

INCE M2M/IOT MOBILE COMMUNICATIONS SERVICES

SERVICE DESCRIPTION

version 1.2 as of October 2018

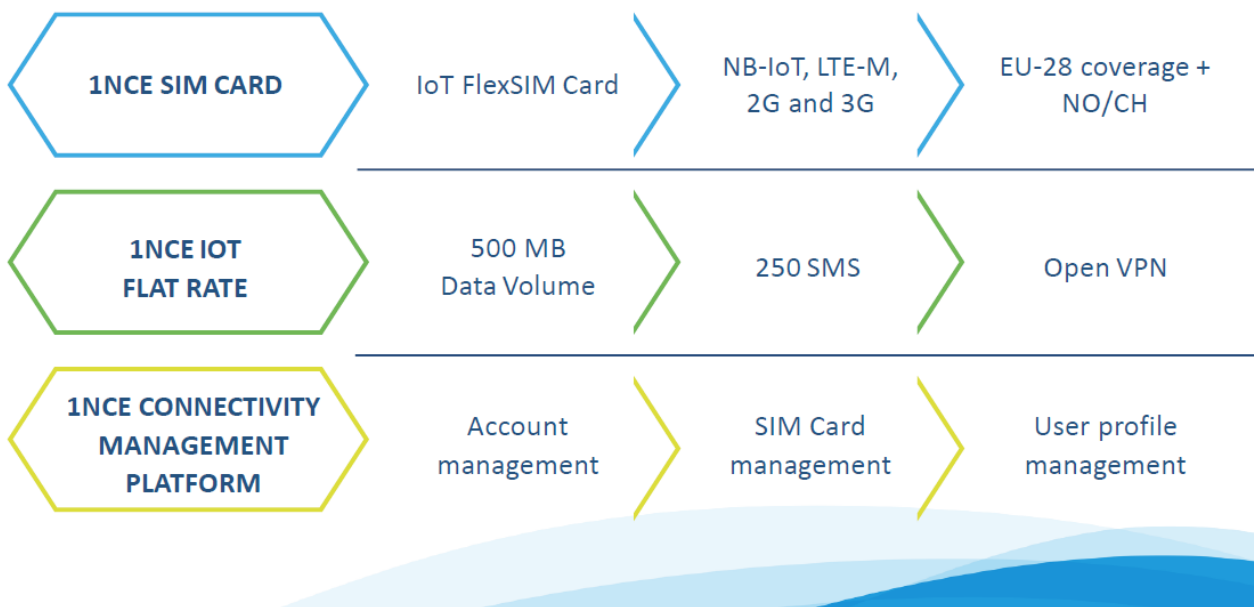
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1 GENERAL INFORMATION

Within the scope of its M2M/IoT mobile communications services, 1NCE GmbH (hereinafter referred to as 1NCE) provides the Customer with access to mobile communications services, connectivity and access to the 1NCE Connectivity Management Portal (hereinafter referred to as the Customer Portal). This connectivity enables the Customer to transfer machine data. The prerequisite for using the connectivity is a corresponding M2M/IoT terminal device. The equipment required for use (hardware and associated software) does not form part of the scope of 1NCE's services and must be provided by the Customer itself.



2 MOBILE DATA CONNECTION

2.1 CHIP CARD

1NCE provides the Customer with one or more Chip Cards (currently in the form of the Chip Cards specified in Section 2.3 of this Service Description) and activates them. The use of the M2M/IoT mobile communications services of 1NCE is only permitted as an integral component within closed M2M/IoT applications and only with terminal devices specifically designed for M2M/IoT communication. This includes the transmission of data or SMS from a terminal device to the application server or vice versa. Any operation beyond closed M2M/IoT applications, e.g. communication with other connection targets or downloading content offers from the Internet, does not form part of the scope of the contract and lies outside the intended use of 1NCE's service.

1NCE's Chip Cards are already activated, i.e. no activation or activation via the Customer Portal is required so that data and SMS can be sent or received with the Chip Card. The Activation Period of 10 years / 120 months of the Chip Card generally begins with the beginning of the fourth calendar month following the calendar month in which 1NCE sends the Chip Card to the Customer (see Section 3.5 of the GTC for further details).

All Chip Cards are provided by 1NCE without pre-set roaming locks.

2.2 IMSI

1NCE uses Global Mobile Subscriber Identity (IMSI) ranges marked with Mobile Country Code 901. This code has no reference to a specific country, Global IMSI ranges allow the use of so-called "Global SIM" cards, which allow cross-border M2M/IoT connectivity at a uniform charge.

2.3 TYPE AND FORM FACTORS

1NCE offers two types of Chip Cards: The IoT Flex SIM, for which no minimum order quantity applies, and the Industrial IoT eSIM, with a minimum order quantity of 100 pieces.

The IoT Flex SIM is an integral part of the M2M/IoT mobile communications service of 1NCE and is already included in the initial charge (EUR 10.00, so-called 1NCE Lifetime Fee). The Industrial IoT eSIM can alternatively be ordered for an additional charge of EUR 2.00 per Chip Card.

The following features characterize the offered Chip Cards:

2.3.1 IOT FLEX SIM

Software Features	Hardware Features
Java Card 2.2.2	Supply voltages range
3GPP Release 8	Class A,B,C (1.8V – 5.0V +/-10%)
GlobalPlatform 2.2	Memory Endurance
OTA	Up to 500,000 Cycles
OTA over SMS	Ruggedized Form Factors :
OTA over HTTPS	Triple SIM (combined all Form Factors together)
Remote File Management (RFM)	ID-1
Remote Applet Management (RAM)	2FF(Standard SIM)
Authentication applications	3FF(Micro SIM)
SIM, USIM, ISIM	4FF (Nano SIM)
Authentication algorithms	M2M Specific Features
Milenage	Temperature Range
Cryptographic features for OTA	Operating -25°C +85°C
CRC	Data Retention
DES, 3DES, AES	Up to 10 years
Java Card™ Cryptographic APIs	
CRC	
DES, 3DES, AES	
User memory	
128 kB	

Minimum order quantity: Bookable from 1 Chip Card.

2.3.2 INDUSTRIAL IOT ESIM

Software Features	Hardware Features
Java Card 3.0.4	Hardware 3DES, AES
3GPP Release 8+	128, 192, 256-bit
GlobalPlatform 2.2	Supply voltages range:
OTA	Class A,B,C (1.8V – 5.0 V +-10%)
OTA over SMS / AES ciphering	Memory Endurance
OTA over CAT-TP	Up to 500,000 Cycles
OTA over https / GP2.2 AmdB (optional)	Ruggedized Form Factor
Remote File Management (RFM)	MFF2
Remote Applet Management (RAM)	M2M Specific Features
Authentication applications	Temperature Range
SIM, USIM	Operating -40°C +105°C
ISIM	Data Retention
EAP	Up to 10 years
Authentication algorithms	ETSI TS 102 671 compliancy
Comp128 2&3	MFF2: TB-MA-HA-CA-VA-SA-RA-UB
Milenage	
TUAK	
Cryptographic features for OTA	
CRC16, CRC32	
DES, 3DES, AES 128/256 bits	
HTTPs OTA	
Java Card™ Cryptographic APIs	
CRC16, CRC32	
DES, 3DES, AES 128/256 bits	
Low Power Network R12/R13 features	
Poll Interval Negotiation	
User memory	
128 kB	

Minimum order quantity: bookable from 100 pieces, can only be extended in blocks of 100 pieces.

2.4 DELIVERY AND ACTIVATION

The delivery of the Chip Cards is carried out according to the provisions of Sections 3.7 and 3.8 of the GTC.

The Chip Cards are already activated, i.e. no further activation and authentication by the Customer is required. This means that the Chip Card may be used by the Customer directly upon receipt.

2.5 CERTIFIED DEVICES

1NCE Customers are advised to develop and run their M2M and IoT applications only with certified mobile communications modules and sensors. 1NCE provides an up-to-date list of all devices certified to use the M2M/IoT mobile communications services of 1NCE on the 1NCE website or, where applicable, by reference to appropriate partner sites; such a list is currently available at: iot.telekom.com/en/products/hardware/.

2.6 CHARGES / INVOICING / METHOD OF PAYMENT

The stated charges are net and in EURO, plus the applicable value added tax (VAT) valid at the time of invoicing.

The accounting underlying to the invoice takes place in data blocks of 1KB. At the end of each connection, but at least once a day, it is rounded up to the next full 1KB data block. 1NCE reserves the right to automatically disconnect inactive connections at 24:00 CET/CEST.

Prepayment by bank transfer or payment by credit card are offered as payment methods. VISA and MasterCard, with a maximum booking volume (receipt of payment) of EUR 5,000.00, will be accepted.

3 CONNECTIVITY SERVICE

3.1 STANDARD INCLUDED SERVICES

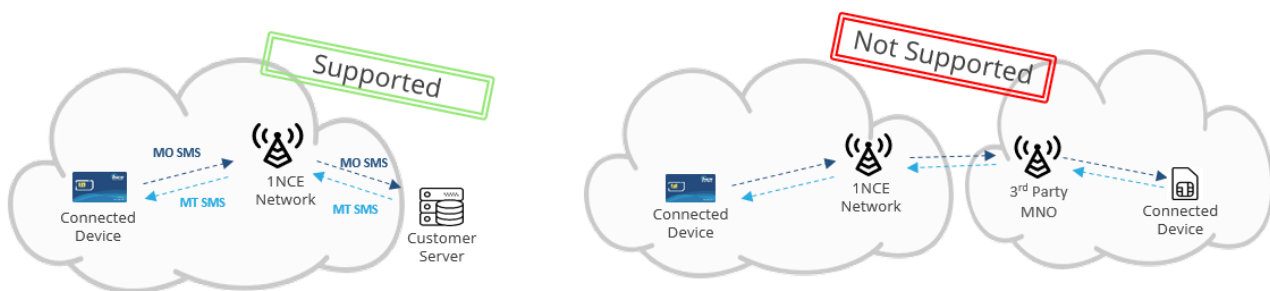
3.1.1 DATA VOLUME PER CHIP CARD

The initial data volume for each Chip Card is 500 MB. Unused data volume generally expires at the end of the Activation Period, unless the Activation Period has been extended (see also Section 6.4 of the GTC).

The data volume is bound to the individual Chip Card and cannot be transferred to other Chip Cards (no pooling), see in detail also Section 3.7 of the GTC.

3.1.2 SMS VOLUME PER CHIP CARD

The 1NCE Lifetime Fee includes 250 SMS. The SMS can be sent both as so-called Mobile Terminated or Mobile Originated SMS. SMS messages sent from one terminal device to another terminal device are not supported. This is also set out in the following illustrations:



- Example shows MO and MT SMS usage which both will be supported

- Device-to-device SMS is not supported

Unused SMS messages expire at the end of the Activation Period, unless the Activation Period has been extended (see again Section 6.4 of the GTC).

The SMS volume is bound to the Chip Card and cannot be transferred to other Chip Cards (no pooling), see again Section 3.7 of the GTC.

3.1.3 SPECIFIC NETWORK SERVICES NARROWBAND IOT (NB-IOT)

Due to lower bandwidth being supported as well as the specific characteristics of NB-IoT modules aiming to transmit low data volumes only, we recommend to not exceed an average data volume per chip card of 500 KB per month. In case of exceedance of this reference value we reserve the right to limit the connection service for NB-IoT.

3.2 ADDITIONAL SERVICES

The Customer also has the option of purchasing additional Quotas of data and SMS volumes within the Activation Period. The additional Quota is added to the Quota

existing at the time the subsequent purchase is effected. Additional purchases are possible up to 18 months after the temporary deactivation of the respective Chip Card. If there is no subsequent purchase of a Quota effected within these 18 months, the Chip Card will be permanently deactivated at the end of this period.

3.3 COUNTRY COVERAGE AND SUPPORTED BEARER

1NCE's Chip Cards allow a smooth change of the supported mobile transmission standards (Bearer) NB-IoT, 2G and 3G. Each card transmits and receives on all supported bearers, provided that the wireless technologies are locally available and the mobile communication module used also supports the relevant wireless technologies.

1NCE's M2M/IoT mobile communications services currently support the following mobile transmission standards in the covered footprint (as of October 2018):

Country	2G	3G	NB-IoT
<i>Austria</i>	X	X	
<i>Belarus</i>	X	X	
<i>Belgium</i>	X	X	
<i>Bulgaria</i>	X	X	
<i>China*</i>	X	X	
<i>Croatia</i>	X	X	
<i>Cyprus</i>	X	X	
<i>Czech Republic</i>	X	X	
<i>Denmark</i>	X	X	
<i>Estonia</i>	X	X	
<i>Finland</i>	X	X	
<i>France</i>	X	X	
<i>Germany</i>	X	X	X
<i>Greece</i>	X	X	
<i>Hungary</i>	X	X	
<i>Ireland</i>	X	X	
<i>Italy</i>	X	X	
<i>Latvia</i>	X	X	

<i>Lithuania</i>	X	X	
<i>Luxembourg</i>	X	X	
<i>Malta</i>	X	X	
<i>Netherlands</i>	X	X	
<i>Poland</i>	X	X	
<i>Portugal</i>	X	X	
<i>Romania</i>	X	X	
<i>Russia</i>	X	X	
<i>Slovakia</i>	X	X	
<i>Slovenia</i>	X	X	
<i>Spain</i>	X	X	
<i>Sweden</i>	X	X	
<i>Ukraine</i>	X	X	
<i>United Kingdom</i>	X	X	
<i>Switzerland</i>	X	X	
<i>Norway</i>	X	X	
<i>USA*</i>	X	X	

*Non-permanent Roaming only

3.4 SLA

The quality of service is determined by 1NCE's standard SLA (Service Level Agreement). We warrant a minimum annual average availability of 99.5% for the 1NCE Core Network Engine. The service provides access to the 1NCE infrastructure and the connected systems. The stated availability is subject to external impairments or failures of the mobile network, maintenance works and force majeure.

3.5 DATA TRANSFER SPEED

1NCE's M2M/IoT mobile communications services are optimized for low-bandwidth applications and intended only for such applications. All data-bound connectivity

services are provided at a maximum transmission speed of 128 Kbit/s (both uplink and downlink).

3.6 SECURITY

All Chip Cards ordered by the Customer are switched in 1NCE's own M2M/IoT Access Point Name (APN) *iot.1nce.net*. From the 1NCE M2M/IoT data center, outgoing data is transmitted securely via a Customer-specific OpenVPN tunnel via the Internet to the Customer's data center.

3.7 APN

The mobile access point (APN) defines the way in which the M2M/IoT terminal device connects to the mobile network when transmitting packet-oriented data traffic. In the 1NCE standard offer, access is effected via the 1NCE M2M/IoT APN *iot.1nce.net*. The M2M/IoT mobile devices may connect to the M2M/IoT application in the Customer's data center via APN. The M2M/IoT mobile devices receive a dedicated private IP address from the 1NCE network.

4 CUSTOMER PORTAL

4.1 GENERAL INFORMATION

With the Customer Portal, 1NCE provides the Customer with a web-based application. With the help of this web-based application, the Customer may electronically order, manage, monitor and carrying out evaluations as to its individual M2M/IoT mobility contracts.

Prerequisites for using the Customer Portal are

- Computer with one of the current web browsers named below: Firefox from Version 61, Chrome from Version 67, Edge from Version 42, Safari from Version 11, including the acceptance of cookies in each case; and
- broadband Internet access.

The connections required for using the Customer Portal, the connections to the Internet and the equipment (hardware and software) required by the Customer are not part of the scope of the services provided by 1NCE and are to be provided by the Customer itself.

The Customer's access to the administration and use of the Customer Portal is encrypted using the HTTPS protocol via the website <https://portal.1nce.com/portal/Customer/login>.

The Customer is provided with a global APN (iot.1nce.net). All traffic from the Customer's mobile devices is securely transmitted to the Customer's data center via this global APN and a central router. The management of this device connectivity is enabled through the Customer Portal and a management API.

Customers with increased security requirements are offered the possibility of concluding an additional contract for a Customer-specific, mobile, virtual private network solution (Mobile IP-VPN M2M) for a separate charge. Such Customers are requested to contact 1NCE's Sales for further details.

4.2 SERVICES CUSTOMER PORTAL

The Customer Portal enables the use of the following functionalities:

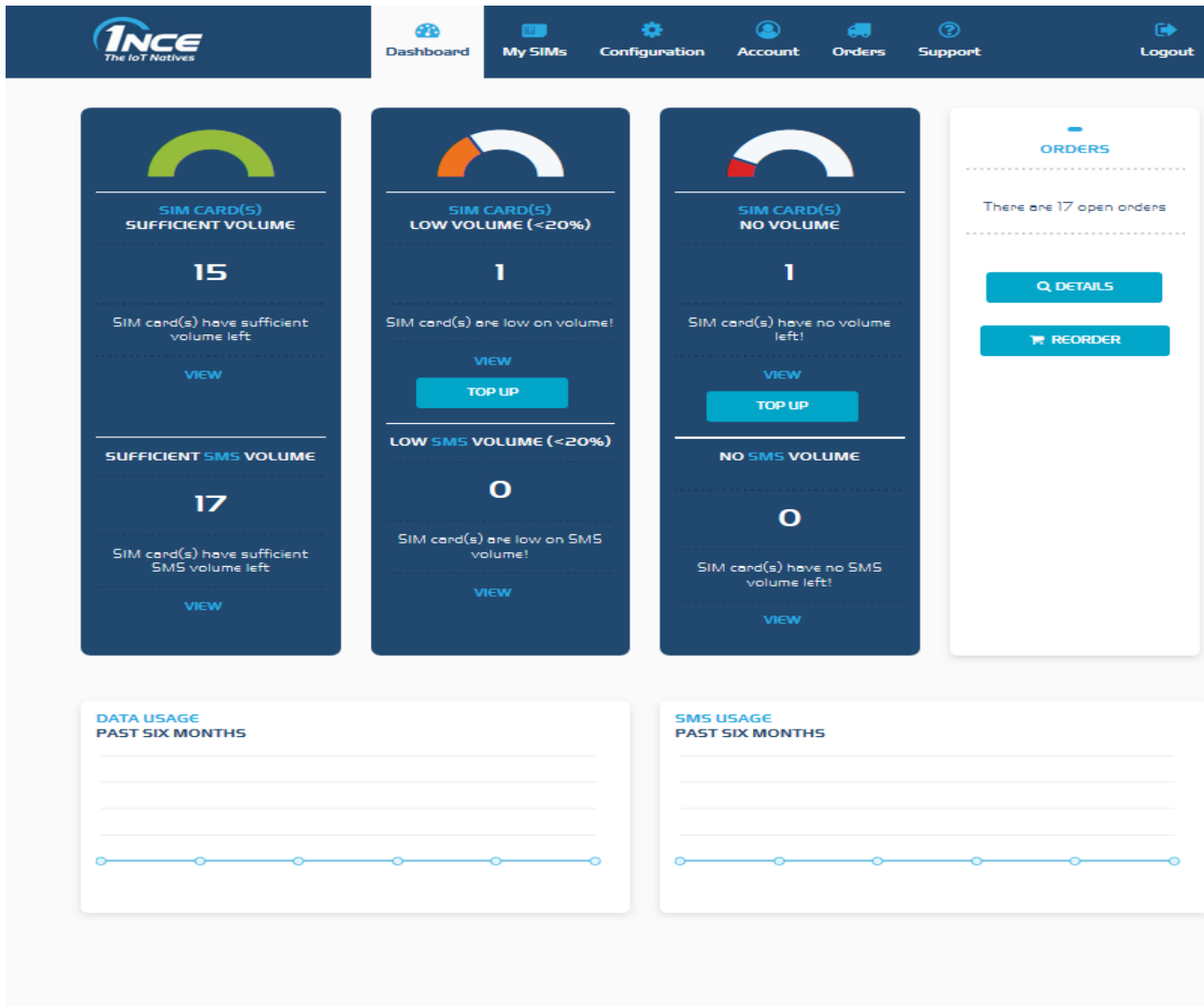
4.2.1 ORDERS OF CHIP CARDS

Customers have the option of ordering Chip Cards online via the Customer Portal in accordance with the Parties' contractual arrangements.

4.2.2 ADMINISTRATION OF CHIP CARDS

The Customer Portal also enables the Customer to administer its active Chip Cards. This includes, for example, overviews on volume consumption or usage histories, the subsequent purchase of additional Quotas and the deactivation of Chip Cards.

The user interface of the Customer Portal is currently displayed as follows (exemplary screenshot):



4.2.3 DISPLAY OF THE CONTRACTUAL AND USAGE STATUS OF THE CHIP CARDS

The Customer Portal also offers a list-like overview of all managed Chip Cards of the Customer. A detailed display of the contractual and usage status can be called up for each Chip Card.

The display of any contractual or technical changes to Chip Cards may be delayed in the Customer Portal for technical reasons, since proper data reconciliation between the various systems is necessary.

For each Chip Card, details of network status and data consumption are displayed in a single overview. This concerns packet-switched data usage and SMS usage. Information about data usage is displayed in seconds and Kbyte, for SMS usage in numbers of pieces. The information displayed can differ from the figures which are agreed and therefore relevant for billing due to the block rounding (rounding up to a full Kbyte for each connection).

The relevant usage data (i.e. non-personal traffic data) are regularly stored by 1NCE for a period of six months. At the end of this period, 1NCE is entitled to delete this data. The Customer has the option of exporting the relevant traffic data before it is deleted.

The Customer receives a standard consumption message if 80% of one of the agreed Quotas of 500 MB or 250 SMS per Chip Card is used; at the same time an indication is also given as to whether the data and SMS volume would probably still be sufficient for the remaining Activation Period of the Chip Card on the basis of the previous consumption profile. If the consumption profile existing at that time indicates a complete consumption of the 500 MB or 250 SMS before the end of the respective Activation Period, the Customer will be informed that it is possible to purchase a further 500 MB and 250 SMS for EUR 10.00.

The monitoring of the aforementioned 80% threshold and a network lock will be provided in real time subject to the technical and operational capabilities of 1NCE. A network lock prevents all usage activities of the Chip Card (Data, SMS).

In addition, the ICCID, IMSI and MSISDN can be displayed individually for each Chip Card or called up as part of a report.

4.2.4 EVALUATIONS (REPORTS)

In the Customer Portal it is also possible to read and process various contract or Chip Card-related information. The scope of such services includes – within the specified storage periods and subject to an earlier deletion through the Customer: Reports on Chip Card orders, Chip Card master data, billing histories and usage reports.

4.2.5 INVOICES

Once the order has been placed and confirmed by 1NCE, the Customer receives an invoice setting out the individual charge items. This invoice can also be viewed in the Customer Portal for a period of 24 months from the date of invoicing.

4.2.6 DIAGNOSIS

The Customer Portal also offers the possibility of checking the functionality of Chip Cards. For this purpose, it is possible to reset a Chip Card from the mobile network via the Customer Portal, so that the mobile communications module must be redialed into the mobile network. An existing connection is inevitably interrupted. When the network information is updated, it is confirmed that the Chip Card can register correctly in the mobile network.

4.3 API

Using the Application Programming Interface (hereinafter referred to as "API") on which the Customer Portal is based, Chip Cards can also be administered directly via web services and information about these Chip Cards can be retrieved without using the Customer Portal. As soon as this API functionality is activated by 1NCE (this is expected to be the case from September 2018), Customers can continuously retrieve their usage data (i.e. non-personal traffic data) via the API in the form of real-time streaming.

Customers can access the API via the configuration information stored in the Customer Portal. The currently available functions are described in detail in the API manual, which can also be accessed via the Customer Portal (see currently the URL <https://api.1nce.com/management-api/swagger-ui.html>).

4.4 OPERATIONS

4.4.1 OPERATION OF SERVERS AND SYSTEM COMPONENTS

All servers and system components required to operate the Customer Portal are operated in a technically and organizationally secure, high-performance computer network. This is protected against attacks and unauthorized access from the Internet by a firewall system.

The Internet connection of the computer network takes place via the Internet backbone of a telecommunications service provider commissioned by 1NCE, with a transmission speed corresponding to the state of the art and which is designed redundantly.

4.4.2 MAINTENANCE OF SERVERS AND SYSTEM COMPONENTS

For maintenance purposes – especially for changes and updates of the server configuration and system components – services of the Customer Portal can be temporarily shut down (maintenance window).

Emergency maintenance work (unplanned maintenance work), especially in the case of current events (e.g. defense against hacker attacks or viruses or worms) can be carried out at any time without prior notice for the fastest possible protection.

The times allotted to maintenance windows used by 1NCE are not included in the calculation of the availability of the service (according to Section 3.4 of this Service Description).

4.5 SUPPORT SERVICES

1NCE provides support services by telephone and by contact form (via e-mail to a ticket system), which can be reached via the Customer Portal. The support is provided from Germany and is available to the named contact persons of the Customer as well as to any other users of the Customer Portal indicated by the Customer. Customer service is provided either in German or English language. Telephone support is available from Monday to Saturday from 9 a.m. to 6 p.m. (CET/CEST) (with the exception of national public holidays); only during these hours will requests that reach 1NCE via the ticket system also be processed in the proper course of business. The support tool can be used with the Internet browsers specified in Section 4.1 of this Service Description.