Interim Taxonomy 1.0

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Summary

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Since today's and tomorrow's business models involve multiple, international cloud service providers, there is an increasing demand for structured, interoperable Service Level Agreements (SLA). Therefore, the underlying document presents a first proposal of a Taxonomy for SLA – aiming to support seamless collaboration, transparency and accountability across federated and entangled multi-provider cloud infrastructures.

Purpose and Context

Modern cloud ecosystems increasingly rely on interconnected services involving multiple providers. There are two primary coordination approaches:

1. **Entangled Supply Chains** in which a Lead Provider manages multiple sub-providers and cascades obligations downward.
2. **Federated Ecosystems** in which independent providers interoperate as peers under harmonized, jointly governed SLAs.

In both scenarios, the design and feasibility of SLAs are complex. Problems that arise can include unclear responsibilities, inconsistent service metrics, and difficulties in enforcing remedies.

Taxonomy Structure

FACIS is **developing essential components needed to set and enforce contacts with different cloud services and providers**. One of these components is the SLA taxonomy, which helps harmonize and improve SLA Governance in these multi-provider environments and is structured in four main building blocks.

1. **Foundation**: Determines the scope of included services and legal responsibilities, defines the relationships between actors, and establishes the terminology used in the agreement.
2. **Service Level Objectives (SLOs)**: Contains a set of key SLOs, defines a general set of Service Level Indicators (SLIs) that fit to those core SLO classes, and adjusts the specific manifestation of SLIs to fit the service's unique use case and the federated environment.
3. **Monitoring:** Includes the corresponding Service Level Indicators and metrics. This building block also discusses monitoring conditions such as scope (individual vs. aggregated), responsibility, schedule, and depth of intervention.
4. **Enforcement:** Determines reporting procedures, remedies and escalation paths and specifies rights in cases of SLA violation.

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Recommended Models for SLA Management

There are three primary SLA Governance models with which functional SLA Governance can be ensured in multi-provider environments:

- **Lead Service Provider:** A single prime supplier acts as the customer's main interface, consolidating data and managing sub-providers.
- **Dedicated SLA Broker:** A **neutral governance function** harmonizes SLOs/SLIs, reconciles measurement data, and coordinates cross-provider activities.
- **Decentralized / Peer-to-Peer Model:** Providers coordinate directly via standardized interfaces and joint processes without a central authority.

While the Lead Provider Model is currently used most in the industry, FACIS is aiming to foster decentralized SLA Management.

Conclusion

The SLA Taxonomy provides a joint, structured vocabulary and logic for describing SLAs. It standardizes and harmonizes the components relevant to SLAs in multi-provider settings and enables providers to align their individual notions of Service Level Objectives and the corresponding Service Level Indicators and metrics used for measurement.

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