
The Service Level Agreement

What is an SLA?

A Service Level Agreement or SLA is a formally negotiated agreement between two parties, often between customers and their service provider, client or between service providers that outlines the common understanding about services, priorities, responsibilities, guarantee, and other aspects of the relationship collectively known as the level of service. Service level agreements define very specific details about availability, capacity, response time and support services. These levels of service are expressed in terms of parameters and metrics upon which penalties and liabilities can be enforced by an independent authority on the violating party. This accuracy and clarity in the business relationship contributes to a well defined interaction between the various parties enabling highly effective resource planning and execution.

In the area of contract and consumer management a SLA promotes consumer and provider trust by facilitating SLAs and other terms and conditions that bind the service providers and the consumers who reuse services. According to Shally Bansal Stanley in Network World, “The truth is that SLAs are nothing more than insurance policies. Just as life insurance doesn’t guarantee life, SLAs don’t guarantee levels of service. They provide you with compensation in case something goes wrong.” As the vendor, you want to be sure that you are writing SLAs that you can meet, so you don’t have to deal with the situation of having to provide compensation.

Components of a SLA

From a practical standpoint, the SLA consists of some or all of the following components depending on the situation:

Service Summary

The service summary is basically the dictionary of services covered in the SLA. This summary provides a name, description, and the specifics of what, why, how, when, and where the service operates. The purpose of this section is to create a common understanding of the services provided effectively eliminating controversy.

Delivery Architecture

The delivery architecture outlines the components and infrastructure necessary to deliver the services listed in the service summary. A detailed description of the delivery architecture is important because the components may directly affect the performance of the services. It is important to analyze internal and external dependencies in the delivery architecture to fully understand the possibilities for service failure.

Service Availability

The service availability section addresses the availability of each service outlined in the service summary and delivery architecture. The composition of this section depends heavily on the nature of the services provided. For simplicity in monitoring and enforcement of the SLA, this section should be limited only to metrics that directly affect the overall level of service. As an example, a service provider is providing credit worthiness scores for a client. In order to provide accurate credit worthiness scores to the client, the service provider must contact the social security administration, all credit bureaus, multiple public records clearinghouses, and several utility records databases. In developing the SLA, the client should not worry about measuring the individual response times of each data source; rather focus on the single integration interface. Using this approach, the client monitoring is focused on a single set of metrics relating to the integration interface. This may seem like common sense but in a more complex situation it is important to consider.

Some examples of service availability characterizations are listed below:

1. The percentage of the time services will be available
2. The number of users that can be served simultaneously
3. Specific performance benchmarks to which actual performance will be periodically compared
4. The schedule for notification in advance of system changes that may affect users
5. Help desk response time for segmented by class of issue (assistance, service error, administrative, etc)
6. Dial-in access availability
7. Usage statistics per period of time from several angles (unique users, individual requests, etc) to accurately express the usage load and patterns on the services

To effectively structure this section, it is essential to run exhaustively evaluate what-if scenarios. When developing or evaluating the service availability section of the SLA, simulation tools can be of great value exposing the compounded effects of service levels in a complex environment.

Monitoring

The monitoring section of the SLA summarizes the methods used to monitor the services and their availability. Not only are the monitoring methods and mechanisms clearly described, the frequency of data collection, the impacts of the monitoring on the service levels, the outputs from the data collection (charts, graphs, emails, etc), the procedures used for dealing with false positives, and handling/storage of monitoring data are also defined.

On a technical level, this section can be used as a specification for the service provider to architect the service environment. For instance, the client may wish to monitor using Simple Network Monitoring Protocol, HTTPS, and SQL*Net. In order to do so, the network must allow the appropriate protocols to be passed and the appropriate security measures must be deployed to address the vulnerabilities that come with each protocol. This is an example of the clarity driven through SLAs.

Service Claims

Service claims are the formal notification from the client to the service provider that a service level was not met. This section of the SLA includes a specification for the data that is required for each claim as well as the process used to deal with the claims. The claim captures various

data points such as date, time, description, and background information about the incident along with evidence captured from the monitoring mechanisms. It is important to require substantiation for the issue to ensure the infraction falls within the coverage of the SLA and to quickly trace the problem to its root cause. The process used to address claims may also have a service level associated with it. To maintain a strong client/service provider relationship, it is important to allocate support resources at an adequate level and develop a streamlined process for dealing with claims equipped with client feedback loops at regular intervals.

The historical claim data is useful to both the client and the service provider for trend analysis. Armed with trend data, the client can pressure the service provider to improve or modify the SLA and the service provider can drive internal change as well as pressure third party providers to improve or modify their service.

Compensation Model

A SLA is nothing without a consequence for not meeting the specified levels of service. The compensation model specifies the plan for how the service provider will compensate the client in the case that a service level is not met. As a result of the complexity of services architectures and the monitoring mechanisms available, the compensation model can get quite convoluted. The key is to develop a simple and sustainable model that does not overburden either party in monitoring and calculating compensation. The most effective compensation models boil the monitoring inputs down to 2-3 measures that truly affect the bottom line. These become the measures that drive compensation. For instance, usage statistics will be monitored but failing to achieve a system response time under five seconds and the 99.999% percentage uptime will cause the service provider to compensate the client.

Legal Aspects of SLAs

The legal document consummating the relationship is nothing more than a standard contract with some modifications to layout various SLA provisions designed to enforce the promises made between the parties. It is important to understand that when legal provisions are coupled with SLA provisions, the intent of SLA provisions can change or lose the original intent of the provision. For example, the agreed upon SLA provision is to keep the system running at a 99.9% user accessible uptime level but the legal provisions eliminate all liability for the primary service provider when problem can be traced to a third party service provider. In this situation, each time the third party is not providing adequate service, the primary service provider is free from liability. The key is to examine the net effect of the SLA coupled with legal provisions of the agreement. The document is the legally binding contract and should be dealt with carefully as it is the document that will be referred to when disputes are settled and during litigation.

Component	Description
Client/Service Provider Responsibilities	An outline of the responsibilities of each party entering into the agreement.
Quality of Service	A specification of the quality of service that the service provider must provide to the client.
Indemnification	To compensate for loss or damage; to provide security for financial reimbursement to an individual in case of a specified

	loss incurred by the person.
Third Party Claims	A claim by the civil defendant/respondent against a party not already named in a court or other adversarial proceeding
Exclusions	Items or situations not covered under this agreement.
Remedies for Breaches	Methods for correcting or compensating the party at fault
Term	The length of agreement either in time or event driven.
Force Majeure	This clause frees both parties from liability or obligation when an extraordinary event or circumstance beyond the control of the parties, such as war, strike, riot, crime, act of God (e.g., flooding, earthquake, volcano), prevents one or both parties from fulfilling their obligations under the contract.
Termination of Agreement	Provisions for situations driven by either normal or abnormal events terminating the agreement.

Benefits of Implementing SLAs

SLAs are used in industries ranging from automobile manufacturing to high technology. In all cases in between, the benefits are the same.

Benefit	Description
Service Level	Produce an enhanced service level as a result of actionable tracking and controls over performance, costs, and resources. The clear relationship established between service provider and client provides the ability for the service provider to implement the exact capabilities to meet the service levels and the client to know the precise level of service to be expected.
Business Control	Improves business controls especially in the area of pricing models, usage-based pricing, and chargeback models.
Service Level Monitoring and Validation	Validate service levels through the use of detailed data created from the monitoring mechanisms necessary to support SLAs.
Overall Project Success	Increase overall project success as a result of the success criteria clearly indicated.
Service and Operational Cost	Reduce service and operational costs as a result of streamlined report generation, reduction of dispute resolution, highly focused operational environments.
Compliance	Achieve organizational and compliance objectives such as Sarbanes-Oxley, COBIT, ITIL and Six Sigma.

SLA Development Lifecycle

Just as all other disciplines have a lifecycle, creation of a service level agreement also has a lifecycle. This lifecycle resembles the scientific method with specific details related to SLA topics. The suggested steps are as follows:

1. Identify the specific business processes and goals to be measured.
2. Identify the metrics that will demonstrate success for the processes and goals.
3. Define and implement repeatable processes for gathering the metrics to support a reliable and trustworthy monitoring process.
4. Define and implement repeatable processes for monitoring and reporting on the SLAs.
5. Gain approval from all parties on the structure and function of the SLA.
6. Develop benchmarks against the defined metrics using processes defined in the steps above.
7. Make modifications as necessary and repeat the process.

Selecting and Structuring Services for Inclusion in SLA

All services are not meant for inclusion in the SLA. The following criteria provide a guide to determine whether a service should be included in the SLA.

1. The service must be fully understood by the service provider and the service provider must be experienced in provisioning the service. Instances where the service is complex and unfamiliar, the chance that the service provider will be able to satisfactorily perform the service while returning a reasonable profit is significantly reduced.
2. The service is provided in reasonably small, discrete and measurable units at a reasonably high frequency. Services which deliver large, amorphous blocks at low frequency lead to uncertainty coupled with difficulty in quality management. Both uncertainty and difficulty produce unmanageable situations for administration of SLAs.
3. The service is repeatable and does not require significant original intellect to deliver. These characteristics of services lend themselves well to training of service provider personnel as well as to continuous monitoring and quality assurance. SLAs as a management approach fits well in situations such as this.
4. The client can understand and help define the service requirements. The client must be capable of describing and specifying what its business needs are and at what level of service they are to be delivered. When this capability is not evident, it must be developed prior to entering into a SLA.
5. The service needs are relatively stable. This condition is a requirement for SLAs since the service provider must establish a fee-for-service model that results in a full offset of costs plus profit for the specified service period.
6. The service provider has or can reasonably obtain the resources needed for the service provision at the required service quality.

Lessons Learned

Throughout the course of investigating and implementing SLAs for various customers, several key items have emerged as potential pitfalls and best practices. The following list includes some important lessons learned concerning development and administration of service level agreements.

1. All service level agreements relating to computer systems should contain very specific provisions and address method to monitor the service levels for the end-user community.
2. Metrics included in the SLA must have a corresponding monitoring mechanism that can be quickly and easily accessed for evaluation.
3. Do not produce SLA provisions just because you can measure them. SLAs should include provisions that affect the bottom line performance of the organization. SLAs can be overdone.
4. Always review the contract document with the understanding that it is the sum of the SLA provisions coupled with several layers of legal provisions. Be sure these provisions together are manageable and acceptable.
5. As a result of people's lack of ability to communicate clearly and concisely, include visual aids in the SLA to more effectively communicate the provisions of the SLA.
6. Keep the provisions of the SLA as simple as possible. Complexity in provisions leads to exceptions and disputes.
7. Identify the owner of each SLA provision. Clear assignment of responsibility creates accountability. Through successes and failures, it is easy to identify who is responsible.
8. Don't be afraid to revisit the provisions of the SLA. Chances are that both parties will benefit in the end from an equitable partnership.

Conclusion

The bottom line is your customers don't care whether it's the IT department, outsourced provider, telecom company, the construction company working on the street outside, or the squirrel that just ran across the wire. Your clients just want the services to work at a specified level and they know exactly when they are not. A means to hold the responsible party accountable when service levels are not met is clearly a necessity. Failure to meet services levels translates to loss of revenue and productivity ultimately resulting in discontented customers.

The SLA is used to identify responsible parties, hold each party accountable for their level of service and compensate the appropriate party if that level of service is not met. SLAs must be structured in a way that makes them comprehensive yet enforceable without being onerous. In today's shared services architectures, SLAs are more important to business continuity than ever. Establishing metrics that are easily accessible for reporting can mean the difference between a strong and weak service record with your customers.