

ČDT-ETHERNET LINE SERVICE DESCRIPTION



of ČD - Telematika a.s.

Company ID: 614 59 445, registered office at Perneroва 2819/2a, Praha 3

Incorporated in the Commercial Register kept by the Municipal Court in Prague, Section B, File 8938

1. Initial provisions

- 1.1. The Service Description defines technical, operational and organisational details of provision of the ČDT-ETHERNET LINE electronic communications service (hereinafter, the Service), enabling the transmission of Ethernet frames between 2 points via a network with an Ethernet port.
- 1.2. The provider of the Service is the company ČD - Telematika a.s., with its registered office at Praha 3, Perneroва 2819/2a, Company ID: 614 59 445, incorporated in the Commercial Register kept by the Municipal Court in Prague, Section B, File 8938 (hereinafter, the Provider), which provides electronic communications services for third parties (Parties) in accordance with legal regulations in force.
- 1.3. This Service Description complements and details the provisions of the General Terms and Conditions of Service Provision issued by the Provider (hereinafter, the General Terms and Conditions). Interpretation of this Service Description and terminology used has to be based on the provisions of the General Terms and Conditions.

2. Subject matter of the Service

- 2.1. Based on an Agreement concluded and to the extent specified therein, the Provider shall provide the Subscriber with the Service of transmitting Ethernet frames via a network with an Ethernet port.
- 2.2. The Service consists in provision of a permanent transmission capacity for the Subscriber between two end points in the electronic communications network.
- 2.3. Within the transmission capacity allocated, the customer is allowed duplex transmission of Ethernet frames. The data transmitted are not modified in any way in the Provider's network.
- 2.4. The Provider may pass onto the Subscriber multiple Services at one end point via one port using the Central Port. The Central Port is a separate service with its own Technical Specification.
- 2.5. The Service includes the possibility of provision of software, technical equipment and other items related to the Service provision. These shall be specified in the Handover Report, used to confirm the acceptance.
- 2.6. The Service shall be provided 24 hours a day, 7 days a week, 365 days a year, except for times of Justified Service Provision Interruption and Scheduled Maintenance Periods.
- 2.7. In addition to the actual operation, operating supervision and servicing, the Service includes survey, design and installation works necessary for setting up the Service, and provision of equipment up to the transfer port.

3. Technical parameters of the Service

- 3.1. The Service is provided on the following ports:

port	version	transmission capacity	connector
Fast Ethernet	IEEE 802.3u	up to 100 Mbps	RJ-45
Gigabit Ethernet	IEEE 802.3 ab, IEEE 802.3z	up to 1 000 Mbps	RJ-45, SFP
TenGigabit Ethernet	IEEE 802.3 ae	up to 10 000 Mbps	SFP+, XFP

- 3.2. The standard MTU size is 9000 bytes.
- 3.3. The ports for Service transfer support the following parameters:

VLAN	as recommended by IEEE 802.1Q
QoS	as recommended by IEEE 802.1P
Q-in-Q tunnelling	as recommended by IEEE 802.1Q-in-Q

- 3.4. By default, the service is provided on the interface in "access" mode. The exception is the central interface service, which is provided in trunk mode.
- 3.5. The Service may be provided as a metered one with a 95% percentile. In such cases, the Technical Specification shall list it as a Metered Service, and show the minimum capacity included in the price of the monthly fee, the maximum capacity that the customer may use, and the price per Mbps.

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- 3.6. Samples for evaluation of the 95% percentile are saved in two separate data fields, separately for inbound and outbound traffic. In a month, this means 2 x 8640 five-minute transmission samples in Mbps. These samples are sorted by size at the end of the billing period. The first 5% of the largest samples are not evaluated. Out of the remaining samples, the largest one shall be used to determine the Mbps to be billed.
- 3.7. The Service End Point is the digital port on the device that terminates the access line. The Service End Point is located within the Czech Republic.
- 3.8. Information on the specific Service implementation, particularly the location of end points, the transmission capacity, the port type and the SLA class, is shown in the respective Technical Specification.

4. Guaranteed parameters of the Service

- 4.1. The Service is provided in SLA quality classes.
- 4.2. The main contractual parameters of the Service are:
 - Service availability and integrity
 - procedures in the event of Service unavailability

The parameter specified in 4.3 shall be used for evaluation.

- 4.3. Loss ratio

The parameter definition is based on recommendation RFC2544.

Frame Loss Ratio (**FLR**) is defined by the ratio of frames lost in transmission to the total number sent.

$$FLR = \frac{N_{lost}}{N_{sent}} \cdot 100\%$$

Data transmission quality in the network is measured using metering performed by devices with ISO 10012-1 certification. The metering output is an annex to the handover report.

The following tests are applied to assess the guaranteed parameter values:

- **loading test** with a duration of 1 hour – measurement of transmission capacity shown in the Technical Specification with an Ethernet frame size of 1522 bytes.
- **quality test** as per recommendation RFC2544 with Ethernet frame sizes of 64, 128, 256, 512, 1024, 1280 and 1522 bytes.

The Service is not considered of quality if long-term or short-term Service integrity failures have occurred, or if the frame loss ratio measured during the loading and quality tests exceeds 0.01%.

5. Other provisions

- 5.1. The Provider is obliged to set up and provide the Service for the Subscriber on the agreed dates under the assumption that the Subscriber Location is properly prepared for the placement, installation and configuration of the Electronic Communications Equipment according to the contractual documents and annexes thereto, including the issuance of all the necessary administrative or private-law permits, and the party pledges to provide the Provider with all the necessary cooperation.
- 5.2. Based on the Provider's instructions and communication of requirements, the Subscriber pledges to provide the Provider, at its own expense, with all the necessary cooperation for the Service setup, performance of test operation and its due performance under the Framework Agreement, including recovery of provision following an interruption or a change of parameters.
- 5.3. In the event of a change of Service parameters based on a request by either contracting party, the contracting parties shall sign the new Technical Specification matching the requirement for the change of Service parameters.
- 5.4. The Service provision shall end on the day of termination of the Technical Specification. In the event of termination of the Technical Specification by notice, the Service provision shall end upon the expiry of the notice period.
- 5.5. In the event of a change of Service parameters based on a request by either contracting party, the contracting parties shall sign the new Technical Specification matching the requirement for the change of Service parameters.



- 5.6. The Subscriber pledges to ensure that the Service and the Electronic Communications Equipment is used in accordance with legal regulations of the Czech Republic and that it is not used for purposes that are in contravention of law or good manners or otherwise misused.
- 5.7. The Subscriber shall be liable for compensation of costs, damages or other claims that may be raised or enforced against the Provider by a third party in connection with the Subscriber's use of the Service that is in contravention of the Technical Specification or the General Terms and Conditions.
- 5.8. The Provider is entitled to suspend the Service provision if the party violates any provision of any contractual documents and fails to make good in a substitute period in spite of the Provider's written notification. In the event of such Service provision interruption, the Subscriber is obliged to pay the Provider a contractual penalty amounting to the price of the Service that the Subscriber would be obliged to pay the Provider if no such Service provision interruption occurred.

6. Joint and final provisions

- 6.1 This Service description and the Provider's and the Subscriber's rights and obligations arising herefrom shall be governed by the legal system of the Czech Republic.
- 6.2 In case one or more provisions of the Framework Agreement, the Service Description or the General Terms and Conditions are construed as illegal, invalid or unenforceable, such illegality, invalidity or unenforceability shall not affect the other provisions, which shall be construed as if those illegal, invalid or unenforceable provisions did not exist. The contracting parties agree that any and all illegal, invalid or unenforceable provisions shall be replaced with ones that are legal, valid and enforceable and are as close to the meaning and purpose of this Service Description as possible.
- 6.3 The Service Description enters into force and effect as of the day of signing the Technical Specification.