

Basis Documents **SLA-Definitions**Enterprise Customers

Swisscom (Switzerland) Ltd





Table of Contents

1	Introduction3
2 2.1 2.2 2.3 2.4 2.5 2.6	Definitions 3 SLA-Variants. 3 Generic Criteria for Defining the Quality of Service 4 Best Effort. 4 Time Zone 4 Holidays 4 Suspend Time 4
3 3.1 3.1.1 3.1.2 3.1.2.1 3.1.2.2 3.1.2.3 3.1.2.4 3.1.3 3.2 3.2.1 3.2.2 3.2.1 3.2.2 3.2.3 3.3.1 3.4 3.4.1 3.4.2 3.4.3 3.5 3.6 3.7	Standard Service Level Parameters (SSLP)5SSLP Operation Time.5Definition5Maintenance Windows5Provider Maintenance Windows in the Swisscom Data Centre6Provider Maintenance Window of the networks between customer's locations and Swisscom6Service-specific Provider Maintenance Windows7Customer-individual Maintenance Windows7Emergency System Changes.7SLP Support Time7Definition7Service Level Values8Deployments outside of Support Time8SSLP Process9Incident Management Process9Service Request Process11SSLP Performance11SSLP Performance12SSLP Security.12
4	Service Level and Quantity Reporting
5	End-to-End Solutions



For each Service, the Service Access Interface Point (SAIP) is defined by default in the Service Description. The SAIP specifies which services are provided where, with which Service Level Target and stated in the Service Level Report.

BSAIP

For Service Packages and Business Services, the Business Service Access Interface Point (BSAIP) is defined based on individual customer requirements. The BSAIP specifies which services are used where, with which target values and which Business Impact Logic in the Monitoring and stated in the Service Level Reporting.

1 Introduction

The present document establishes the SLA variants and the *Standard Service Level Parameters* utilised for defining the quality of the ICT Services of Swisscom (Switzerland) Ltd - hereinafter called Swisscom. They form the basis for the *Service Level Agreements (SLA)* in the *Service Descriptions* or individual contracts, the management during the provision of services and the final prove of performance (*Service Level Reporting*).

The following **Standard Service Level Parameters** (SSLP) are the service-neutral, generic criteria for defining the various Key Performance Indicators (KPI):

Standard Service Level Parameters

3.1 - SSLP Operation Time	3.4 - SSLP Process	3.7 - SSLP Continuity
3.2 - SSLP Support Time	3.5 - SSLP Performance	
3.3 - SSLP Availability	3.6 - SSLP Security	

2 Definitions

2.1 SLA-Variants

For each Service, the Service Description specifies the services, KPIs and Target Values offered. These form the standardised service components in the Swisscom Service Portfolio for assembling the individual customer solution and for the Service Level Targets. It is guaranteed that the individual Services can be assembled similarly to a modular system. The general conditions relating to the handling of Service Level Agreements and the services defined thereby are specified in the Service Descriptions and/or individual contract.

Depending on the customer solution's degree of value, several types of Service Level Agreements (SLA) may apply:

A) + B) Standard SLA for each Service with target value as proposed in the Service Description.

() + D) Individual SLAs for Service Packages or Business Services with target values per requirement.

The following figure illustrates possible combinations of services (SAIP, BSAIP):







3/13



The BSAIP is specified in the Service Descriptions or individual contract. The customer has the option to receive additional indicative information on lower levels in an enhanced Reporting Service. If no comprehensive SLA is agreed upon, the reporting is standardly carried out on the individual Service.

The quality definitions and the individual Business Impact Logic are represented in a service tree (Service Impact Model), and the values on the various levels are agreed upon. The standard KPIs and, depending on the requirements, additional KPIs are utilised for this purpose.

The proof of Service performance is made monthly in the standard Service Level Reporting and Quantity Reporting. SLA-relevant and indicative report information are reported separately.

Generic Criteria for Defining the Quality of Service 2.2

For each Service, the following items are defined in the Service Description and for the individual Service Packages/Business Services in the individual contract:

- the offered KPIs and target values representing the various qualitative requirements for an SAIP/BSAIP;
- the **method of measurement** utilized to verify compliance with the Service Level Parameters;
- the Standard Service Level Report, which documents the periodic analysis of the agreed Service Levels as proof of the services provided by Swisscom.

The following figure visualizes an SLA that incorporates service definitions, Key Performance Indicators and Service Level Targets:

Services	Quality attributes	Service Level Targets
Spezifications	Key Performance Indicators	Service Level Target Values
Service A	KPI Service Downtime	2:00[h:m]
	KPI Max. No. Of Service Outages	1[#]
Service B	KPI Incident Time To Resolve	8:00[h:m]

Service Level Agreement

The foregoing items form the basis for the service commitment and for the statement of the service quality provided in the Service Level Reporting.

2.3 **Best Effort**

This term means that Swisscom strives to provide the Service or repair any Fault, as the case may be, in an appropriate and generally accepted manner using the resources available, but makes no promise in this reverence. Any and all claims of warranty, damages and liquidated damages, in particular, are precluded. The customer may report Faults via the standard Incident Process.

If no Service Level Target has been specified, then the Quality Definition "Best Effort" is applicable.

24 Time 7one

If not otherwise defined or agreed, the time used in this document are based on the Swiss time zone.

2.5 **Bank Holidays**

National and public Holidays in Switzerland: 1 January, Ascension Day, 1 August and 25 December. Legal, cantonal Holidays are also Holidays, depending on the agreed SAIP. Individual deviations, including but not limited to international sites, are defined in the respective individual contracts.

2.6 Suspend Time

"Suspend Time" is the period of time in which Fault correction or Request Fulfillment are suspended and are not included in the Service Level calculation. Reasons for Suspend Time are for example:

4/13



- Service outages or "Request Fulfillment" falling outside of the agreed Support Time.
- The outage occurs in the Provider Maintenance Windows, in a customer-specific Maintenance Window, or in an announced Service interruption.
- A *Fault* is caused by the correction of an *external system Error* or an *interruption of the Internet* whose correction does not fall within Swisscom's service obligations.
- If Swisscom can prove that neither Swisscom nor its auxiliary persons are to blame for the Fault.
- In case of a false alarm. The *Incident* is closed due to a "false alert".
- Periods of reduced performance (latency/transmission delay, throughput packet loss), if Swisscom's measurements prove that the contractually specified values have been achieved.
- The customer or assigned third parties have authorization which can potentially affect the SLA compliance (in particular root-/admin rights on Swisscom operated systems).
- The customer is not available within the scope of its obligations to cooperate in order to carry out, support or complete the correction of the *Fault*. For example, the *Incident Management* Process cannot be followed for lack of availability/access or lack of a contact person or confirmation by the customer. This is especially valid when the customer contact data are not updated by the customer himself.
- The customer obligations are not fulfilled.
- During Fault clearance, the customer is identified as being responsible of the Error, such as in the case of:
 - applications, configurations or equipment falling outside the agreed scope of the Service (in particular customer provided resources like for example in the case of errors in software licenced by the customer), or third-party services which have not been contractually assigned by Swisscom
 - Errors occurring on site: e.g. in-house installation, customer's network, power, low temperatures, improper handling by the customer, etc.
- The customer or the user are not available at the agreed appointment time.
- The delivery date is postponed by the customer.

3 Standard Service Level Parameters (SSLP)

3.1 SSLP Operation Time

3.1.1 Definition

The parameter "*SSLP Operation Time*" is the period of time in which all ICT components relevant for service delivery are in operation. This is usually 24/7, excluding *Maintenance Windows*. Compliance with the *Operation Time* is not reported.

SSLP Operation Time	in service description	meaning
Example Target Values ¹	7x24	Monday - Sunday, 00:00 - 24:00 incl. Bank Holidays excl. Maintenance Windows

3.1.2 Maintenance Windows

Maintenance Windows are timeslots used for maintenance activities made by Swisscom. Maintenance Windows are timeslots that are only used if necessary. Swisscom strives to keep the actual Service interruptions as short as possible.

Swisscom differentiates between:

- Provider Maintenance Windows in the Swisscom Datacenter
- Provider Maintenance Windows of the Networks between customer's locations and Swisscom
- Service-specific Provider Maintenance Windows
- Customer-individual Maintenance Windows

¹ The concrete target values per *Service* is defined in the service description.



Remarks:

- On customer's side no maintenance work should be planned during these periods.
- During the maintenance windows basically no *Incident* Tickets will be registered.
- Upon completion of the maintenance work, Swisscom tests/audits the functionalities of the dependent Services for which it is responsible. The remaining services, i.e. those falling outside the scope of Swisscom's responsibility, must be tested by the customer.

3.1.2.1 **Provider Maintenance Windows in the Swisscom Data Centre**

The *Provider Maintenance Windows* in the Swisscom Data Centre (PMW-DC) are used to reserve time slots for maintenance work in Swisscom's premises.

Within the data centres the following three types of Provider Maintenance Windows (PMW) are possible:

	General	For Maintenance work on the technical platforms ² .	Every Year - 8 Weekends each Saturday 18:00 - Sunday 18:00
	Connectivity	For Maintenance work on the network in the Swisscom computing centre. Interruptions at the Service layer normally last <60 minutes.	Every Year - 4 Weekends each 3 nights: Friday 22:00 - Saturday 06:00 and Saturday 22:00 - Sunday 07:00 and Sunday 22:00 - Monday 06:00
	Backup	For Maintenance work on the backup infrastructure.	Weekly Wednesday 14:00 - 17:00

PMWs in the Swisscom Datacenter (PMW-DC)

These maintenance windows apply for services, that are produced within Swisscom's data centers and complement the service specific PMWs. The PMW-DC defined above do not apply for cloud-based services. For these services valid PMWs are defined in the relative service description.

The planning process PMW-DC General and Connectivity takes course as follows:

In the **planning phase**, Swisscom informs the customer about the *PMW-DC* planning, and the dates are appointed in the *PMW-DC* and annual release planning until October 31st of the previous Year:



Before of each maintenance window a detailed planning is performed defining the precise service interrupts and the planned duration in coordination with the customers. Afterwards the customer is obliged to confirm the system change within 28 calendar days. The next Change Advisory Board (CAB) will definitely releases the System Change.

For the maintenance window PMW-DC *Backup* no coordination with the customer is provided, as no service is impacted.

This coordination is does also not apply for cloud-based services.

3.1.2.2 Provider Maintenance Window of the networks between customer's locations and Swisscom

The *Provider Maintenance Window* of the networks between customer's locations and Swisscom (PMW-NWK) defines the period that Swisscom mainly uses for maintenance activities on the network platform outside the data centers.

6/13

² Building, heating-air conditioning, electrical power supply etc.



PMW of the networks between customer's locations and Swisscom (PMW-NWK)

Connectivity	For maintenance work on Swisscom's networks outside the data centers.	Weekly Sunday 02:00 - 06:00

The connectivity can be impacted by such maintenance tasks. Within the maintenance window, planned interruptions that presumably last longer than the period announced in the service description and all the exceptional maintenance windows are communicated towards the customer in advance. If this is not specified, no particular communication towards the customer of maintenance work will be performed.

3.1.2.3 Service-specific Provider Maintenance Windows

The *Provider Maintenance Window* of particular services (PMW-S) is used to define the maintenance periods of a service specific infrastructure. This PMW is stated in the service description.

Service-specific Maintenance Window (PMW-S)

's Specified in the service descriptions of the relative service.
's Specified in the service descriptions of relative service.

If not stated differently in the service descriptions no communication with the customer is performed.

3.1.2.4 Customer-individual Maintenance Windows

Customer-individual Maintenance Windows (IMW) for customer-specific ICT-infrastructures and applications are mutually coordinated and agreed.

Customer-individual Maintenance Windows (IMW)

Individual	For maintenance work on customer- specific ICT-infrastructures and	Upon agreement
	applications on customer premises.	

Customer-individual *Maintenance Windows* - falling outside of the standard *PMW* - are specified, agreed, and billed on a project basis, taking into account the additional effort.

3.1.3 Emergency System Changes

In practice - in addition to the *PMW* - requirements for emergency system Changes in operations arise at short notice for all ICT components. Swisscom reserves the right to implement unscheduled emergency system *Changes*, e.g. security *Patches*, immediately.

Insofar as possible, customers are informed shortly prior to implementation of the *Change Request*. The customer has a veto right³ for its dedicated systems and may schedule an alternative date for implementation. After execution of an emergency system *Change*, a completion report is issued via the *Change* monitor. If the customer vetoes the *Changes*, then the risk arising from the failure to close the security gap is transferred to the customer until such time as that gap is closed.

3.2 SSLP Support Time

3.2.1 Definition

- "Support Time" is the period of time (from to) in which...
- qualified personnel are available for purposes of Service Restoration and work on this; i.e. the contractually agreed Service Level values (quality) are ensured during this period.
- deviations relevant to the Service Levels are analyzed for the Service Level Reporting.

For purposes of evaluating the SLA-relevant down time, time falling outside of Support Time is considered as Suspend Time.

³ No veto right can be offered in connection with systems shared by multiple customers.



3.2.2 Service Level Values

Several profiles are available for the "SSLP Support Time", depending on the Service and the offer model.

SSLP Support Time	in service description	meaning
Example Target Values ⁴	Mo-Fr 07:00-18:00	Monday - Friday, 07:00 - 18:00
	Mo-Fr 06:00-22:00	Monday - Friday 06:00 - 22:00 and
	Sa 08:00-12:00	Saturday 08:00 - 12:00
	Mo-Su 00:00-24:00	Monday - Sunday, 00:00 - 24:00

Bank holidays are generally excluded from Support Time, except at "Mo-Su 00:00-24:00" that covers all bank holidays. Possible exceptions to this rule are stated in the service descriptions.

In a *Business Service*, the *Support Time* of all *Services* involved must have the same or greater value in accordance with the requirements.

3.2.3 Deployments outside of Support Time

If the customer requests a temporary deployment falling outside of the *Support Time*, the relevant terms must be specified by separate contract. Support during temporary deployments is not subject to provisions concerning the measurement of the *Service Levels*.

3.3 SSLP Availability

3.3.1 Definition

The Parameter "SSLP Availability" refers to the availability of the contractually agreed Service at the defined SAIP (Service Access Interface Point) or BSAIP (Business Service AIP). In the active Service Level Management Process, a Fault in an infrastructure component is automatically detected and logged, and intervention is initiated based on the Support Time. In the Incident Management Process, the time of a Fault falling between "Start - Event Time Stamp" and "Service restored - Event Time Stamp" is recorded and provided for the statement "Agreed availability met" in the Service Level report (see diagram below). Workarounds are considered a temporary correction of a Fault; if the customer can use the Service, then the Service is considered available in this period.

The following figure shows the relationship of the different timers for the SSLP "Availability":



⁴ The concrete target values per *Service* is defined in the service description.



a) KPI Service Downtime [h:m]

Service Downtime is the total Service Outage Time [h:m] during the Support Time, excluding Suspend Time, in a reporting period. For business-related Services & Business Services, the Service Downtime [h:m] is normally used.

SSLP Availability	KPI Service Downtime [h:m]
Formula	Service Downtime in h:m = Σ Service Outage Time(s) - Σ Suspend Time(s)
Example Target Values ⁵	1:00 [h:m]

b) KPI Service Availability [%]

For infrastructure-oriented Services, availability is usually stated as Service Availability in %. Service Availability is the calculated Service Downtime, stated as a percentage, in relation to the Operation Time in a reporting period. Suspend Time is considered in the Service Downtime.

SSLP Availability	KPI Service Availability [%]
Formula	Service Availability in % = $\frac{\text{Operation Time} - \text{Service Downtime}}{\text{Operation Time}} \times 100[\%]^{6}$
Example Target Values ⁷	99.5 [%]

c) KPI Service Outages [#]

The "KPI Service Outages" [#] defines the maximum allowed Service Level-relevant outages per reporting period:

SSLP Availability	KPI Service Outages [#]
Formula	Service Outages = Number of SL-relevant Outages
Example Target Values ⁸	1

3.4 SSLP Process

The parameter "*SSLP Process*" defines standard *KPIs* normally for purposes of measuring, managing and reporting process services (e.g. ITIL, Business Processes) in the reactive *Service Level* Management environment.

3.4.1 Incident Management Process

In the Incident Management Process, fault reports from the customer are logged and analysed as Incidents.

The following figure shows the relationship of the different timers for the Incident Management Process:

⁵ For each Service, the specific target values are defined in the Service Description.

⁶ For the calculation of the *Operation Time* the number of Days in a Month (28, 29, 30, 31) are distinguished.

 ⁷ For each Service, the specific target values are defined in the Service Description.
 ⁸ For each Service, the specific target values are defined in the Service Description.





Compliance with the Service Level is calculated for each Incident based on the analysis of the Incident Tickets (excluding Suspend Time) for the individual faults and reported for each calendar month:

KPI Incident Intervention Time [h:m, BD] a)

The KPI Incident Intervention Time defines in each ticket the period between Time Stamp "create Ticket" until "Work in Progress", excluding Suspend Time:

SSLP Process - Incident Management Process	KPI Incident Intervention Time [h:m, BD]
Formula	Intervention Time [h:m, BD] per Incident = Time Stamp "Work in Progress" - Time Stamp "Create Ticket" - Σ Suspend Time(s)
Example Target Values ⁹	4h, EONBD ¹⁰ / EO3BD ¹¹

b) KPI Incident Intervention Time On Site [h:m, BD]

The KPI Incident Intervention Time On Site defines per incident the period between Time Stamp "create Ticket" until "Arrived at Site", excluding Suspend Time:

SSLP Process - Incident Management Process	KPI Incident Intervention Time On Site [h:m, BD]
Formula	Intervention Time [h:m, BD] per Incident = Time Stamp "Arrived at Site" - Time Stamp "Create Ticket" - Σ Suspend Time(s)
Example Target Values ¹²	4h, EONBD ¹⁰ / EO3BD ¹¹

 ⁹ For each Service, the specific target values are defined in the Service Description.
 ¹⁰ EONBD = End Of Next Business Day
 ¹¹ EOxBD = End of x Business Days considering the Support Time

¹² For each Service, the specific target values are defined in the Service Description.



c) KPI Incident Time to Resolve [h:m, BD]

The KPI Incident Time to Resolve defines per incident the time necessary to resolve the service, excluded Suspend Time:

SSLP Process - Incident Management Process	KPI Incident Intervention Time To Resolve [h:m, BD]
Formula	Time to Resolve [h:m, BD] per Incident = Incident Total Duration - Σ Suspend Time(s)
Example Target Values ¹³	4h, EONBD ¹⁰ / EO3BD ¹¹

3.4.2 Service Request Process

In the Service Request Process, the following KPIs are utilized:

d) KPI IMACD Confirmation Time [h:m]

The KPI IMACD Confirmation Time defines the time necessary to confirm an IMACD Service Request.

SSLP Process - Service Request Process	KPI IMACD Confirmation Time [h:m]
Formula	<pre>IMACD Confirmation Time [h:m] = Time Stamp "Request Confirmed" - Time Stamp "Request Created" - Σ Suspend Time(s)</pre>
Example Target Values ¹⁴	0:30 h, 1:00 h

e) KPI IMACD Fulfillment Time [h:m, BD]

The KPI IMACD Fulfillment Time defines the time necessary to deliver an IMACD Service Requests:

SSLP Process - Service Request Process	KPI IMACD Fulfillment Time [h:m, BD]
Formula	<pre>IMACD Fulfillment Time [h:m, BD] = Time Stamp "Request Completed" - Time Stamp "Request Created" - Σ Suspend Time(s)</pre>
Example Target Values ¹⁵	6 h, EO2BD ¹⁶

3.4.3 Service Fulfillment Process

f) KPI Ready for Service (RFS) [Date]

The KPI Ready for Service defines the agreed fulfillment date:

SSLP Process - Service Fulfillment Process	KPI Ready for Service (RFS) [Date]
Example Target Values ¹⁷	01.02.2016

Ready for Service refers to the date confirmed by Swisscom, on which a contractually agreed service will be operational. The exact date may be agreed upon by contract.

¹⁴ For each Service, the specific target values are defined in the Service Description.

¹³ For each Service, the specific target values are defined in the Service Description.

 ¹⁵ For each Service, the specific target values are defined in the Service Description.
 ¹⁶ EOxBD = End of x Business Days considering the Support Time
 ¹⁷ For each Service, the specific target values are defined in the Service Description.



3.5 SSLP Performance

The parameter *"SSLP Performance"* provides information about the load status, throughput, measurements, and *Response Times* for reference transactions and the quantities (activities, transactions). For such performance measurements, additional technologies such as probes, agents, recorders and/or robots as well as monitoring systems are used in Swisscom's computing center and/or at the customer's premises as needed.

The measurement criteria, measurement procedure, preparation of the report and the applicable conditions are agreed upon individually in the *Service Description* or for E2E applications in the individual contract.

3.6 SSLP Security

The parameter *"SSLP Security"* comprises several levels of protection to accommodate the various needs of ICT Security. The defined protection levels describe *Security* measures for implementing the following protection objectives: **Confidentiality**, **Integrity**, **Obligation** and **Availability**.

The following figure shows the relationship between the security requirements and the IT Security Levels:

Requirements:

- Individual Security needs (solution not part of the Service Portfolio)
- Additional Security needs (solution out of the Service Porfolio)
- Elementary Security needs (included as Standard in the Services)



3.7 SSLP Continuity

After handover from Incident Management to IT Service Continuity Management, the parameter "SSLP Continuity" defines the maximum recovery time and maximum data loss. The target values are specified in the RTOc (Recovery Time Objective) and RPOc (Recovery Point Objective).

The handover from Incident Management to *IT Service Continuity Management* is a business decision. It can be taken by the customer or by Swisscom depending on the criticality of the situation.

The following figure illustrates the various target values in the context of the continuity management:





- RTOC (Recovery Time Objective) specifies the agreed maximum allowable time period for restoring a Service provided to the customer after handover to the Continuity Management.
- In this case, the Service Level Target to be met may fall below the normal Service Level Targets.

SSLP Continuity	KPI RTO _c [h:m, BD]
Formula	RTO _c [h:m, BD] = Time Stamp "Recovery Point" - Time Stamp "Transition to Continuity Management"
Example Target Values ¹⁸	≤ 4 hours, Best Effort

RPOc (Recovery Point Objective) defines the time point in the past at which a system has consistently been recovered by restoring a backup. The RPO_C is specified in hours and is calculated from the time the Incident was raised.

SSLP Continuity	KPI RPO _c [h:m, BD]
Formula	RTOc [h:m, BD] = Time Stamp "Service Interruption" - Time Stamp "Last Data Backup"
Example Target Values ¹⁹	near 0 hours, Best Effort

Only the defined Continuity SLA-Parameters and agreed targets prevail once the Incident is handed over to the Continuity Management.

4 Service Level and Quantity Reporting

For the standard *Services*, Swisscom provides a monthly *Service Level* and *Quantity Report* as a quality and quantity statement as defined in the *Service Description*. The standard Reporting focuses on a reporting period of one calendar month and is made available electronically.

Individual reporting needs may be addressed by the additional service for more extensive reporting on a customer-specific basis, also including with other reporting periods

5 End-to-End Solutions

In order for Swisscom to be able to guarantee the *Service Level* commitment, in the context of End-to-End-Solutions, the customer must fulfil the following conditions:

- All Services part of an End-to-End-Solution must be in the (sole) contractual responsibility of Swisscom.
- In an End-to-End Solution (Service Package or Business Service with BSAIP), all of the involved Services affect the E2E Service Level. Therefore, these Services must have an equal or greater Service Level value in accordance with the requirements of the E2E SLA, e.g. application and server and database: Availability ≥ 99.3% or Service Downtime ≤ 2 hrs.
- An E2E SLA calls for active monitoring and management of the application; this can be ordered with additional "Application Management" or "Advanced Reporting" services.

 ¹⁸ For each Service, the specific target values are defined in the Service Description.
 ¹⁹ For each Service, the specific target values are defined in the Service Description.