

Lab 8.3.1 Interpreting a Service Level Agreement

Objectives

- Describe the purpose of a Service Level Agreement (SLA).
- Review general customer SLA requirements.
- Analyze a sample SLA and answer question regarding content and suitability based on customer needs.

Background / Preparation

An SLA is a formal agreement between a customer and a service provider. The SLA defines the types and levels of service that the customer can expect to receive, as well as any penalties that may exist for non-conformance. In this lab, you will review the purpose of an SLA and the types of customer requirements it can cover. You will then analyze a sample SLA between an ISP and a Customer of a medium-size business and answer questions regarding the provisions of the SLA. You may work alone or in small groups.

The following resource is required:

- Sample SLA (in this lab)

Step 1: Review typical customer needs

A Typical customer will have the following requirements regarding an SLA. These requirements should be included in the SLA with the service provider:

- **Service description** – Describes the service volume and the times when the service is needed. It also describes the times when the service does not need to be covered by the SLA. The services described could be those typically found in a small- to medium-size manufacturing company: e-mail service, electronic data interchange, online accounting, secure remote worker support, remote instrumentation and control systems, and backup and recovery services.
- **Availability** – Describes the availability of each service in hours per day and days per month that the service can be available.
- **Performance** – Describes the peak and off-peak distribution of the volume of data the customer expects to generate for each service.
- **Reliability** – Describes the reliability percentage required for each service.
- **Response time tracking and reporting** – Describes the performance need of the users for each service.
- **Security** – Describes the security policies of the customer as they pertain to the services to be covered by the SLA.
- **Budget Cycle** – Identifies the budget cycle of the customer.
- **Penalties for Service Outages** – Provides an estimate for the cost to the customer for a service outage for each of the services the customer wants covered by an SLA.
- **Costs** – Provides a table of costs that the customer has paid in the past for the services provided by other SLAs.

Step 2: Analyze a sample SLA and identify key components

- a. Read over the sample SLA that follows and answer these questions regarding content, ISP responsibilities, and customer requirements.

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- b. According to this agreement, can the ISP be held liable for damage to equipment owned by the customer [Client] or data loss that occurs due to accidental actions by ISP vendor staff or other persons? _____
- c. What are some examples of One Time Services included in the SLA?

- d. What are some examples of Ongoing Services included in the SLA?

- e. When will regular downtime maintenance be scheduled and how many business days notice must the ISP give of any scheduled downtime?

- f. What does the ISP's network monitoring system do when an error condition is detected?

- g. What is the stated availability of the Systems Administrators in the event of a system failure?

- h. What is "usage monitoring" and how does the ISP provide this service?

- i. Regarding problem severity and ISP response time, what is the difference in response between "Level 1 – normal business hours" and "Level 3 – normal business hours"?

- j. On what factors are the penalties for service outages based?

(Sample)

Service Level Agreement

Between

[Client]

and

ISP Services Vendor, Inc.

As of [Date]

I. General Term of the Service Level Agreement

This Service Level Agreement (SLA) documents the agreement between [Client] and the ISP Services Vendor, Inc. (ISPSV) for delivery of ISP services including services delivered, levels of service, communications, and pricing. This agreement is in effect from [start_date] to [end_date] unless otherwise modified by an amendment. All terms are in effect until modified by an amendment.

Amendments can be added to the agreement at any time that the parties agree. If there are substantial service changes, then some time may be required to implement. The timing of the amendment will be included in the amendment. Changes to the agreement that result in changes in charges may require 30 days to implement.

Either party can terminate this agreement in whole or in part with 30 days notice. The SLA is reviewed on its anniversary. Billing rates may be adjusted based on service level changes.

II. Warranty and Liability

It is the mission of the ISPSV is to provide high quality, cost effective ISP facilities services to the surrounding community.

We commit to protecting the equipment and data supported under this SLA from deliberate damage from ISPSV or other persons provided access to the equipment by ISPSV. However, we will not be held liable for and damage to equipment owned by the Client or data loss that occurs due to accidental actions by ISP VENDOR staff or other persons.

III. Services Provided to [Client]

This table indicates which services are to be included in this SLA. Pricing of services is via the ISPSV pricing model and attached as an amendment to this SLA.

	Service	Comments
	One Time Services	
	Rack & Computer Installation	
	Backup Implementation	
	Firewall Configuration	
	Ongoing Services	
	Server Hosting	
	Backup and Recovery	
	Unix System Administration	
	Windows System Administration	
	Application Administration	

IV. System Availability

Systems will be available 7X24 except for regularly scheduled maintenance downtime. The downtime maintenance schedule will be negotiated with each client and will occur between 7pm and 7am. Clients will be given at least three (3) business days notice of any scheduled downtime.

The ISP facility is staffed with professional systems administrators from 7 am to 7 pm on workdays. The systems administrators are on call 7X24 for system failures.

V. System Monitoring

Basic operating monitoring, periodically testing systems for proper functioning, is provided for all systems housed in the ISP facilities. The monitoring, pages the on-call systems administrator when error conditions are detected.

External operating monitoring can be arranged through a contract with ExternalAlertServices who provides external monitoring. This can be arranged with the client paying the fees (approximately \$25/month/url) for this service.

Usage monitoring provides users with statistics on web site "hits". The ISP facility maintains a WebTrends server for this purpose. Data from the WebTrends server is available to clients on a monthly basis.

VI. System Notifications

The ISP facilities will provide a set of email lists for each server and application. The membership of these is determined and maintained by the client. The lists are:

- **[system]-info**
Will be notified of system logged messages on the operational status of the system.
- **[system]-announce**
Will receive all ISP facilities messages about planned maintenance, systems outages, or other events.

- **[system]-[application]-info**

Will be notified of system logged messages on the operational status of the application.

- **[system]-[application]-announce**

Will receive all ISP facilities messages about planned maintenance, systems outages, or other events

VII. Change Management Process

All requests for changes to systems or applications, whether originated by the client or by ISPSV staff must go through the ISPSV change management process for approval. The process starts with a request submitted via ISP Management Change Process (MCP). Requests will be logged then sent via email to the authorized Client for approval. The Client will return the request via email with approval or denial of the request.

With the exception of emergencies, requests will not be done without Client approval. In the case of an emergency, the client will be contacted as quickly as feasible and informed of the changes.

- **Communications Methods**

- **Standard Requests**

- All standard requests for account changes or other non-emergency requests must be submitted via ISP MCP. The request must include:

- Client Name
 - System Name
 - Application Name
 - Nature of the Request
 - Date the Change is Needed
 - Problem Severity (level 1, 2, 3 or 4)

- **Emergency Requests**

- Emergency requests must be submitted either in person or via the ISP facilities hot line at (123) 456-7890. If the call transfers to voice mail leave a message which includes your name and a call back phone number. The on call Systems Administrator will be automatically paged within 5 minutes and will return your call.

- **Escalation**

- If problems are not resolved to the client's satisfaction by the above methods, the client can escalate the response by contacting ISP VENDOR management in the following order: 1. Facilities Director, 2. Marketing Director, 3. President.

- **Systems Request Authority**

- We will maintain four lists to grant people authority. These lists are in the client addendum and are as follows:

- **Master authority list**

- List of people who can add or remove people from the remaining lists.

- **Account change authority list**

- List of people who can request Account changes.

- **Systems changes authority list**

- List of people who can request System changes.

- **Application changes authority list**

- List of people who can request Application changes.

VIII. Problem Severity and Response Time

ISPSV will respond to problems according to the following severity levels:

Problem Severity	Initial Response Time	Follow-up w/Client
Level 1 – normal business hours	Respond to client within 30 minutes of notification 100% of the time	Hourly
Level 1 – off hours	Respond to client within 1 hour of notification 95% of the time	Hourly
Level 2 – normal business hours	Respond to client within 4 hours of notification 100% of the time	Daily
Level 3 – normal business hours	Respond to client within 1 working day of notification 100% of the time	Weekly
Level 4 – normal business hours	Respond to client within 3 working days of notification 100% of the time	Monthly

○ Severity Level 1:

Major Business Impact – defined as a problem that causes complete loss of service to the Client production environment and work can not reasonably continue. Workarounds to provide the same functionality are not possible and can not be found in time to minimize the impact on the Client's business. The problem has one or more of the following characteristics:

- A large number of users cannot access the system.
- Critical functionality is not available. The application cannot continue because a vital feature is inoperable, data cannot be secured, backed up, etc.

○ Severity Level 2:

Significant Business Impact – this classification applies when processing can proceed but performance is significantly reduced and/or operation of the system is considered severely limited. No workaround is available, however operation can continue in a restricted fashion. The problem has one or more of the following characteristics:

- Internal software error, causing the system to fail, but restart or recovery is possible.
- Severely degraded performance.
- Some important functionality is unavailable, yet the system can continue to operate in a restricted fashion.

○ Severity Level 3:

Minor Business Impact – a problem that causes minimal loss of service. The impact of the problem is minor or an inconvenience, such as a manual bypass to restore product functionality. The problem has one or more of the following characteristics:

- A software error for which there is a Client acceptable workaround.
- Minimal performance degradation.
- Software error requiring manual editing of configuration or script files around a problem.

○ Severity Level 4:

No Business Impact – a problem that causes no loss of service and in no way impedes use of the system. The impact of the problem has one or more of the following characteristics:

Appendix 1: Services and Pricing

System or Application	Services	Price

Appendix 2: System Requests Contact Lists

Name	Email	Work	Cell	Home
Master Contact				
Account Change				
System Change				
App Change				