



Service Description for SLA Ethernet TopInternet.

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Table of contents.

1. Introduction.....	3
2. Scope.....	3
3. Service level and Support level.....	3
3.1 Service Level.....	3
3.2 Support Level.....	4
4. Proactive customer notification.....	4
4.1 Process Flow.....	4
4.2 Contact details for proactive customer notification.....	5
5. Site availability.....	5
5.1 Evidence and Reporting.....	5
5.2 Availability calculation.....	5
5.3 Observation Period.....	5
5.4 Suspended Times.....	5
6. Network and Service Management.....	6
6.1 Network Operation Center.....	6
6.2 Help Desk and contact persons.....	6
6.2.1 Helpdesk/Service Line.....	6
6.2.2 Point of contact at the customer's.....	6
6.2.3 Access to technical equipment by Drei.....	6
6.3 Maintenance.....	6
6.4 Network and service monitoring.....	7
6.4.1 Reactive service monitoring.....	7
6.5 Fault Management.....	7
6.5.1 Reactive fault logging.....	7
6.5.2 Incident resolution.....	7
7. Escalation.....	7
8. Security Management.....	8

1. Introduction.

This Service Description describes the nature and scope of the service management provided for the Premium and Premium+ service levels offered by Drei. Service-specific differences to the specifications described in this document are stated in the Service Descriptions for the relevant customer service.

The parameters of the Service Level Agreement (e.g. availabilities for sites) are stated in the proposed solution.

2. Scope.

This Service Description currently applies to TopInternet services for the Premium and Premium+ service level. The application area for services based on these is confined to the stated services as service components

3. Service level and Support level.

The Service Management services are described by the service level and the support level. One service level and one support level can be selected in a customer network per customer site.

3.1 Service Level.

The service level defines all monitoring and fault remedy services. The TopInternet service level is specified in the respective solution offered for the corresponding customer service. The service features of the two currently valid service levels Premium and Premium+ are summarised below:

Service Management services	Premium	Premium+
Guaranteed availability	Yes	Yes
Guaranteed restoration time in the event of a fault	Yes	Yes
SLA reports	Yes	Yes
Monitoring	No	Depends on support level
Fault Management		
Proactive customer notification	No	Optional/depends on support level
Fault reports accepted round the clock by the Drei Helpdesk	Yes	Yes
Information on repair status	During support hours, as per support level (STS, ES1, ES2, FUS)	
Incident resolution	During support hours, as per support level (STS, ES1, ES2, FUS)	
Response and fault clearance times		
Diagnosis/remote Analysis 1	< 2 hours	< 1 hour
TTR using remote fault clearance 2	< 4 hours	< 3 hours
TTR in case of on-site fault clearance 2	< 8 hours	< 6 hours
Arrival times in case of on-site fault clearance (arrival of engineer after fault diagnosis):		
in regional capital cities: 2 hours on weekdays Monday to Friday 7 a.m. to 6 p.m. (weekdays) and 3 hours at other times		
outside regional capital cities: 3 hours on weekdays Monday to Friday 7 a.m. to 6 p.m. (weekdays) and 4 hours at other times		
[1] Period of time between receipt of fault report and fault isolation		

[2] Period of time between fault isolation and incident resolution

In the event of a fault, the entire downtime, which includes the total time for diagnosis and incident resolution in the case of remote fault clearance and any necessary on-site fault clearance, is used to calculate availability. The availability of a site is guaranteed if a Service Level Agreement is concluded

3.2 Support Level.

The support hours (fault clearance hours) during which – in the event of a customer service fault – incident resolution is carried out are stipulated in the support level. The following support hours are defined at present:

Support Level	Abbreviated designation	Fault clearance hours
Standard Support	STS	Mon - Fri 7 a.m. - 6 p.m. weekdays ¹
Extended Support 1	ES1	Mon - Fri a.m. - 10 p.m. weekdays ¹
Extended Support 2	ES2	Mon - Fri 6 a.m. - 10 p.m. weekdays ¹ Saturdays 6 a.m. - 6 p.m.
Full Support	FUS	Mon - Sun 24 hours

During support hours:

- Drei attempts to determine the cause of the fault from the Network Operation Center (remote diagnosis),
- Drei will forward fault reports to Drei's suppliers and/or service partners if the cause of the fault is assumed to lie within their area of responsibility,
- If required, Drei will also dispatch an engineer to a customer site. For this purpose, the customer must ensure that the engineer is granted immediate access to the premises in which the affected installations are located. Any waiting times are excluded when logging the actual fault clearance time.

The support levels for a specific customer network are listed in the proposed solution for the relevant customer service.

In principle, Drei only carries out incident resolution measures during the agreed support hours (fault clearance period).

The monthly charge for the service includes fault clearance during the agreed support hours. Expenditure incurred in connection with fault clearance due to causes which are the customer's fault will be invoiced.

4. Proactive customer notification.

Proactive customer notification is optionally available at extra charge in addition to the Premium+ service level together with the Full Support level. Proactive customer notification must be specified in the bid as an additional service (additional charge). Proactive customer notification is not possible at sites which have any other service levels/support levels

4.1 Process Flow.

After a fault is reported by a management system, where a customer service is affected by the fault, detection or logging of the service outage is automatically forwarded to the e-mail-address specified by the customer (fault notification) and a service ticket is opened. An automatically generated text message can also be sent to a phone number specified by the customer; Drei cannot give any guarantee that sent text messages will be delivered.

Drei continuously monitors the availability of the site so that it is not necessary for the customer to report a fault. Fault clearance is also arranged by Drei without any prompting by the customer.

The time at which the fault is reported by the management system is deemed to be the time at which the fault starts.

¹ weekdays: Monday –Friday, with the exception of statutory holidays

4.2 Contact details for proactive customer notification.

The customer must use the "Service Level Agreement registration" form to forward the contact details for proactive customer notification to Drei at the time the contract is concluded. These contact details include an e-mail-address, a phone number and, optionally, a mobile phone number for text messages. The customer must advise Drei of any change in these details without delay. If the customer fails to notify changes in contact details, fault reports will be deemed to have been delivered if they were sent using the contact details last notified by the customer.

5. Site availability.

5.1 Evidence and Reporting.

Drei makes reports available as evidence of the availability of individual sites; these reports are provided on the 10th of the month for the preceding month and the customer can download them by ftp access.

5.2 Availability calculation.

The term "site availability" denotes actual provisioning of the services stipulated in the Service Description for the relevant service at the network termination point of a site.

The achieved availability of a site is calculated on the basis of the formulae shown below.

$$\text{Availability} = \left(1 - \frac{\text{Downtime within observation period less suspended times}}{\text{entire support time according to support level within observation period}} \right) \times 100\%$$

The downtimes which are relevant for calculating the availability actually achieved are logged on the basis of the timestamps on service tickets. An individual downtime is the period between the timestamps for the start of a fault and the end of a fault, less any possible suspended times according to paragraph 5.4.

Service tickets which are still unresolved at the end of an observation period are not included in achieved availability calculations for this period but are taken into account in the next observation period.

5.3 Observation Period.

The observation period is the time interval, measured in minutes, during which the performance indicators agreed in the SLA are measured and analysed.

If the agreed start of the Service Level Agreement does not coincide with the agreed observation period, pro rata apportionment is not applied. The first observation period is that period in which conclusion of the Service Level Agreement or its agreed start occurs. All periods which are actually missing prior to full completion of the first observation period are treated as though there had been full compliance with the SLA.

Only those sites for which there is a valid contractual relationship throughout the entire current observation period have an entitlement to services under the Service Level Agreement.

5.4 Suspended Times.

- The following times are not factored in to downtime and are regarded as suspended times:
- Periods outside the stipulated support hours (also referred to as "fault clearance times") in the agreed support level.
- Scheduled interruptions notified in advance for maintenance work.
- These also include interrupted connection which is unavoidable due to carrying out modifications in the customer network ordered by the customer or due to the customer's equipment.
- All times attributable to delayed incident resolution caused by the customer or for which the customer is responsible (e.g. customer cannot be contacted, no access to customer's site and the like).
- Unavailability attributable to equipment or external influences at the customer's site (in-house or customer's own cabling, power, air conditioning, building, disconnection, etc.)
- All downtimes where the customer fails to comply with the agreed incident resolution procedures.
- When the customer is making modifications to equipment or the network.

- All downtimes which are attributable to the fact that the customer, its employees, helpers or third parties who it has allowed to use the telecommunication services cause(s) the failure.
- Times when there is reduced performance if Drei messages prove that the contractually specified values were achieved.
- Times when there is reduced performance of a service for which no performance values have been specified.
- Downtimes caused by force majeure (e.g. damage caused by fire or water or atmospheric discharges), deliberate damage caused by third parties (vandalism and the like).

6. Network and Service Management.

6.1 Network Operation Center.

Drei operates a Network Operation Center (NOC) as a point of contact for customers round the clock, 365 days a year. This team is equipped with central network management systems for continuously logging statistical, quality and fault information. The NOC coordinates all maintenance measures and the entire incident resolution process should a fault occur.

NOC fulfils the following functions at every service level, as standard:

- Point of contact for customer in the event of problems or errors.
- Initiate, monitor and close-out problem resolution procedure, including issuing of trouble tickets in accordance with the procedure defined in Chapter 8.5 (Fault Management).
- Exchange information with the customer concerning status and actions in respect of ongoing problems and events.
- Escalation of problems.
- Provide data and information needed in order to prepare quality of service reports.

6.2 Help Desk and contact persons.

6.2.1 Helpdesk/Service Line.

NOC is available round the clock, 365 days a year by phone, fax or e-mail as a point of contact for answering fault reports submitted by the customer. The customer is provided with information on how to contact (contact person, phone number, etc.) at the time the service is handed over.

The customer can submit a fault report to the NOC at any time regardless of the contractually promised fault clearance time as per the agreed support level.

6.2.2 Point of contact at the customer's.

In order to optimise the flow of information and coordination of the problem resolution procedure, Drei advises every customer to set up its own end-user helpdesk as a single, clearly defined point of contact for its end users. This creates a single interface between the customer and Drei. This end-user helpdesk must be accessible during the chosen support hours.

The customer must indicate, in every case, at least one contact person's phone number or fax number and e-mail-address via whom the customer can be reached during agreed support hours. The customer must advise Drei of any change in these details without delay. If the customer fails to notify changes in contact details, fault reports will be deemed to have been delivered if they were sent using the contact details last notified by the customer.

6.2.3 Access to technical equipment by Drei.

Drei and third parties acting on its instructions must be afforded entry or access to Drei's technical equipment at the customer's site at any time during agreed support hours in order to carry out fault clearance and maintenance measures. Incident resolution delays resulting from failure to afford access are excluded when calculating service downtimes. In cases where access to such a site is needed, Drei will advise the customer thereof without delay.

6.3 Maintenance.

The hardware and software used by Drei and/or contractual partners may be maintained in order to make sure that optimum quality of service is provided at all times. All preventive maintenance, repair and replacement of defective parts or systems and software maintenance come under this heading.

As a rule, maintenance work associated with service interruptions is performed in predefined daily maintenance windows at night between 10 p.m. and 6 a.m. and is announced at least 3 working days in advance by phone, fax or e-mail. In doing so, the customer is informed of the time and expected duration of the service outage. The extent of such maintenance measures involving service interruptions does not exceed 12 hours per annum.

Drei reserves the right to unilaterally change the times of predefined maintenance windows provided it gives the customer at least 2 weeks advance notice of such a change.

Other maintenance times may also be agreed with the customer.

For more extensive work which cannot be completed within the stated maintenance window for reasons of time and for last-minute work which cannot be postponed and which is absolutely necessary in order to prevent business interruptions, Drei may also make use of maintenance times outside of maintenance windows. Drei will nevertheless make every effort to ensure that such maintenance work is performed, where possible, at times agreed with the customer and is announced at least 3 working days in advance.

Service downtimes due to previously announced maintenance work during predefined or other agreed maintenance windows do not count as unavailable times when calculating service availability and are regarded as suspended times.

6.4 Network and service monitoring.

Network and service monitoring are performed around the clock 365 days a year by Drei's own Network Operation Center. The technical monitoring capabilities for the customer service also determine the procedure for error logging for the relevant customer service.

6.4.1 Reactive service monitoring.

Reactive service monitoring is characterised by the fact that there is no complete system-assisted end-to-end monitoring of the customer network. Faults are logged on the basis of fault reports submitted by the customer. The scope of Drei services includes reactive service monitoring.

6.5 Fault Management.

The Drei Helpdesk in the Network Operation Center (NOC) is equipped with extensive means of ensuring extremely efficient fault diagnosis, problem tracking and information flows within Drei and to the customer. All contact with the customer and every measure to localise faults and clear them are recorded in the trouble ticket system so that all information concerning a fault is available at all times.

6.5.1 Reactive fault logging.

A service ticket is opened when the customer reports of fault via the Drei service line. Immediately afterwards and within the fault clearance time agreed with the customer in the support level, Drei starts working on resolving the problem.

The start of the fault is deemed to be the time at which the fault is reported by the customer to Drei in writing or by phone (time of day when fax was sent or when fault was reported by phone).

6.5.2 Incident resolution.

The entire incident resolution process, from fault report to fault clearance report, takes place in a clearly structured process flow in order to guarantee the contractually agreed service level. The incident resolution procedure itself can, however, only be performed during the support hours which were agreed with the customer in accordance with the desired support level.

Drei undertakes, on receiving a fault report, to set fault clearance measures in motion without delay. Fault-finding is started as soon as possible by the NOC and, where possible, the incident is resolved by the NOC. Engineers are dispatched immediately if the need for on-site intervention by an engineer becomes apparent. It is Drei's responsibility to decide on the course of action, i.e. whether to start clearing the fault on site or by using remote maintenance. All engineer interventions are referred to as "on-site fault clearance" but need not necessarily take place at the customer's site (e.g. on-site troubleshooting at unbundling sites). Fault clearance is completed once the agreed scope of the service has been fully restored.

7. Escalation.

The purpose of the escalation process is to provide the customer with a partner point of contact in critical phases of incident resolution. This makes sure that Drei's pays appropriate attention to a critical phase in

a manner which is appropriate to the particular level, and that this is communicated to the customer at any time. To achieve the agreed service level, Drei's NOC is responsible for restoring the service. If the problem cannot be resolved within the agreed maximum downtime, the following escalation process is initiated:

Escalation level	Customer	Drei
3rd Level	CEO	CEO
2nd Level	IT/Telecommunications Business Unit Manager	Network Operations Business Unit Manager
1st Level	Person responsible for network	NOC Manager
Normal	Network engineer	Drei operator

8. Security Management.

Drei attaches great importance to security. All necessary steps such as access control and further physical and logical protective measures are therefore taken in order to guarantee the dependability and integrity of the services on offer.

Drei's security and integrity concepts also includes the stipulation of addresses (addresses for correspondence, invoicing addresses, SLA reports etc.) as well as phone and fax numbers plus e-mail-addresses, including the addresses of both parties' technical contact persons.