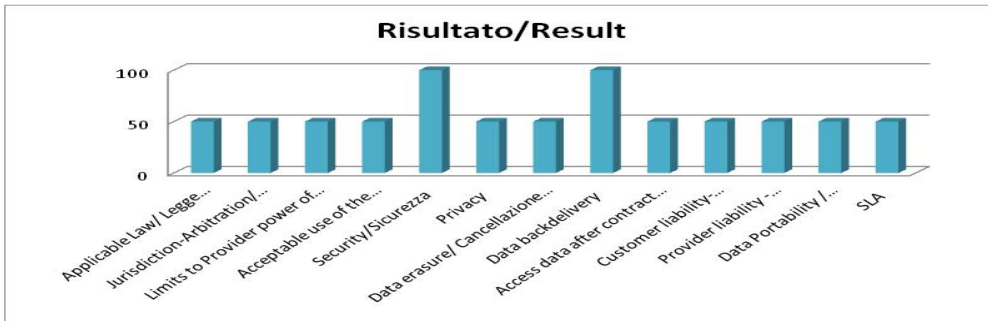
**Use case = Cloud Profile 2: Corporate using SaaS for HR processing**



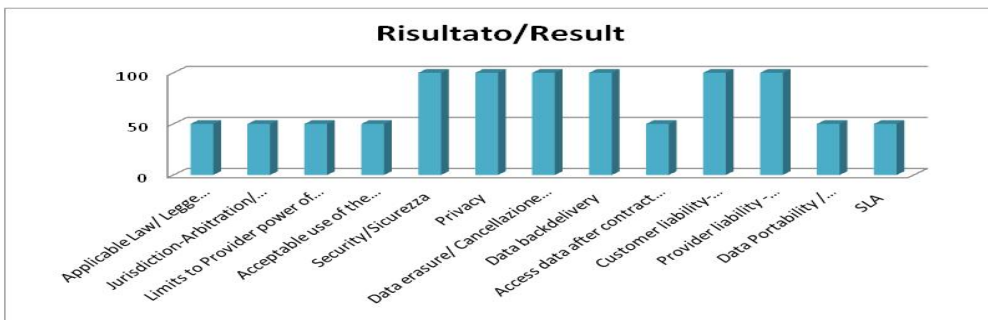
**Use case = Cloud Profile 3: Corporate using SaaS for VAS services to its subscribers**



**Use case = Cloud Profile 4: Professional using PaaS for technical processing**



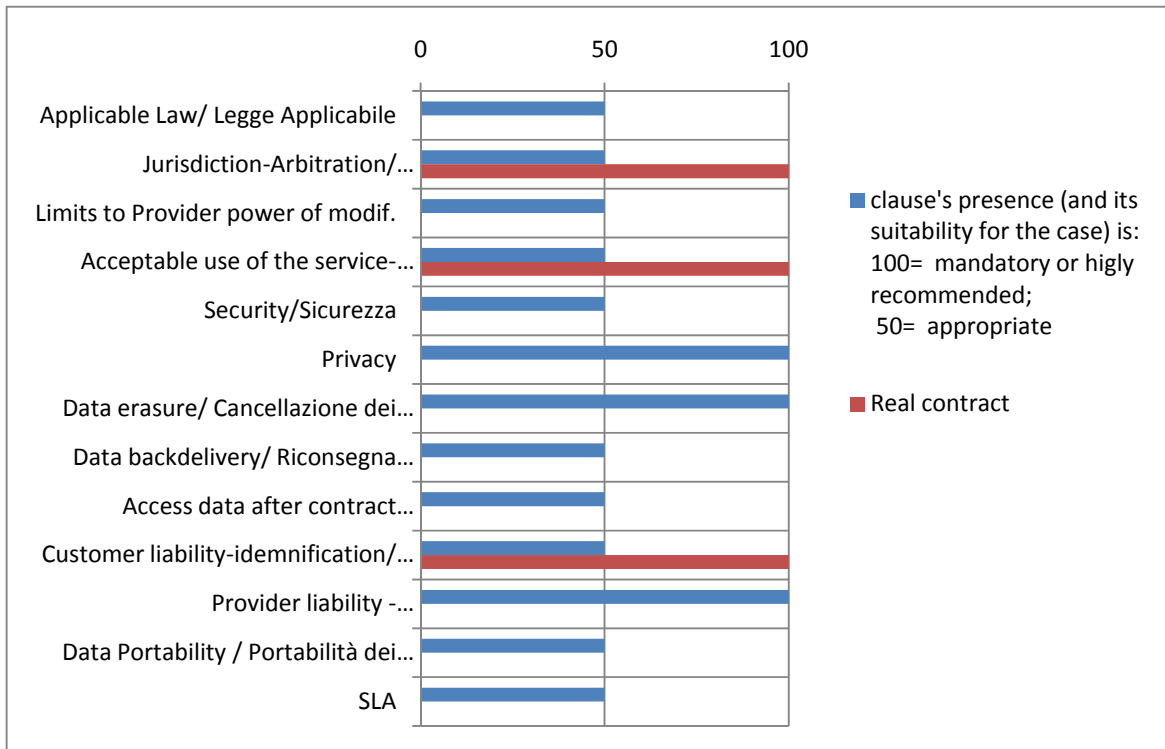
**Use case = Cloud Profile 5: Admin.account. services for professionals from professional**



The following table shows the values selected for the Cloud Factors corresponding to the above 5 use cases.

<b>Cloud factor category</b>	<b>Cloud factor detail</b>	1 Social network services for Consumers	2 Corporate using SaaS for HR processing	3 Corporate using SaaS for VAS services to its subscribers	4 Professional using PaaS for technical processing	5 Admin.account. services for professionals from professional
Type of Cloud Net	private	N	Y	N	N	N
Type of Cloud Net	public	N	N	Y	N	Y
Type of Cloud Net	community	N	N	N	N	N
Type of Cloud Net	hybrid	Y	N	N	Y	N
Type of Cloud Service	SaaS	Y	Y	Y	N	Y
Type of Cloud Service	PaaS	N	N	N	Y	N
Type of Cloud Service	IaaS	N	N	N	N	N
Type of Cloud Service	Multilayered	N	N	N	N	N
Type of Customer	Consumer	Y	N	Y	N	N
Type of Customer	Professional-SME	N	N	N	Y	Y
Type of Customer	Professional- Corporate	N	Y	N	N	N
Type of Customer	Public Admin.	N	N	N	N	N
Type of Supplier	SME	N	N	N	N	N
Type of Supplier	Corporate	Y	Y	Y	Y	N
Contract chars	Negotiable	N	Y	N	N	N
Contract chars	Not Negotiable	Y	N	Y	Y	Y
Contract chars	Not charged service	Y	N	N	N	N
Contract chars	Charged service	N	Y	Y	Y	Y
Type of Data	personal	Y	Y	Y	N	N
Type of Data	sensitive	N	Y	N	N	N
Type of Data	judicial	N	N	N	N	N
Type of Data	critical	N	N	N	N	N
Type of Data	anonymous	N	N	N	N	N
Type of Data	other	N	N	N	Y	Y
Type of Processing/Sector	HR	N	Y	N	N	N
Type of Processing/Sector	administrative-accounting	N	N	N	N	Y
Type of Processing/Sector	technical	N	N	N	Y	N
Type of Processing/Sector	information society services	Y	N	N	N	N
Type of Processing/Sector	VAS	N	N	Y	N	N
Type of Processing/Sector	purchasing	N	N	N	N	N
Type of Processing/Sector	selling	N	N	N	N	N
Type of Processing/Sector	others	N	N	N	N	N
Data Subject	Customer's subscribers	N	N	Y	N	N
Data Subject	Customer's personnel	N	Y	N	N	Y
Data Subject	Social networks users and persons concerned	Y	N	N	N	N

## 5.2 Assessment of contract appropriateness, for a service represented in terms of applicable Cloud Factors



The figure shows an example of using the checklist, made with test data, assuming a contract in which are expressly present, for Cloud Computing purpose, the only clauses relating to jurisdiction, acceptable use of the service and user's liability, for a service represented by Cloud Profile case 1: "Social network services for Consumers" (see example 1 above).

## 6.0 References

- [1] NIST Cloud Computing Related Publications: <http://www.nist.gov/itl/cloud/publications.cfm>

[checked: September 10, 2012]

- [2] Queen Mary University of London - Cloud Legal Project:

<http://www.cloudlegal.ccls.qmul.ac.uk/Research/index.html> [checked: September 10, 2012]

- [3] Cloud Security Alliance guide lines and checklist: <https://cloudsecurityalliance.org/>

[checked: September 10, 2012]

- [4] ENISA materials for Cloud Computing: <http://www.enisa.europa.eu/activities/risk-management/files/deliverables/cloud-computing-risk-assessment>

[checked: September 10, 2012]

- [5] EU Working Party 29 : Opinion 05/2012 on Cloud Computing

[http://ec.europa.eu/justice/data-protection/article-29/documentation/opinion-recommendation/files/2012/wp196\\_en.pdf](http://ec.europa.eu/justice/data-protection/article-29/documentation/opinion-recommendation/files/2012/wp196_en.pdf)

related article:

Cloud Computing: the official Opinion of the EU Data Protection Authorities

<http://www.diritto.it/docs/33744>

by G.Marcoccio

[checked: September 10, 2012]



## Appendix 1 - Master data for the identified Cloud Computing Clauses

### **Applicable Law/ Legge Applicabile**

La legge applicabile è l'insieme di norme alle quali il contratto deve conformarsi.

*Applicable law is the set of rules to which the contract must conform.*

### **Jurisdiction-Arbitration/ Giurisdizione-Arbitrato**

La giurisdizione è l'attività, svolta dai giudici, con la quale lo Stato dirime le controversie. Le parti possono convenire di far decidere una controversia ad arbitri (soggetti privati).

Per i contratti conclusi con il Consumatore il foro competente è quello ove il consumatore è residente (c.d. Foro del Consumatore).

*Jurisdiction is the activity carried out by the courts, by which the State settles disputes. The parties may agree to settle any dispute to arbitration (private subjects).*

*For contracts concluded with Consumer the jurisdiction is where the Consumer is resident (known as the Consumer Forum).*

### **Limits to Provider's power of contract terms modification /Limiti alla capacità del Provider di modificare i termini del contratto**

Le parti possono determinare contrattualmente la possibilità di modificare, anche unilateralmente, alcune condizioni contrattuali. Le modifiche pregiudizievoli per i Consumatori, anche se da questi approvate, sono ugualmente inefficaci.

*The parties may determine by contract the ability to change, even unilaterally, some contractual conditions. The changes when harmful to consumers, even if accepted by them, are equally ineffective.*

### **Acceptable use of the service-Breaches of contract/Usò accettabile del servizio - Violazioni contrattuali**

Clausole per regolamentare che il servizio sarà utilizzato dal fruitore per gli scopi ed i fini indicati nel contratto, a pena di risarcimento danni e/o perdita di garanzie del servizio.

*Clauses to regulate the service will be used by the user for the purposes and the purposes specified in the contract, on penalty of damages and \ or loss of service guarantees.*

### **Security/Sicurezza**

Le clausole relative alla sicurezza regolamentano il processo volto alla protezione (da atti dolosi, colposi o accidentali) delle informazioni affidate dal fruitore del servizio, per evitarne il danneggiamento, temporaneo o permanente, parziale o totale.

*The clauses concerning security regulate the process for protecting (from negligent acts, intentional or accidental) the information entrusted by the service's user, to prevent damage, temporary or permanent, partial or total.*

### **Privacy**

Le clausole relative alla privacy regolamentano il controllo e la gestione delle informazioni afferenti i dati personali di un soggetto.

*The clauses concerning privacy regulate the control and management of information pertaining the personal data of a subject.*

### **Data erasure/ Cancellazione dei dati**

Queste clausole regolamentano la cancellazione dei dati in tempi certi e/o stabiliti da regolamentazioni. Per cancellazione si intende l'eliminazione del dato, in modo che non sia, per chiunque, più disponibile o utilizzabile.

*These clauses regulate the deletion of data in times defined and / or established by regulations. Cancellation means the erasure of the data, so that it is, for anyone, no longer available or usable.*

### **Data backdelivery/ Riconsegna dei dati**

Queste clausole regolamentano l'obbligo del fornitore, al termine del servizio, che i dati affidatigli dall'utente vengano reimmessi nella disponibilità di quest'ultimo.

*These clauses regulate the obligation of the supplier, for the purpose to ensure that at the end of the service, the data assigned by the user are returned to the availability of the latter.*

### **Access data after contract termination/Accesso ai dati dopo il termine del contratto**

Queste clausole regolamentano la possibilità per il fruitore di aver accesso ai propri dati, per un determinato periodo dopo la conclusione del contratto, anche se con delle limitazioni di utilizzo.

*These clauses regulate the ability for the users to have access to their data, for a predefined period after the conclusion of the contract, albeit with some limitations on use.*

### **Customer liability-idemnification/ Responsabilità del Cliente e risarcimenti**

**and**

### **Provider liability-idemnification/ Responsabilità del Fornitore e risarcimenti**

La violazione degli obblighi contrattuali comporta la responsabilità del soggetto inadempiente.

Qualunque fatto doloso o colposo che cagiona ad altri un danno ingiusto, obbliga colui che ha commesso il fatto a risarcire il danno.

*The breach of contract gives rise to liability of the defaulting party.*

*Any fault or negligence on the fact that causes unjust damage to others, obliges the one who committed it to pay damages.*

### **Data Portability / Portabilità dei dati**

Queste clausole regolamentano l'obbligo del fornitore, anche durante l'espletamento del servizio, di mettere a disposizione dell'utente, su sua richiesta, i dati in formato intellegibile secondo lo standard vigente.

*These clauses regulate the obligation of the supplier, even during the performance of the service, to make available to the user, at his request, the data in intelligible form according to the standards in force.*

### **SLA**

I Service Level Agreement regolamentano il livello del servizio e costituiscono uno strumento\obbligo contrattuale del fornitore nei confronti del fruitore di mantenere le prestazioni attese all'interno di valori prestabiliti.

*The Service Level Agreements regulate the level of service and they are a mean \ contractual obligation of the supplier toward the user to maintain performance expectations within predetermined values.*

## Appendix 2 - Master data for the identified Cloud Computing Factors

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Cloud Net	NIST Deployment Model	Private	<p><i>NIST "A private cloud is one in which the computing environment is operated exclusively for a single organization. It may be managed by the organization or by a third party, and may be hosted within the organization's data center or outside of it."</i></p> <p>NIST "Per "private cloud" si intende il caso in cui l'ambiente di calcolo è posto a disposizione di una singola organizzazione. Può essere gestito dall'organizzazione stessa o da terzi, e può essere ospitato all'interno del data center dell'organizzazione o al di fuori di esso."</p>
Type of Cloud Net	NIST Deployment Model	Public	<p><i>NIST "A public cloud is one in which the infrastructure and computational resources that it comprises are made available to the general public over the Internet. It is owned and operated by a cloud provider delivering cloud services to consumers and, by definition, is external to the consumers' organizations."</i></p> <p>NIST " per "public cloud" si intende il caso in cui le infrastrutture e le risorse di calcolo che esso comprende sono messe a disposizione pubblicamente su internet. Esse sono di proprietà e sono gestiti da un fornitore di servizi cloud offerti agli utilizzatori e, per definizione, sono esterne alle organizzazioni che le utilizzano."</p>

<sup>5</sup> the study has been prepared by an Italian team, for this reason in some of the descriptions there are references to Italian regulations

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Cloud Net	NIST Deployment Model	community	<p><i>NIST "A community cloud falls between public and private clouds with respect to the target set of consumers. It is somewhat similar to a private cloud, but the infrastructure and computational resources are exclusive to two or more organizations that have common privacy, security, and regulatory considerations, rather than a single organization."</i></p> <p>NIST "La community cloud si colloca tra la public cloud e la private cloud con riferimento ai Consumatori. E' qualcosa di simile ad una private cloud, ma con le risorse di infrastruttura e computazioni che sono esclusive per 2 o più organizzazioni che hanno una comune considerazione in termini di privacy, sicurezza e regolamentazioni, piuttosto che una unica organizzazione."</p>
Type of Cloud Net	NIST Deployment Model	Hybrid	<p><i>NIST "Hybrid clouds are more complex than the other deployment models, since they involve a composition of two or more clouds (private, community, or public). Each member remains a unique entity, but is bound to the others through standardized or proprietary technology that enables application and data portability among them."</i></p> <p>NIST " Le hybrid cloud sono più complesse rispetto alle precedenti in quanto esse comportano una composizione di 2 o più cloud (private, community, or public). Ogni una rimane una unica entità, ma è legata alle altre attraverso tecnologie standard o proprietarie che abilitano la portabilità di applicazioni e dati fra loro"</p>
Type of Cloud Service	NIST Service Model	SaaS	<p><i>NIST "Software-as-a-Service. Software-as-a-Service (SaaS) is a model of service delivery whereby one or more applications and the computational resources to run them are provided for use on demand as a turnkey service. Its main purpose is to reduce the total cost of hardware and software development, maintenance, and operations. Security provisions are carried out mainly by the cloud provider. The cloud consumer does not manage or control the underlying cloud infrastructure or individual applications, except for preference selections and limited administrative application settings. "</i></p> <p>NIST "Software-as-a-Service. Software-as-a-Service (SaaS) è un modello di erogazione dei servizi in cui sono previste una o più applicazioni e le risorse di calcolo per eseguirle</p>

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
			sono fornite a richiesta e come servizio chiavi in mano. Il suo scopo principale è quello di ridurre il costo totale di hardware e sviluppo software, manutenzione ed esercizio. Gli aspetti di sicurezza sono principalmente a carico del fornitore cloud. L'utilizzatore del servizio non gestisce o controlla l'infrastruttura cloud sottostante o le singole applicazioni, fatta eccezione per la selezione di preferenze e limitate azioni di configurazione relativamente alla parte amministrativa delle applicazioni. "
Type of Cloud Service	NIST Service Model	PaaS	<p><i>NIST "Platform-as-a-Service. Platform-as-a-Service (PaaS) is a model of service delivery whereby the computing platform is provided as an on-demand service upon which applications can be developed and deployed. Its main purpose is to reduce the cost and complexity of buying, housing, and managing the underlying hardware and software components of the platform, including any needed program and database development tools. The development environment is typically special purpose, determined by the cloud provider and tailored to the design and architecture of its platform. The cloud consumer has control over applications and application environment settings of the platform. Security provisions are split between the cloud provider and the cloud consumer."</i></p> <p>NIST "Platform-as-a-Service. Platform-as-a-Service (PaaS) è un modello di erogazione dei servizi in cui la piattaforma informatica/computazionale è fornita su richiesta, mediante la quale le applicazioni possono essere sviluppate e implementate. Il suo scopo principale è quello di ridurre i costi e le complessità di acquisto, l'housing, la gestione dell'hardware sottostante e le componenti software della piattaforma, compreso qualsiasi programma necessario e strumenti di sviluppo di database. L'ambiente di sviluppo è tipicamente a scopo specifico, definito dal fornitore cloud e adattato per la progettazione e architettura della piattaforma. L'utente cloud ha il controllo sulle applicazioni e sull'ambiente di configurazione delle applicazioni. Gli aspetti della sicurezza sono divisi tra il fornitore e l'utilizzatore."</p>

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Cloud Service	NIST Service Model	IaaS	<p><i>NIST" Infrastructure-as-a-Service. Infrastructure-as-a-Service (IaaS) is a model of service delivery whereby the basic computing infrastructure of servers, software, and network equipment is provided as an on-demand service upon which a platform to develop and execute applications can be established. Its main purpose is to avoid purchasing, housing, and managing the basic hardware and software infrastructure components, and instead obtain those resources as virtualized objects controllable via a service interface. The cloud consumer generally has broad freedom to choose the operating system and development environment to be hosted. Security provisions beyond the basic infrastructure are carried out mainly by the cloud consumer. "</i></p> <p>NIST "Infrastructure-as-a-Service. Infrastructure-as-a-Service (IaaS) è un modello di erogazione dei servizi in cui è fornita a richiesta l'infrastruttura informatica di base di server, software e apparecchiature di rete, come un servizio a richiesta sul quale può essere impiantata una piattaforma per sviluppare ed eseguire applicazioni. Il suo scopo principale è quello di evitare l'acquisto, l'housing, e la gestione delle componenti infrastrutturali hardware e software ed invece ottenere tali risorse come oggetti virtuali controllabili tramite un'interfaccia. L'utente cloud ha in genere ampia libertà di scegliere il sistema operativo e all'ambiente di sviluppo da ospitare nell'infrastruttura. Gli aspetti di sicurezza oltre l'infrastruttura di base sono principalmente a carico dell'utente cloud. "</p>
Type of Cloud Service	NIST Service Model	Multilayered	<p><i>Any combination of the NIST Service Model, for example a SaaS provided by using PaaS/IaaS and other SaaS components.</i></p> <p>Qualunque combinazione di NIST Service Model, per esempio un SaaS fornito utilizzando PaaS/IaaS ed altri servizi componenti SaaS.</p>
Type of Customer	<p><i>Customer is the natural or legal person who is the Acquirer Party in a Contract</i></p> <p>Cliente è la persona fisica o giuridica che, in un contratto, è la parte acquirente</p>	Consumer	<p><i>Natural person acting for his/her personal purposes other than his/her enterprise/commercial/artisan or professional possible purposes; Legislative Decree 206/05 section 3 para. 1 letter a)</i></p> <p>La persona fisica che agisce per scopi estranei all'attività imprenditoriale, commerciale, artigianale o professionale eventualmente svolta. D.Lgs. 206/05 art 3 comma 1 lettera a)</p>

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Customer	<p><i>Customer is the natural or legal person who is the Acquirer Party in a Contract</i></p> <p>Cliente è la persona fisica o giuridica che, in un contratto, è la parte acquirente</p>	Professional-SME	<p><i>Natural or legal person acting in its role for the operation of its enterprise/commercial/artisan or professional purposes, directly or by its intermediary; Legislative Decree 206/05 section 3 para. 1 letter c)</i></p> <p>SME=Small Medium Enterprise</p> <p>La persona fisica o giuridica che agisce nell'esercizio della propria attività imprenditoriale, commerciale, artigianale o professionale, ovvero un suo intermediario. D.Lgs. 206/05 Art. 3 comma 1 lettera c)</p> <p>SME= Piccola media impresa,</p> <p>EU reference/riferimento:  <a href="http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm">http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm</a></p>
Type of Customer	<p><i>Customer is the natural or legal person who is the Acquirer Party in a Contract</i></p> <p>Cliente è la persona fisica o giuridica che, in un contratto, è la parte acquirente</p>	Professional-Corporate	<p><i>Natural or legal person acting in its role for the operation of its enterprise/commercial/artisan or professional purposes, directly or by its intermediary; Legislative Decree 206/05 section 3 para. 1 letter c)</i></p> <p><i>Corporate is a company larger than a SME and, typically, a multinational company</i></p> <p>La persona fisica o giuridica che agisce nell'esercizio della propria attività imprenditoriale, commerciale, artigianale o professionale, ovvero un suo intermediario. D.Lgs. 206/05 Art. 3 comma 1 lettera c)</p> <p>Corporate è un'azienda di dimensioni maggiori rispetto ad una SME e, tipicamente, multinazionale</p>



Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Customer	<p><i>Customer is the natural or legal person who is the Acquirer Party in a Contract</i></p> <p>Cliente è la persona fisica o giuridica che, in un contratto, è la parte acquirente</p>	Public Admin.	<p><i>This means the body, whatever its legal character, carrying out activities for the care of the interests of the public community</i></p> <p>Qui si intende l' ente, quale che sia la sua natura giuridica, che svolge attività volta alla cura degli <u>interessi</u> della collettività</p>
Type of Supplier	<p><i>Supplier is the natural or legal person who is the Vendor Party in a Contract</i></p> <p>Fornitore è la persona fisica o giuridica che, in un contratto, è la parte venditrice</p>	SME	<p><i>See definition for the same case, in Type of Customer</i></p> <p>Vedasi definizione per il medesimo caso, in Type of Customer</p>
Type of Supplier	<p><i>Supplier is the natural or legal person who is the Vendor Party in a Contract</i></p> <p>Fornitore è la persona fisica o giuridica che, in un contratto, è la parte venditrice</p>	Corporate	<p><i>See definition for the same case, in Type of Customer</i></p> <p>Vedasi definizione per il medesimo caso, in Type of Customer</p>
Contract chars	<p><i>Special Contract feature</i></p> <p>Particolare caratteristica del contratto</p>	Negotiable	<p><i>The acquirer of the service may negotiate, in whole or in part, the terms of the contract</i></p> <p>La parte acquirente del servizio può negoziare, in tutto o in parte i termini del contratto</p>

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Contract chars	<i>Special Contract feature</i>  Particolare caratteristica del contratto	Not Negotiable	<i>No negotiation over the terms of the contract is allowed for the acquirer of the service</i>  Alla parte acquirente del servizio non è consentito alcuna negoziazione sui termini del contratto
Contract chars	<i>Special Contract feature</i>  Particolare caratteristica del contratto	Not charged service	<i>Not charged service</i>  Il servizio è gratuito
Contract chars	<i>Special Contract feature</i>  Particolare caratteristica del contratto	Charged service	<i>Charged service</i>  Il servizio è a pagamento
Type of Data	<i>Type of Data</i>  Tipo dei Dati	personal	<i>Any information relating to natural persons that are or can be identified, even indirectly, by reference to any other information including a personal identification number(Legislative Decree 196/03 article 4 para. 1 letter b)</i>  Qualunque informazione relativa a persona fisica, identificata o identificabile, anche indirettamente, mediante riferimento a qualsiasi altra informazione, ivi compreso un numero di identificazione personale (D.Lgs 196/03 art. 4 comma 1 lettera b)

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Data	<i>Type of Data</i>  Tipo dei Dati	sensitive	<p><i>Personal data allowing the disclosure of racial or ethnic origin, religious, philosophical or other beliefs, political opinions, membership of parties, trade unions, associations or organizations of a religious, philosophical, political or trade-unionist character, as well as personal data disclosing health and sex life (Legislative Decree 196/03 article 4 para. 1 letter d)</i></p> <p>I dati personali idonei a rivelare l'origine razziale ed etnica, le convinzioni religiose, filosofiche o di altro genere, le opinioni politiche, l'adesione a partiti, sindacati, associazioni od organizzazioni a carattere religioso, filosofico, politico o sindacale, nonché i dati personali idonei a rivelare lo stato di salute e la vita sessuale (D.Lgs 196/03 art. 4 comma 1 lettera d)</p>
Type of Data	<i>Type of Data</i>  Tipo dei Dati	Sudicia	<p>Personal data disclosing the measures referred to in Section 3(1), letters a) to o) and r) to u), of Presidential Decree no. 313 of 14 November 2002 concerning the criminal record office, the register of offence-related administrative sanctions and the relevant current charges, or the status of being either defendant or the subject of investigations pursuant to Sections 60 and 61 of the Criminal Procedure Code (Legislative Decree 196/03 article 4 para. 1 letter e)</p> <p>I dati personali idonei a rivelare provvedimenti di cui all'articolo 3, comma 1, lettere da a) a o) e da r) a u), del d.P.R. 14 novembre 2002, n. 313, in materia di casellario giudiziale, di anagrafe delle sanzioni amministrative dipendenti da reato e dei relativi carichi pendenti, o la qualità di imputato o di indagato ai sensi degli articoli 60 e 61 del codice di procedura penale (D.Lgs 196/03 art. 4 comma 1 lettera e)</p>
Type of Data	<i>Type of Data</i>  Tipo dei Dati	critical	<p><i>Data that the Customer considers critical for its needs / intended use</i></p> <p>I dati che il Customer ritiene critici in base alle proprie esigenze/finalità di utilizzo</p>

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Data	<i>Type of Data</i>  Tipo dei Dati	anonymous	<i>Any data that either in origin or on account of its having been processed cannot be associated with any identified or identifiable data subject (Legislative Decree 196/03 article 4 para. 1 letter n)</i>  Il dato che in origine, o a seguito di trattamento, non può essere associato ad un interessato identificato o identificabile (D.Lgs 196/03 art. 4 comma 1 lettera n)
Type of Data	<i>Type of Data</i>  Tipo dei Dati	Other	<i>Any other type not included in the above details</i>  Qualunque altro tipo non compreso nelle categorie precedenti
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	HR	<i>Data processing concerning natural persons within an employment relationship</i>  Trattamento dei dati di persone fisiche nell'ambito di un rapporto di lavoro.
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	administrative-accounting	<i>Data processing for administrative-accounting purposes</i>  Trattamento di dati per finalità amministrativo – contabili
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	technical	<i>Data processing in technical context</i>  Trattamento di dati in ambito tecnico
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	information society services	<i>Data processing for information society services (in short the service normally provided for remuneration, at a distance, electronically and at the individual request of the services recipient. For more details see Legislative Decree 70/2003)</i>  Trattamento dei dati nei servizi per la società dell'informazione (in sintesi il servizio prestato normalmente dietro retribuzione, a distanza, per via elettronica e a richiesta individuale di un destinatario di servizi. Per ulteriori dettagli vedasi D.Lgs 70/2003)

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	VAS	<i>Value Added Service: the value-added services is a typical term used in telecommunications industry, it refers to services other than the basic ones, such as the use of geo-location of a mobile phone to indicate what are the pharmacies closest to it</i>  Value Added Service: i servizi a valore aggiunto è un termine tipico dell'industria di telecomunicazioni che indica tutti i servizi al di fuori dei servizi di base, quale ed esempio l'utilizzo della geo-localizzazione di un telefonino per indicare quali sono le farmacie più vicine ad esso
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	purchasing	<i>Data processing for purchasing management</i>  Trattamento dati per gestire acquisti
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	Selling	<i>Data processing for sales management</i>  Trattamento dati per gestire le vendite
Type of Processing/Sector	<i>Type of Processing/Sector</i>  Tipo/settore di trattamento dati	Others	<i>Any other type not included in the above details</i>  Qualunque altro tipo non compreso nelle categorie precedenti
Data Subject	<i>The person that is the subject of the data</i>  La persona a cui si riferiscono i dati	Customer's subscribers	<i>The clients/subscribers of the Customer: the latter one has acquired a Cloud Service and uses it as part of its services sold to its customers</i>  I clienti/abbonati/ del Customer ossia della parte che ha acquistato un servizio Cloud e che utilizza quest'ultimo nell'ambito di suoi servizi venduti alla propria clientela.

Cloud factor category	<- Descr.	Cloud Factor detail	<- Descr. <sup>5</sup>
Data Subject	<p><i>The person that is the subject of the data</i></p> <p>La persona a cui si riferiscono i dati</p>	Customer's personnel	<p><i>The personnel (employees, consultants,...) of the Customer: the latter one has acquired a Cloud Service and uses it as part of its internal services</i></p> <p>Il personale (impiegati, consulenti,...) del Customer ossia della parte che ha acquisto un servizio Cloud e che utilizza quest'ultimo nell'ambito di suoi servizi interni</p>
Data Subject	<p><i>The person that is the subject of the data</i></p> <p>La persona a cui si riferiscono i dati</p>	Social networks users and persons concerned	<p><i>Natural persons who use social networks and the people they mention (with pictures, with the designations, ...) in using these services</i></p> <p>Ossia le persone fisiche che utilizzano i Social Network e le persone essi menzionano (con foto, con nomi identificativi,...) nell'utilizzo di tali servizi.</p>