

Cloud Computing Bill of Rights

From Cloud Computing Community Wiki

Jump to: [navigation](#), [search](#)

See also: [Cloud Computing Manifesto](#)

Contents

- [1 User rights](#)
 - [1.1 Auditing](#)
 - [1.2 Billing](#)
 - [1.3 Backups](#)
 - [1.4 Data](#)
 - [1.5 Interfaces](#)
 - [1.6 Legal](#)
 - [1.7 Location](#)
 - [1.8 Security](#)
 - [1.9 Service](#)
 - [1.10 Standards](#)
- [2 Acknowledgements](#)
- [3 References](#)

User rights

Auditing

1. **Events** must be securely recorded for a period disclosed to and depending on the needs of the user
2. **Logs** must be made available by download in a transparent format and optionally online
3. **Monitoring** should not exceed that required for service delivery, or must be optional

Billing

1. **Itemised Invoices** must be made available with sufficient information so as to validate the providers' claims
2. **Limits** must be able to be enforced so as to prevent runaway costs
3. **Rates** must be transparent, in that a user should be able to calculate and anticipate usage
4. **Usage Data** (both current and historical) must be available to enable users to monitor usage trends

Backups

1. **Bulk Access** shall be provided to all user data (including metadata and configuration data)
2. **Frequency** of access shall not be unreasonably limited (eg >30 days^[1])
3. **Redundancy** should be built into the systems such that user data is protected against loss

Data

1. **Encryption** of data shall be facilitated where feasible and never unnecessarily hindered
2. **Integrity** data integrity expectations will be clearly defined
3. **Licensing** as necessary for delivery of services (eg hosting) is acceptable with explicit permission
4. **Metadata** and configuration data (eg settings) is included
5. **Ownership** is retained by the user along with all associated rights (eg copyright)^[2]

6. **Subusers' data** is included (eg Google Apps users have multiple accounts, Salesforce users have customer accounts)

Interfaces

1. **Application Programming Interfaces** (APIs) shall be maintained for accessing and manipulating data
2. **Change control** shall allow for all API changes to be notified well in advance
3. **Documentation** shall be made available online in open standard formats
4. **Superseded versions** of APIs shall be available for a reasonable period

Legal

1. **Conflicts** of interest shall be revealed to the user (eg where sponsorship has affected platform choice)
2. **Contracts** shall use clear and easy to understand contract language, striving for the fewest surprises
3. **Notice** of changes (most notably service shutdown) must be given well in advance (ideally months)
4. **Termination** of service agreements without penalty must be possible in the event that *Terms of Service* changes are not acceptable to the User
5. **Warrants** shall be defended and notified to the user according to a set of published policies, except where forbidden

Location

1. **Location** of systems and data shall be made available to users, but need not be provided beyond the smallest significant jurisdictional boundary (eg state, country, union of states)
2. **Selection** of an appropriate location based on user preferences shall be provided where feasible (price may vary according to local conditions)^[3]
3. **Entry points** (eg URLs) shall be owned by the user to facilitate transition between providers

Security

1. **Access** to systems must be available in a secure fashion (eg appropriate authentication and [transport layer security](#) with appropriate ciphers)
2. **Administrative Requests** be handled using secure processes resistant to social engineering (eg identity verification, proof of control of domain^[4])
3. **Change management** shall be enforced and users shall be notified of changes which affect them in advance (ideally with the option to reject)
4. **Confidentiality** of user data must be strictly maintained
5. **Multitenancy** be strictly enforced such that no user can access or modify the data of any concurrent, former or future user
6. **Purging** of data shall be facilitated as required, including immediate, permanent and secure purging if necessary

Service

1. **Marketing** shall match service levels and price points (eg never advertise a high service level at a low price point and demand a premium)
2. **Availability** shall be maintained to a suitably high level for the application (typically at least 'three nines': 99.9%)
3. **Expectations** shall be met whether explicit or implied; service delivered shall match expectations and providers (who bear the expense in full) will spare no expense in meeting them
4. **Service Level Agreements** shall be clear, concise and backed by financial penalties where they are offered, and alternatives should be offered
5. **Support** shall be provided in a timely fashion, typically 24x7 with 1hr response for severity 0 (however subusers may or may not be assisted by provider)

Standards

1. **Existing standards** shall be used where possible in preference to creating new standards
2. **Open Standards** should be used where appropriate standards are available (eg REST)
3. **Proprietary Standards** shall not be used or supported in a fashion that could impair innovation

4. **Transparent** data formats shall be used, except where the user explicitly stores opaque data (eg by uploading a proprietary document)

Acknowledgements

- **Sam Johnston** prepared this document based on existing efforts and contributed to it
- **James Urquhart** refined a draft document over a number of blog posts^{[5][6]}
- **Rich Wellner** contributed a pre-prepared draft document for incorporation

References

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2. ↑ [wesabe: Data Bill of Rights](#)
3. ↑ [Amazon S3 Storage Now Available In Europe](#)
4. ↑ [Google Apps Domain Verification](#)
5. ↑ [The Cloud Computing Bill of Rights](#)
6. ↑ [Update: The Cloud Computing Bill of Rights](#)

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Views

- [Page](#)
- [Discussion](#)
- [View source](#)
- [History](#)

Personal tools

- [Log in / create account](#)

Navigation

- [Main Page](#)
- [Community portal](#)
- [Current events](#)
- [Recent changes](#)
- [Random page](#)
- [Help](#)

Search

Toolbox

- [What links here](#)
- [Related changes](#)
- [Upload file](#)
- [Special pages](#)
- [Printable version](#)
- [Permanent link](#)

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