

Ministry of Information Technology and Telecommunication
National Information Technology Board

SERVICE LEVEL AGREEMENT GUIDELINES

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Definitions and Acronyms

TERM	DEFINITIONS
Addendum	Something added to a previously existing document, usually a contract
Clause	Group of words that contains a subject and a verb that have a relationship.
Consultant	An individual/firm which provides expert professional advice & services
Critical	Factor/Situation that is extremely important which affects system in terms of failure to perform operations & loss of business
Dispute	A disagreement or argument.
Disruption	Disturbance or problems which interrupt an event, activity, or process
Down Time	Time during which a machine or service, is out of action or unavailable for use.
Escalation matrix	Defines the level & point of concern persons that will handle incidents at each level.
Failure time	A time during which the machine or service fails or is unavailable for use
Gbps	Gigabits per second
Incident	An instance of something happening; an event or occurrence.
IT	Information Technology
KPI	Key Performance Indicator
Major	An activity that is important for the business/service.
Mbps	Megabits per second
Minor	An activity that is inconvenience or less important.
Network	Consists of two or more than two computers for the purpose of data exchange, share resources & enable communication.

P1	Priority 1. Complete business down situation or single critical system down with high financial impact. The client/user is unable to operate
P2	Priority 2. Major component of the clients' ability to operate is affected. Some aspects of the business can continue but its a major problem.
P3	Priority 3. The clients' core business is unaffected but the issue is affecting efficient operation by one or more people.
P4	Priority 4. The issue is an inconvenience but there are clear workarounds or alternates so that application can work.
Party	An entity/person involved in business/activity
Priority	The fact or condition of being regarded or treated as important to be resolved.
Recovery Time	The time device/machine takes to be available for use
Reference	The action of mentioning or source of information
Resource Allocation	A systematic way of defining resources against activity
Revision	A revised edition or form of something
Scheduled Time	The arranged or planned time for a service to be available.
Sensitive data	A type of personal information. If revealed, it can leave an individual vulnerable to misuse or unauthorized access
Service	Application of providing technical & business expertise to organization/individuals or doing work for someone
Severity	Level of impact to the system/business.
SLA	Service Level Agreement
SRS	Software Requirements Specification
Stakeholder	A person with an interest or concern in something, especially a business/product or activity.

Supplier	An entity that is providing any kind of service.
SWOT	stands for strengths, weaknesses, opportunities, and threats, and it is a tool that helps to evaluate the internal and external factors that may affect the service delivery
Up time	Time during which a machine, or service is in operation.
Urgent	Requiring immediate action or attention
w.r.t	With respect to

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1. Introduction

Service Level Agreement is an agreed contract between the service provider & the party requesting for service. It is an agreement which defines the services, milestones & the key performance indicators. SLAs help to manage customer expectations and define the quality, severity levels and circumstances under which they are bound to achieve service level objectives. The SLA is typically one of the foundational agreements that service providers have with their customers. Service providers should establish a service level agreement to establish the general terms and conditions in which they will work with customers. Service level agreement offers the following benefits:

- Helps you consistently deliver on service level agreements
- Improves customer service
- Facilitates communication
- Sets standards for customer service.
- Reduces the time to identify, diagnose, and correct performance issues
- Efficient Resource Allocation

2. Objective

The primary goal of service level agreement is to guarantee that every service that is now provided and planned for the future is delivered in line with defined service level goals. The measurement guidelines are aimed at managing Service Level Agreements (SLAs) quality in a manner that reflects customer needs in the contracts for well-coordinated SLA services. This document defines a SLA framework & highlight key components to be included in SLA. This document is beneficial for both service providers and service customers as it is very important to define the service level agreement before working & define the quality of services that the service provider offers to the customer.

The purpose is to evade misperception and ease a common understanding between service providers and service customers. The objective of measurement guidelines is following:

- Define a SLA framework than can define important parameters of SLA.
- Provides a description of the promised services and their agreed quality of service.

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- Defining the quality level of services provided.
- Measure whether the services quality level set are accurate and evaluable.
- Make certain that the service level criteria are clearly and explicitly stated in the SLAs.

3. Applicability

This document contains SLA framework in which areas that are mandatory & important are listed. This document may be taken as a single entity document for contract to be signed between the parties & may be amended as per the requirement. Also, this SLA framework may be referred or important clauses may be taken in the contract agreement between the Service provider & party. This document will be applicable to all government organizations & any private sector organization that may adopt this SLA guidelines document.

4. Challenges

SLA is to ensure the provision of services agreed under the contract by identifying the required and expected service level performance. SLA measurements are evaluated out on the IT environment to verify that the system is in compliance with the agreed upon service quality requirements like availability, performance, problem resolution etc.

Services quality is measured through SLA, for poorly defined agreements there is no measure of quality or SLA defined. Some of challenges are:

- Poorly defined scope of work & services covered with criteria.
- KPI's are either missed or not properly written.
- Lack of Service credit, penalty due to which Service provide are not bound to ensure services in case of non-compliance.
- Stakeholders' involvement is not considered important as incase of any maintenance/support activity no mechanism for informing stakeholders.
- Conflict management is missing due to which in case of conflicts there is no mechanism defined.
- No review & report mechanism

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5. SLA Framework

5.1 Scope of Work

Scope defines the work & services that would be provided by the Service provide. Scope is important as it clearly outlines the level of services. Both the parties should clearly state the services scope & agree on them to avoid any conflict(s) in the future.

5.2 Service Name

SLA should contain all the services that would be provided to the customer/client. These services could be related to IT Domain such as Software, Networks & Hardware, Cloud, Cybersecurity etc. These will be the services that both the parties would be agreed upon. Following is a structure for service description & areas. All the services should be briefly described in a tabular or descriptive form as per requirement.

Table 1.0 Services Description table

Service Name	**Description**	**Area (Software, Hardware, Network)**
Name of the service	*A brief introduction of the service*	*Domain/Area that services referred to.*

5.3 Stakeholders

Stakeholders in SLA can be individual (Consultant) or group or companies that would agree upon the services and the Quality that would be provided. Stakeholders must agree upon the services & the quality of the services that would be provided. If the stakeholder is represented by some other individual for agreeing upon SLA, he/she should be mentioned for the record purpose.

Table 2.0 Stakeholders Details

Entity	**Address**	**Representative**	**Contact**
Party A (Service Acquire)	*Address of the party A*	*Party A Representative name & details*	*Party A contact details*
Party B (Service Provider)	*Address of the party B*	*Party B Representative name & details*	*Party A contact details*

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5.4 Service KPIs

A service KPI or metric is a performance measurement that is used by service teams and by the customer support management team to monitor, visualize & analyzes services. Following are the services:

- Software
- Hardware & Network Communication
- Cloud & hosting Services
- Cybersecurity
- Maintenance & Support

Table 3.0 Service KPIs

Service	KPI	Description & Target
Software	First KPI (e.g., Performance)	Could be in percentage/description
	Availability	
	Second KPI (e.g., Response Time)	
Cloud & Hosting	Servers & Application Availability	Could be in terms of Percentage/time
	Server Storage capacity	Could be in terms of volume/data
	Service credit/Penalty	Could be in terms of amount/percentage
Cybersecurity	Data integrity & Data retention	Could be in terms of process/mechanism or process
	Data Backup & Recovery	
	Web & Server security	
	Risk Assessment	Could be in terms of process/mechanism
	Incident response	
	Availability	Could be in percentage/description
	Data monitoring	
Hardware	Availability	Could be in percentage/description
	Performance	
	Response Time	Could be in percentage/description
	Warranty/Guaranty	
Network	Availability	Could be in percentage/description
	Response Time	
	Bandwidth/Network Availability	
Support	Monitoring	Could be in percentage/description
	Reporting & Resolution	
	Escalation & Response Time	

These services, KPI & targets may vary with respect to requirements for each. Detail KPI sample table is attached as Appendix-A

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5.5 Duration of Agreement

Duration of agreement defines the time period in which the Service level agreement will be valid for. The duration should clearly define the date & year for which the services will be valid for.

5.6 Service Responsibilities

A mutually signed SLA should define the part of responsibilities that service provider would be covering on its part w.r.t. service or related to hardware (if any) & also define the part of responsibilities that service acquire would be covering (inhouse or with service provider) that might be helpful to be shared with the service provider. This clearly states the part of responsibilities w.r.t to services on both sides.

5.7 Level of Support – on site/remotely

SLA Should cover the level of support (Onsite & Remotely) as per agreement. The level of support should clearly define the scope of support & required actions to be taken for support against the defined services.

5.8 Service Monitoring / Periodic Review

SLA should clearly state the Service Monitoring/Periodic review interval. The KPI's of services should be measured on below mentioned:

- Service performance levels
- Support performance levels
- Installation performance
- Equipment issues
- System issues

A mechanism should be defined to identify the root cause analysis of the issues & define the count of issues occurred & number of resolved & unresolved issues & the resolution time for those issues. In this way the quality of services can be measured & improved in the future.

5.9 Confidentiality

IT services contain sensitive information & data that must be protected from unauthorized access to safeguard the privacy or security of an individual or organization or service provider, therefore companies should take necessary measures to protect sensitive information &

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unauthorized access to prevent data misuse. Similarly, mutually signed non-disclosure agreement, ensures that the information you share with another company will remain under lock and key. The agreement signed between both parties should remain confidential & service provider should be bound to keep SLA & related things confidential. Confidential information will remain the property of the disclosing party and the receiving party will not acquire any rights to that confidential information.

5.10 Warranty & Guaranty

Warranty is a written commitment, assurance from a manufacturer that the facts specified in the product is true and genuine & incase it does not meet as specified it will be repaired or replaced within a certain period of time. While Guaranty is a verbally or written expressed promise that the product or service after-sales will perform as intended. SLA should clearly define the services & products coming under warranty & the guaranty that service provider will be providing.

5.11 Dispute Resolution

Dispute occurs when both the parties are unable to resolve the dispute through the informal procedure. Service level agreement should devise dispute resolution to resolve disputes arising under the service level agreement. Both the Parties should agree to use their respective best efforts to resolve any dispute(s) that may arise regarding the SLA.

5.12 Compensation/Service Credits

Service provider should make ensure to deliver the Services at specified Service Levels. If Service provider fails to meet such Service Levels, then, Service provider shall pay or credit the performance credits specified as per service level agreement. It should be clearly mentioned the figure of service credit to be given in case of service provider failing to meet the service level objectives.

Table 4.0 Service Credit

Service Availability	Service Credit
Less than 99.99% but equal to or greater than 99.0%	As per agreed upon
Less than 99.0% but equal to or greater than 95.0%	As per agreed upon
Less than 95.0%	As per agreed upon

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5.13 Maintenance & Support

It defines the particular levels of maintenance that the service provider will be providing against the services. SLA should cover the services, products that would come under maintenance. Support defines the support service provider extends against the provided services. Some cases cover the support during the contract while in some cases the support is defined after the closure. SLA should state the services & level of support that would be provided after.

In case of service provider providing software licenses or hardware from a third-party vendor it should clearly lock the support & maintenance terms for that procuring software & hardware so that it is covered in case of any circumstances.

5.14 Supply Chain Risk Management

Managing SLA risks and opportunities is an ongoing and proactive process that requires constant communication, feedback, and improvement from both parties. The goal is to ensure that the SLA is being fulfilled and that the service delivery is meeting or exceeding expectations. One of the best ways to assess SLA risks and opportunities is to conduct a SWOT analysis. Additionally, it is important to monitor and measure the service delivery and performance, and report and document the results and outcomes. Furthermore, analyzing and evaluating the service delivery and performance, can help identify and address any gaps, issues, or opportunities for improvement or innovation.

5.15 Addendum/Change in Service Level

If either party propose changes to the scope, services, nature or time constraints of Services being performed under the Agreement an Addendum will be initiated & approved through change control procedures to the Agreement and must be approved in writing by both the Parties.

5.16 Penalty

The Service level agreement contract should include any penalty in case of non-compliance or violations of SLA. It can be in form of Service Credit or some specific penalties as agreed upon both parties.

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5.17 Force Majeure Closure

Force majeure is included in contracts to remove liability for unforeseeable and unavoidable catastrophes that interrupt the expected course of events and prevent services for fully operation. These clauses generally cover both natural disasters and catastrophes created by humans. In SLA, the agreement must state force majeure closure & may cover the areas/events that come under force majeure closure.

5.18 Liquidated Damages

It is important to notice that a small amount/percentage of unavailability of services can affect the business in huge amount whether in terms of finances or customer lose & reputation of the organization. Sometimes there is being delay in the IT services or the services are not fulfilled and there is some breach in the contract or the equipment received is either damage or not working accordingly, in this case Liquidated damages should be covered in SLA for compensation. The total liquidated damages will be capped to a maximum of 10% of the total contract value or as per agreed requirement

5.19 Agreement Termination

In some cases, as per defined, the agreement may be terminated by the customer giving prior notice as per agreement. In any case if the payment remains unpaid, there could be clause added as per agreement to suspend the services until the time payment is paid.

6. KPI Measurement parameters

To measure the performance of the services, the party should be regularly sending reports to indicate the performance & following parameters to be evaluated for SLA measurement:

1. Service availability
2. Bandwidth Availability
3. Network Availability
4. Error rate
5. Service Requests
6. Network Measurement
7. Service reporting/Escalation Matrix
8. Service Monitoring
9. Incidents Resolvent

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10. Support & Maintenance
11. Weekly/Monthly Reports

6.1 Service Availability

Service availability is an attribute that defines the availability & quality of being accessible & usable of the agreed upon services. Service availability should be measured as per all the services & their agreed upon availability requirements. Availability could be measured as:

Below is the structure table where service availability & their minimum availability level should be defined.

Table 5.0 Services Availability

Service	Availability Requirement	Minimum Service Level	Target Service Level	Down Time
Network, Software, Hardware	*Availability requirement that should be achieved as per SLA*	*Could be defined in terms of percentage or time as per convenient*	*Could be defined in terms of percentage or time as per agreed*	*Could be defined in percentage or time as per convenient*

6.2 Bandwidth Availability

Bandwidth is the amount of the data that is transmitted through internet over a given period of time. It's the volume of information that could be send rather than the internet speed. High bandwidth is preferred & it's often expressed in bits per second per the capacity has been increase due to which its express in Mbps or Gbps.

6.3 Network Availability

- As per defined in SLA, network availability could be measured as per different parameters. (Up time, Down Time, Failure Time, Recovery Time etc.)
- Regular tests should be performed to measure the network availability & reports to be shared with the team & service provide.
- To ensure conformance to the SLA, customer/client should ensure all the network, software & hardware are in good working condition to ensure availability & quality.

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Targets can be set as per both parties' agreement & may vary according to the requirements.

6.4 Error Rate

Errors in services or network usually occur due to different circumstances. For SLA some criteria are preferred to have been set to identify the error rates that would occur in network & services & some actions should be defined for corrective actions & to mitigate errors in future. Error Rate can be measured as:

A root cause analysis should be done for periodic reviews to state the root cause analysis of all the issues & errors that were occurred & the time that was taken to resolve those. This would further identify the loop holes & areas of improvement to overcome in future to enhance the quality of the services.

6.5 Service Requests

As per the services agreed upon in Service level agreement, the support is provided in case of incidents or requests from the customer/client side. These requests are to be considered & the party should respond to the requests/incidents as per agreed upon in service level agreement. The better the respond rate, the less effects the party might bear in terms of any incident.

Table 6.0 Service Request Level

Severity Level	**Criticality/Priority**	**Response time**
Level 1	High	*Response time should be very quick for this, can be in hours/minutes as per agreed upon*
Level 2	Medium	*Response time should be quick*
Level 3	Low	*As per agreement*

6.6 Network Measurement

- Client has to make sure all the network/equipment is in working condition to ensure quality as per SLA.
- All fault equipment's identified is usually covered in SLA for return/maintenance.
- Regularly reports regarding network & equipment to be shared with supplier to ensure all equipment is in working condition & providing quality services as per SLA agreed.

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Table 7.0 Network Category Response & Restore Time

Category	Restore/Workaround Time
Critical	This is a critical portion & major business is affected so immediate action is to be required within the agreed time frame as per SLA
Major	This is a major portion & high impact issues are occurred which needs immediate action. Usually, it should be within the agreed time frame the problem is reported.
Minor	A minor portion on which action can be taken in a flexible time frame as per agreement

6.7 Service reporting / Escalation Matrix

Reporting is important for SLA to measure the quality & failures & do necessary actions to solve & mitigate the problem. An escalation level should be defined in SLA to identify the reporting persons & their expected response time.

Table 8.0 Escalation Table

Escalation Level	Name & contact of concerned Person	Role/Designation	Target Response
Level 1	*Name & contact of the concerned person*	*Role/designation of the concerned person*	*Within same business day or as per SLA agreed*
Level 2			*as per SLA agreed*
Level 3			*as per SLA agreed*

6.8 Service Monitoring

To measure the SLA and the services, review meetings should be held in order to make the services better. Following things may be covered.

- Service Performance Level
- Response & Support Level
- Compliance with SLA
- Network & System issues

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6.9 Incidents Resolve measurement

Incidents are reported whenever any service or network faces some failure or issues. An incident management process should be defined in SLA to outline a procedure to report incident & the concerned person. A good supplier always responds within agreed time frame on incidents to provide support & to resolve the problem & to avoid adverse effects on the business services & operations. To measure the incidents Percentage can be calculated as = Incidents resolved/Total Incidents Reported

Table 9.0 Incident Response & Resolution Time

Priority	Response
P1	This is of high priority & should be responded urgently or as per agreed in SLA.
P2	This is of second priority level & important to be taken care of
P3	Less priority but equally important.
P4	Not immediate but to be taken care of as per agreed in SLA

Resolution is the amount of time in which the incident would be repaired or the problem/error would be solved by the supplier. The respond back is preferred to have by human and not by any automated entity. This whole activity should be monitored in order to track the incidents & identify the status of the incident. Tickets should be created for incidents for history & tracking.

6.10 Support & Maintenance

Support is provided to ensure the services are of quality & any problem encountered is handled through a process. Support should be provided as per agreed upon in SLA. Following types of support is defined:

i. Primary Maintenance
ii. Preventive Maintenance
iii. Corrective Maintenance

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i) Primary Maintenance

All the functional responsibility of operations, services include in primary maintenance. Following are the activities mostly covered in primary maintenance:

a) Scheduled primary maintenance activities
b) Services & Operational Activities
c) On-site corrective maintenance activities.
d) Support provided by the supplier as per SLA terms.

ii) Preventive Maintenance

Periodic activities come under preventive maintenance. These include patrolling, tests, different type of measurements, & other activities. This maintenance objective is to keep the operations stable & to ensure the normal status so that reduction in failures can be ensured & activities are in lined for corrective actions.

Supplier should perform the maintenance activities on regular basis for ensuring smooth operations & services. Results of activities should be shared & preventive measurements should be taken.

iii) Corrective maintenance

This maintenance is carried out on network & hardware in-case of breakdown with the coordination of supplier. The activities on-site for maintenance should be done in supervision of agreed party & supplier. The staff should be available on the premises to take corrective actions on immediate basis. Fault & breakdown should be reported immediately as per agreed process. Stakeholders should be informed prior for routine maintenance & updates. In case of failures or repercussions for maintenance, report for root cause analysis & corrective measures to be shared.

Table 10.0 Activities Maintenance schedule

Activity Name/Description	**Routine Schedule**
Activity name should be written	*Schedule can be written; it can be w.r.t to time/day*

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6.11 Weekly/Monthly Reports

Reports show the overall status of the services & are beneficial for monitoring performance. The contractor should provide appropriate reports & shared with relevant stakeholders. Format can be decided between the parties. The reports can be of:

- SLA Compliance Reports
- Maintenance Reports
- Incidents Report

7. Revision Policy

The ICT industry is evolving at a very rapid pace and the change management is a very important part. The policy document will be modified as per the industry requirements, area expert consensus, open public stance and the needful international standards & policies compliance.

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8. Appendix

(Appendix-A)

This is a sample KPI table that may be taken as reference for KPI metric. The data below is sample & may be incorporated/changed as per the requirements.

KPI Name	Description	Performance Measures	Period	Calculation	Target	Status (Pass/Fail)
Application Availability	Measure core business functions of applications are available	% of time application is available for	Could be Days/Week/Month	Availability may be measured by available & down time. Agreed service Time (AST) & Down Time (DT) according to the formula: Availability= AST-DT/AST *100% (The availability may be calculated as per requirements by each)	*Baseline (as per agreed)*	*Whichever applicable*
Critical Incidents	Measure critical incidents count	Number of P1 Incidents	Could be Days/Week/Month	Sum/Number of P1 Incidents raised in the service management/review during the period	*(As per agreed)*	*Whichever applicable*
Service Desk/Support	Measure the volume of service requests catered.	Requests, incidents reported by the number of request tickets resolved.	Could be measure based on days/week/Month	Number of incidents logged, by the number of incidents resolved.	*(As per agreed)*	*Whichever applicable*

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