

Tele2 Carrier Line

Service Description

Service Level Agreement

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1 Introduction

The conclusion of the Service Level Agreement is offered for the Tele2 hired line service, i.e. for all connections defined in the proposed solution for which the customer opted for Service Level BUSINESS. A service level agreement offers the customer guaranteed availability and the carrying out of all necessary fault clearance operation within mutually agreed upon maximum time periods. In case of any breach, a compensation scheme is provided for. Any potentially conceivable claims which surpass the payments provided for in the compensation provision are excluded.

2 Scope

The description of service is currently applicable to the Service Carrier Line with the ECONOMY / BUSINESS Service Level and/or Standard/Full Support Level.

In the Service Level Agreement, the service quality for each “end-to-end” transmission path, i.e. between the network termination points (hereafter referred to as connection) specified in the description of service for the Tele2 Carrier Line Service, is evaluated according to the following parameters:

- Availability as a statistical value of all individual outages of a connection over an agreed upon time period (hereafter referred to as observation period).
- Maximum individual outage duration in every single potentially occurring outage, in which both response and repair take place.

During the observation period, these parameters are compared with the agreed upon target value and using this, attainment of the target value for the SLA is determined. Should the target value be met or exceeded, then the SLA is kept, otherwise a compensation scheme is provided for, the amounts of which are calculated according to the extent of the fault to comply.

The **availability** of a connection constitutes a quality indicator over a defined, invariable observation period in which all outage periods within the agreed upon fault repair periods are allowed for.

In order to evaluate the troubleshooting process in individual cases, a maximum **individual outage duration** is also agreed upon which includes response and repair times for remote problem resolution as well as potentially necessary on-site problem-solving.

The SLA parameters are collected by the company’s own network operation centre in the trouble ticket system and evaluated using appropriate tools. The result shall be provided to the customer with the SLA report upon request. This ensures an objectively measurable and assessable appreciation of the service quality.

3 Service and Support Level

The services provided by service management are described through the **service Level** and **support Level**. For each end-to-end connection, a service level and/or support level can be selected.

3.1 Service Level

All service monitoring and failure correction procedure services are stipulated in the **service level**. The main differences between the ECONOMY and BUSINESS service levels are characterised by:

the guaranteed high service quality at the BUSINESS service level, which is reflected in the signing of a **service level agreement (SLA)**. This agreement describes the specified service characteristics with respect to a quality of service guaranteed by Tele2 vis-à-vis the customer and provides for a price reduction in case the stipulated quality parameters are not upheld.

At the ECONOMY service level no service level agreements are entered into with the customer.

The service levels are cited in the proposed solution for a given customer service.

The service characteristics of both currently applicable service levels ECONOMY and BUSINESS are summarised in the following table:

Services provided by Service Management	ECONOMY		BUSINESS	
Guaranteed Availability	no		yes (SLA)	
Guaranteed outage duration (downtime) in case of fault	no		yes (SLA)	
SLA Reports	no		yes (SLA)	
Failure Management				
Failure reporting "round the clock" by the Tele2 Help Desk	yes		yes	
	during support hours	outside support hours	during support hours	outside support hours
Information about repair progress	yes	no	yes	no
Problem resolution	yes	no ¹⁾	yes	no ¹⁾
Response and repair times (all information are based on experience, however they are not guaranteed within the support time)				
Diagnosis/Remote Analysis ²⁾	< 2 hours		< 1 hour	
Problem resolution at a distance	< 4 hours		< 3 hours	
Problem resolution through on-site intervention	< 8 hours		< 5 hours	

¹⁾ possible outside the support period for a fee based on time involved

²⁾ period from receipt of the problem report until fault is identified

³⁾ period from when the fault is identified to when it is fixed

Arrival times in case of on-site intervention (time taken for a service technician to arrive starting from problem diagnosis):

in provincial capital cities: 2 hours on working days Monday – Friday 7 am to 6 pm (on working days) or 3 hours during other times; outside of provincial capital cities: 3 hours on working days Monday to Friday 7 am to 6 pm (working days) or 4 hours during other times

Table 1: Service Level Management Parameters

Note about the response and repair times indicated:

At the **ECONOMY** service level, the times indicated for resolving faults in the customer network are usual times based on internally performed Tele2 repair operations and are not guaranteed in any particular case. Tele2 strives to meet or do better than the response and repair times listed in Table 1: Service Level Management Parameters

However, non-compliance with these values cannot and shall not give rise to any monetary claims in any way, shape or form.

If a Service Level Agreement has been entered into (BUSINESS service level), in case of failure, the **total individual outage time**, which includes the total time required for diagnosis and failure repair at a distance and if necessary on-site repair, is **guaranteed**. Tele2 also strives to meet or do better than the response and repair times listed in Table 1: Service Level Management Parameters

3.2 Support Level

In the support level, the **support hours** (repair hours) in which, in case of a fault in the customer's service, the problem is repaired, are defined.

The following support hours are currently defined:

Support Level	Short Designation	Repair Times
Standard Support	SS	Monday to Friday 7:00 am – 6:00 pm
Full Support	FS	Monday - Sunday 24 hours a day

Table 1: Support Level (Repair Times)

During support hours:

- the cause of the problem is determined by the Network Operation Centre (remote diagnosis),
- Tele2 relays the problems to its vendors or service partners if the cause of the disturbance is believed to fall in their area of responsibility
- If necessary, Tele2 sends a technician to the customer's location. The customer ensures that the technician shall gain immediate access to the location of the affected equipment. Possible wait times are not figured in during the measurement of the actual repair time

The support levels are listed in the proposed solution for a particular customer service.

Problem resolution measures are generally only carried out by Tele2 during the stipulated support hours (repair hours). Repairs during the agreed upon hours are included in the monthly service fee.

For repair operations which are required due to customer's fault or in case of repairs which at the customer's request are ordered outside of the support hours, the incurred costs are billed at the following hourly rate.

Times	Mon. to Fri. 8 am to 6 pm	Mon.-Fri. 6-8 am, 6-10 pm Sat. 6 am to 10 pm	Mon.-Sat. 0-6 am, 10 pm – Midnight; Sun., holidays 24 hours
Qualified Technician	118	171	212
System Specialist	166	241	299

Table 2: Currently applicable hourly rates for repairs outside of the support hours

The amount of the fees is based on the currently applicable Tele2 pricelist. The amounts are in EUR not including VAT.

3.3 SLA – Service Level Agreement

Tele2 offers all services standard with the ECONOMY service level and the STANDARD SUPPORT level.

Should a higher quality SLA be desired, the following SLA parameters and corresponding surcharges on top of the monthly fee per connection are available:

SERVICE LEVEL	SUPPORT LEVEL	Support hours	Availability	Surcharge
Economy	Standard Support	Mon. to Fri. 7 am to 6 pm	Best Effort	0%
Economy	Full Support	Mon. to Sun. 24 hours	Best Effort	+ 15%
Business	Standard Support	Mon. to Fri. 7 am to 6 pm	99.4%	+ 7%
Business	Full Support	Mon. to Sun. 24 hours	99.9%	+ 7% + 15%

Table 3: Service Level Agreements

These SLA's are periodically defined over an observation period of one year as of the date on which the service is delivered.

The surcharges to be added to the monthly fee are calculated according to the following formula:

e.g. monthly fee 750 EUR => the customer chooses Business (=+7%) + Full Support (= +15%).

Thus, the new monthly fee is calculated as follows:

a. $750 * 1,07 = 802,50$

b. $802,50 * 1,15 = 922,88$

=> The new monthly fee for the carrier line with the Business service level and Full Support level amounts to 922.88 EUR.

4 Observation Period

The observation period is the period of time measured in minutes in which the parameters stipulated in the SLA are measured and evaluated. The observation period is a one year cycle beginning with the date service is initiated. This date is noted in the service initiation report.

In stub years, availability is assumed at 100 % for the period during which service is no longer provided.

Should a service up or downgrade occur within a given year, then new observation periods of one year's duration shall begin as of the day of the up or downgrade.

Customers are entitled to the provision of services arising from the Service Level Agreement only for those connections for which a sustained contractual relationship exists over the entirety of the current observation period.

5 Determination of the Attainment of the SLA Target Value

5.1 Availability

Availability means the actual disposal of the carrier line.

The availability is expressed in percentages. It is the result of the relationship measured in minutes between the total of all outage periods having occurred in the observation period (minus suspended times) and the total support time in the observation period (see Table 3).

The corresponding target value for availability is defined in the proposed solution.

5.2 Achieved Availability

The achieved availability is calculated for each connection according to the following formula:

$$\text{Availability} = \left(1 - \frac{\text{Outage time during the observation period minus suspended times}}{\text{Total support time as per support level in the observation}} \right) \times 100\%$$

The collection of the relevant outage times for the calculation of the actually achieved availability is based on time stamps from trouble tickets (hereafter referred to as service tickets).

Service tickets which are still open at the end of the observation period are not included in the calculation of the achieved availability for this period, but rather are considered in the next observation period.

5.3 Maximum Individual Outage Duration in SLA BUSINESS

The individual outage time results from the time span between the time stamps for outage start and finish minus any suspended times pursuant to point 5.4.

The maximum individual outage duration for each connection is 6 hours.

5.4 Suspended Periods

The following times are not to be included in the outage time and are indicated in the SLA report as suspended periods:

- Time spans which fall outside of the support hours stipulated in the contracted support level.
- Scheduled and previously announced interruptions for maintenance operations. These maintenance windows are defined in the description of service for the service level. These also includes connection interruptions which are unavoidable due to modifications ordered by the customer to be carried out on his/her network and/or equipment.
- All times resulting from delays to problem resolution which are caused by the customer or for which s/he is responsible (e.g. customer not reachable, no access at the customer's location and similar)
- Unavailability which can be traced back to equipment or other external influences at the customer's location (internal or the customer's own cable systems, electricity, climate, building, disconnection, etc.).
- All outages in which the customer does not respect the agreed upon procedures for fault resolution.
- If the customer carries out modifications to the equipment or the network.
- All outage periods, for which it can be determined that the customer, his/her employees, assistants or third parties whom s/he allowed to use the telecommunications services caused the outage.
- Periods with decreased service capacity when measurements taken by Tele2 show that the contractually specified values were met.
- Periods with decreased service capacity of a service for which no performance values are specified.
- Outage times caused by acts of god (e.g. fire or water damage, atmospheric discharges, intentional damage by third parties (vandalism, etc.).

6 Compensation Scheme for SLA BUSINESS

If the contractually stipulated availability during the observation is not met, then the customer is entitled to compensation in accordance with the following provision.

6.1 Availability

In case of non-compliance with target values according to the service level agreement, Tele2 grants the following **price reduction**:

For each 0.1 % by which the stipulated target value for individual availability in the observation period is fallen short of, the price reduction amounts to 1 % of the total of all contractually stipulated monthly fees owed for the observation period in question, up to a maximum of 40 % of these fees.

This provision applies separately to each individual connection,

With this price reduction, all claims by the customer - of any sort whatsoever – arising from the service restrictions are considered satisfied.

Should the actually achieved availability (according to the provisions of the rules described above in greater detail) fall below the agreed upon target value for availability, then the customer is entitled to request compensation in the form of a price reduction, the amount of which is to be calculated according to the rules provided for in the applicable proposed solution. The price reduction must be claimed of Tele2, in case of another exclusion, in writing, within six months of the end of the observation period in question. Any claims of any type whatsoever which exceed the former, compensation, discounts or similar, are excluded.

The price reduction is granted in the form of a deduction from the billed charges; a cash payment shall occur only in those cases in which no monies are owed or may be owed in the future to Tele2 by the customer, in particular, if all contracts between Tele2 have been terminated.

6.2 Maximum Individual Outage Duration

If the maximum individual outage duration is exceeded during the observation period, then the degree of success with respect to the target set is reduced, for each instance, by the percentage cited (referred to as availability deduction).

In case the maximum individual outage duration is exceeded, Tele2 shall grant an additional, one-time availability deduction of 0.1 %.

7 Limitations

Since for the Tele2 hired connection service, due to technical reasons, not all connections on an end-to-end basis can be proactively monitored, this Service Level Agreement shall be agreed upon on the basis of reactive fault recording.

8 SLA Reports

The customer shall, upon request, receive a SLA report for each observation period, which includes an itemised list of the SLA parameters collected as well as a detailed list of all service tickets; these are divided into:

SLA relevant service tickets (service tickets which affect calculation of availability),

Non-SLA relevant service tickets (service tickets which do not affect calculation of availability),

open service tickets (service tickets which were still open (pending) at the end of the observation period).

The service tickets listed include all detailed information on each outage in the provision of the customer service, so that the Service Level Agreement can be understood using the SLA report.

The following information is provided for each service ticket in the SLA report.

Ticket Number – An unambiguous designation (number) of the service ticket

Ticket opened - Date and time the service ticket was opened

Ticket closed - Date and time the service ticket was closed

Minutes – Information on the amount of unavailable time in minutes taking into account suspended times.

Fault type - A general designation for the consequences of the outage for the customer according to the following categories:

- No consequences for the customer
- Limited service quality
- Complete breakdown of the service interface
- Closure code – An unambiguous designation for the reason for the outage. Tele2 currently uses the following closure codes:

Closure code – Fault in the customer's purview		
Code	Description	Suspension
CNRA	Cause of fault not identifiable and accepted by the customer	yes
CHRA	Hardware fault	yes
CHRB	Installation fault	yes
CSRA	Application fault	yes
CSRB	Configuration fault	yes
CORA	Maintenance in the customer's purview: announced by the customer	yes
CORB	Maintenance in the customer's purview: not announced by the customer	yes
CORC	Procedural violation by the customer (e.g. customer not available, access to customer's location impossible)	yes

Closure code - Fault in Tele2's purview		
Code	Description	Suspension
UNRA	Cause of fault not identifiable	no
UHRA	Active network component fault	no
UHRB	Passive network component fault	no
UHRC	CPE hardware fault	no
USRA	Application fault	no
USRB	Configuration fault	no
USRC	CPE application fault	no
USRD	CPE configuration fault	no
UORA	Maintenance in Tele2's purview announced to the customer by Tele2. Tele2 maintenance window	yes
UORB	Maintenance in Tele2's purview not announced to the customer by Tele2	no

Closure code – Fault in the access provider's purview		
Code	Description	Suspension
ANRA	Cause of fault not identifiable	no
AHRA	Active network component fault	no
AHRB	Passive network component fault	no
ASRA	Application fault	no
ASRB	Configuration fault	no
AORA	Maintenance in the access provider's purview announced to the customer by Tele2. Tele2 maintenance window	yes
AORB	Maintenance in the access provider's purview not announced to the customer by Tele2	no

9 Network and Service Management

9.1 Network Operation Centre

Tele2 maintains a Network Operation Centre (NOC) 24 hours a day, 365 days a year. It is equipped with central network management systems to continually gather information on statistics, quality and faults. All maintenance measures are coordinated through the NOC as is the entire problem resolution process in case of any failures.

The following functions are provided by default by the NOC at each service level.

- Customer contact centre in case of problems or faults. hereupon are contained in the description of service for each customer service.
- Initiation, inspection and termination of the problem resolution procedure including generation of trouble tickets according to the procedure described in Chapter 9.5.
- Exchange of information with the customer about status and actions to be taken regarding current problems and events.
- Escalation of problems.
- Preparation of data and information required to produce service quality reports.

9.2 Help Desk and Contact Persons

9.2.1 Tele2 Help-Desk / Service Line

As a contact point to receive fault reports from the customer, Tele2 maintains a service line in front of the NOC and which is available 24 hours a day, 365 days a year by telephone via an Austria-wide toll-free service telephone number, by fax or email. Upon signing up for service, the customer shall receive information on how to make contact in case of problems (contact person, telephone number, and etc.).

Independent of the contractually guaranteed problem resolution time according to the support level, the customer can always contact the service line to report a problem. The service line coordinates all reports and relays them to the appropriate fault management division at the NOC.

9.2.2 Help Desk at the Customer's Location

In order to optimise the flow of information and coordination of the problem resolution procedure, Tele2 recommends that each customer set up his/her own end user help desk as an unmistakable and clear contact point for his/her end users. In so doing, a single interface is established between the customer and Tele2. This end user help desk should be reachable during the selected support hours.

In any case, at the very least the customer should provide the name of a contact person with a telephone and/or fax number at which the customer can be reached during the agreed upon support hours.

9.2.3 Access to Tele2's Technical Equipment

For the purpose of carrying out repairs and maintenance operations, Tele2 as well as third parties acting in its behalf are to be granted access and/or admission to Tele2's technical equipment at the customer's location at any time during the agreed upon support hours. Delays arising as a result during problem repairs are not included in the calculation of service outages. In case admission is required to such a location, Tele2 shall immediately inform the customer thereof.

9.3 Maintenance

In order to constantly ensure the quality of service, the hardware and software used shall be maintained by Tele2 and/or its contractual partners. All preventive maintenance services as well as the repair and/or replacement of defective parts or systems and software maintenance fall under this category.

Maintenance operations which are associated with service interruptions shall, as a general rule, be carried out within predefined maintenance windows, at night between 10:00 pm and 6:00 am and announced via telephone, email or fax at least 10 working days in advance. The customer shall be informed of the date and time as well as the scheduled duration of the service outage. The extent of such maintenance operations associated with service interruptions shall be a maximum of 12 hours per annum.

Tele2 reserves the right to modify the predefined maintenance window times unilaterally and to inform the customer thereof at least 2 weeks in advance.

Other maintenance times can also be arranged in consultation with the customer.

For more extensive work which can not be completed within the maintenance window due to time reasons or for work which arises on short notice that cannot be delayed as it is absolutely necessary to avoid service outages, Tele2 can also request maintenance hours which fall outside of the maintenance windows. Tele2 shall put forward its best efforts, however, to carry out such maintenance operations in respecting the customer's possibilities or to inform the latter thereof at least 3 working days in advance.

Service outages due to previously announced maintenance work within the predefined or other agreed upon maintenance windows, do not count in the calculation of service availability as unavailable time and are considered to be suspended time.

9.4 Network and Service Monitoring

Network and service monitoring is carried by Tele2's network operation centre 24 hours a day, 365 days a year. The fault recording procedure for a given customer service is also determined according to the technical monitoring possibilities for customer service.

9.4.1 Reactive Service Monitoring

Reactive service monitoring means that there is no complete system-supported end-to-end monitoring of the customer network. Fault recording occurs based on reporting of problems by the customer.

9.4.2 Proactive Service Monitoring

Proactive service monitoring means that the customer network is continuously and completely monitored end-to-end and any problems are automatically recorded in the trouble ticket system (proactive fault recording).

So far as it is technically possible, proactive service monitoring is carried out at the BUSINESS service level. Information on this are contained in the description of service for each customer service.

9.5 Fault Management

The Tele2 help desk at the Network Operation Centre (NOC) is equipped with comprehensive tools to carry out fault diagnosis, problem tracking and the flow of information within Tele2 as well as to the customer in the most efficient way possible. Each customer contact and measure taken to isolate and correct faults is documented through the trouble ticket system, such that all information regarding a problem is always available for consultation.

9.5.1 Reactive Fault Recording

After a customer reports a problem using the Tele2 service line, a service ticket is opened. Immediately thereafter and during the repair time arranged with the customer in the scope of the support level, Tele2 shall begin working to solve the problem.

The beginning of the disruption is the time when the problem is reported to Tele2 by the customer by phone or in writing (send time of the fax or time of the telephonic problem report).

9.5.2 Proactive Fault Recording

Following fault reporting by a management system, if a customer service is affected by the problem, registration and/or detection of the outage, the contact person designated by the customer shall be immediately notified (fault notification) and a service ticket opened.

Tele2 continuously monitored the availability of the customer network such that the customer does not need to report a fault. Fault repair shall also be carried out by Tele2 without the customer's requesting it.

The beginning of the disruption is the time the fault is reported by the management system.

9.5.3 Fault Repair

The entire fault repair process, from fault notification to repair reporting, shall take place in clearly structured steps in order to guarantee the contractually stipulated service level. The fault repair procedure itself can only be carried out during the support hours arranged with the customer in the scope of the desired support level.

Tele2 commits itself to take immediate action following fault reporting so as to correct the problem. NOC shall begin troubleshooting as soon as possible and if possible shall take care of fixing the problem itself. Should it be necessary to send technicians out to the site, then they shall be sent out immediately. Tele2 is in charge of deciding on the course of action and whether problem solving shall be started on-site or through remote maintenance.

During repairs and during the stipulated repair time, the customer shall be informed as to the status and subsequent course of the fault correction (diagnosis and prognosis on the extent and duration of error correction) whenever new, relevant information is available for the customer.

Repair is considered finished when service has been fully restored to the agreed upon level. The end of the disruption is considered to be the time and date of written notification by Tele2 to the customer that the problem has been fixed.

10 Escalation

The goal of the escalation process is to provide the customer with a contact possibility at all times, including in the critical stages of problem solving. This ensures that attention for an appropriately critical stage is paid according to level and that constant communication is maintained with the customer. The Tele2 help desk is responsible for restoring service so as to reach the agreed upon service level. If it is not possible to solve the problem within the maximum stipulated outage time, then the following escalation process shall be initiated:

Funktion	Name
Level 0	<p>Receipt of technical failures, trouble shooting Tel. +43 (0) 50 500 3333 E-Mail: mailto:service@at.tele2.com Fax: +43 1 9009 3967 bzw. +43 1 9009 3599</p> <p>Receipt of maintenance notice E-Mail: mailto:wartung@at.tele2.com</p>
Level 1	<p>Head of Technical Customer Support (TCS): Heinz Kotar e-Mail: heinz.kotar@tele2.com Mobile: +43 688 8800 235</p>
Level 2	<p>Head of NOC: Wolfgang Grossegger e-Mail: wolfgang.grossegger@tele2.com Mobile: +43 688 8800 203</p>
Level 3	<p>Head of Transmission and Infrastructure: Josef Koller e-Mail: josef.koller@tele2.com Mobile: +43 688 8800 251</p>
Level 4	<p>CTO: Dietmar Pöttl e-Mail: dietmar.poetl@tele2.com Mobile: +43 688 8800 456</p>

Table 4: Escalation Levels

11 Security Management

Security is of great importance for Tele2. Therefore, we take all necessary steps, such as access controls and other physical and logical protection measures in order to guarantee the reliability and integrity of the services offered.

Establishment of addresses (addresses for postal correspondence, billing addresses, SLA reports, etc.) telephone and fax numbers and email addresses as well as the addresses of technical contacts of both parties is also part of Tele2's security and integrity concept.