



# Central reference database for telephone numbers – ZR-DB

## Specifications usage notifications

VERSION: 1.01

Rundfunk und Telekom Regulierungs-GmbH (RTR-GmbH)

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## **1 General information**

### **1.1 Motivation**

Pursuant to Art 114 Par 1 TKG 2021, Rundfunk und Telekom Regulierungs-GmbH (RTR) is responsible for the efficient administration of the Austrian numbering plan, in particular the allocation of communications parameters and the recording of their usage. For this purpose, RTR uses a database system which records the allocation of communications parameters as well as usage reports for used and ported numbers.

Since RTR believes that the systems currently in use have a number of weaknesses (usage notifications are sent exclusively by e-mail at weekly, monthly and quarterly intervals and are therefore of limited significance depending on the time interval), usage notifications will be integrated into the ZR-DB in the future and will be available on a daily basis with regard to porting information.

## 1.2 Definitions:

ZR-DB	Central reference database for telephone numbers, entire application incl. interfaces
decision holder	The party to whom a telephone number, number range or number block was allocated by official decision under Art. 65 Par 3 TKG 2003, or its legal successor
KDB_ID	Operator id of the KNB or KDB according to operator list, 4 digits
csp, Content Service Provider	Content Service Provider (csp) corresponds to the service provider according to § 3 Z 8 KEM-V 2009
RTM	Information on whether this number has the right to be passed on to an end customer. Under Art. 114 Par. 1 TKG 2021, RTR may grant the right to administer subordinate elements independently when allocating telephone numbers. In accordance with the KEM-V 2009, this right is always granted when numbers are allocated to a KDB so that the KDB can assign the numbers to its subscribers. This right is not granted in the case of numbers assigned directly to end users. Therefore, these end users may only use the numbers themselves.
RTP	Information on whether this number has the right to be passed on to other communications service providers.
Exklusive transfer	Exclusive transfer" refers to the contractual transfer of rights to use telephone numbers pursuant to Art. 10 Par. 5 KEM-V 2009. In the case of "exclusive transfer," the decision holder allows another KDB to exclusively use specific number ranges.
Optional transfer	In the case of "optional transfer", the decision holder allows one or more other KDBs to use numbers from the certificate holder's number pool.
NDC	National destination code (Area code according to definition KEM-V 2009)
SN	Subscriber number (Subscriber number according to definition KEM-V 2009)
number_start	(subscriber) number start in the ZR-DB in the format 43+NDC+SN
number_end	(subscriber) number end in the ZR-DB in the format 43+NDC+SN
KDB, ecsp, communication service provider	Operator of a communications service as defined in Art. 3 No. 3 TKG 2003; now corresponds to the provider of a communications service as defined in Art. 4 No. 36 TKG 2021
Web-GUI	Web portal through which all defined business cases, defined queries, setting of authorizations and notifications can be carried out and business cases can be viewed and which is connected to the ZR-DB.
Telephone number	A telephone number in accordance with the Communications Parameters, Fees and Value-Added Services Ordinance 2009 (KEM-V 2009), Federal Law Gazette II No. 265/2009, as amended
** "	public short numbers with star

## **2 Basics for the usage reports - keypoints**

### **2.1 Legal Framework for usage reports new:**

§ 12 Abs 1 ZR-DBV:

*"Communications service providers are required, as of the cutoff date of March 31 of each year, to enter the usage status of each telephone number for which they are recorded as a communications service provider within 14 days or to keep the usage status current on an ongoing basis."*

§ Section 17 (3) ZR-DBV: Section 12 shall enter into force on February 1, 2022.

### **2.2 Comprehensive numbers**

- mobile numbers
- geographical numbers and numbers from the 720 range
- service numbers (ranges 5, 10, 86, 89, 96, 97, 111, 118, 718, 8xx, 9xx and "\*\*")

### **2.3 Obligation to report the use of telephone numbers**

- Communications service providers who are the decision holders of telephone numbers and use these numbers themselves or have assigned telephone numbers to subscribers for use.
- Communications service providers who act as communications service providers for other decision holders (who have been assigned numbers without RTP and RTM) and "serve" these numbers for the respective decision holder (e.g., 05, 118, individual numbers from the 8xx and 9xx ranges).
- Communications service providers who have been exclusively assigned telephone numbers by a decision holder and use these numbers themselves or have assigned telephone numbers to subscribers for their use.
- Communications service providers who have imported numbers from the 8xx and 9xx ranges.

## 2.4 Possibilities for notification the usage

1. daily notification ("usage status" is kept up to date) via the REST interface or web GUI of the ZR-DB or
2. file upload via the web GUI, at least once a year (on the due date of 31.03); in between, partial ranges of phone numbers (at least all phone numbers behind a NDC, see section 4.2) can also be notified via upload.

The usage status of numbers from the 118, 8xx and 9xx ranges must ALWAYS be kept up-to-date on a daily basis (applies both to numbers for which the communications service provider is the decision holder and to imported numbers from these ranges).

The use of optionally forwarded telephone numbers, imported and back-ported telephone numbers (except for telephone numbers from the 118, 8xx and 9xx ranges) need NOT to be NOTIFIED, as these are already automatically entered into the ZR-DB on a daily basis via one of the following business cases. For the business cases

- "Porting optional",
- "Porting (KNB)",
- "Porting KDB" and
- "Backporting"

usage entries (phone number activated, phone number deactivated) are generated AUTOMATICALLY within ZRDB after a successful transaction. In the 118, 8xx and 9xx number ranges, the current content service provider must also be indicated by the current communications service provider after the imported number in question.

Usage notifications via file upload must be made in such a way that the usage status of all telephone numbers in the ZR-DB corresponds to reality at least on the cut-off date of each year (March 31).

In order to fulfill this obligation, communications service providers are recommended to notify the total usage status of their telephone numbers via file upload once a year on the cutoff date of March 31, no later than 14 days after the cutoff date. However, communications service providers are free to submit usage reports via file upload at shorter intervals (e.g., quarterly in the case of geographical numbers). It is also up to each communications service provider to report the usage of specific numbers at short notice (e.g., prior to the imminent expiration of an allocation period) by means of daily registration (via REST interface or web GUI) or via file upload (note in particular Section 4.2, however, according to which the smallest possible range of numbers to be reported is all numbers behind a NDC, e.g., geographic numbers used are limited to specific local networks).

Regardless of the type of notification (daily notification or file upload), however, the communications service provider must ensure that a CURRENT TOTAL of used telephone numbers is available in the ZR-DB as of March 31 of each year.

### 3 Parameters of the usage notification (content)

The usage notification (applies to both the REST interface or WEB GUI and file upload) must always contain the following parameters:

Parameter	Erklärung	Inhalt
number_start	Phone number starting in the format 43 + NDC + SN	mandatory
number_end	Phone number ending in the format 43 + NDC + SN, when notifying a single phone number, number_end has to be = number_start	mandatory for REST-IF / WEB-GUI optional for file upload:
date_reported	Deadline of notification	mandatory
type	Usage status of the phone number (UA, UT, UR, UI, UM, US)	mandatory
csp	Name and summonable address of the content service provider	mandatory for 118, 8xx and 9xx optional for all other ranges
note	corresponding-0800 at "*" " Remarks at all range	obligatory for "*" " optional for all other ranges

NOTE: Call numbers / call number ranges must ALWAYS be entered in the international format (43 + NDC + SN)! For public short numbers with star in the following format: 43 + \* + short number.

Details for formats can be found in point 4.1.1 for notification via REST interface and in point 4.2.1 for notification via file upload.

#### 3.1 Usage states (type) of a phone number:

The following usage statuses can be notified in connection with the use of a phone number:

Status	type	Anmerkung
Usage active	UA	Phone number active, assigned to a subscriber for use
Usage reserved	UR	Phone numbers reserved for use. Example: Prepaid SIM cards issued to merchants but not yet activated.
Usage technical use	UT	Telephone numbers for technical use in own networks. Example: MSRN numbers in mobile networks, etc.
Usage M2M	UM	Numbers used for machine-to-machine communication.
Usage SMS	US	Numbers used for SMS services.
Usage inactive	UI	Phone number has been deactivated, no longer assigned to a subscriber, or no subscriber is served under this phone number.



## **4 Details notificaton options**

### **4.1 Daily notification of usage**

A daily updated notification of the usage of a phone number or a phone number range can be done either directly via the API endpoint (/number-administration/usage-indication/) or via the WEB-GUI.

The term "up to date" means that every change in the use of a number or number range must be indicated (including numbers no longer in use = inactive status (UI)) in order to comply with the requirement to "keep the data up to date on an ongoing basis" (cf. Section 12 (1) ZR-DBV and Explanatory remarks). Continuous registration of telephone numbers with unchanged status is not intended and is also not expedient, but the old data stock is overwritten in any case.

#### **4.1.1 Daily usage notification via API endpoint**

For details on the API endpoint, see API description / Interface description.

#### **4.1.2 Daily usage notification via WEB-GUI**

Daily usage notifications can be entered via the WEB-GUI (zrdb-portal.rtr.at), menu item "Enter new business cases"; category "Usage notification".

For details on how to handle this "business case", see the WEB-GUI user manual, section 6.12 ("Notification of use" business case) starting on page 88.

### **4.2 Usage notification via file upload**

Usage notifications via file upload can be submitted via the WEB GUI (zrdb-portal.rtr.at), menu item "Enter new business cases"; category "Notification of use upload".

When using the file upload to report usage, it is important to note that inactive phone numbers may NOT be included in the file. All phone numbers that are not included in a file are automatically notified as inactive.

This assumes that it is clear which call number ranges are notified with a file. It is therefore valid:

The smallest possible range of subscriber numbers to be notified is that of all subscriber numbers behind a number range = NDC. If at least one subscriber number is notified in a NDC, this file must contain the notification for this complete NDC. Subscriber numbers of this NDC that are not contained in this file are automatically considered to be notified as inactive.

If all numbers behind a complete NDC are to be notified as inactive, the file must contain any subscriber number of this NDC with the status inactive (UI). This is an



exception to the basic requirement that no inactive subscriber numbers may be contained in the file.

NDCs are:

- mobile phone numbers: a mobile NDC
- geographical numbers: one local network code (NDC)
- other NDCs: 720, 5, 10, 86, 89, 96, 97, 111, 118, 718, 800, 804, 810, 820, 821, 828, 900, 901, 930, 931, 939 and "\*".

The upload of usage reports is done in 3 different categories:

- mobile phone numbers
- geographical numbers and numbers from the 720 range
- Service numbers (ranges 5, 10, 86, 89, 96, 97, 111, 118, 718, 8xx, 9xx and "\*")

The upload can be done either for all phone numbers of a category in one file or for one or more NDCs. The upload always takes place for a specific key date.

File uploads can only be carried out via the WEB-GUI ([zrdb-portal.rtr.at](http://zrdb-portal.rtr.at)), menu item "Enter new business cases"; category "Usage notification".

### Examples:

Example 1:

1. an operator uses only numbers in range 5 (private networks) and one routing number in range 89. All that is required is to upload a file (for format, see Section 4.2.1) with the numbers used in these ranges using the file upload function in the Service numbers category.
2. this operator activates a further number in range 5. The notification is done with a file upload. The file must contain all numbers in range 5 that are active at the time of notification, but does not have to contain the number in range 89.
3. this operator deactivates all numbers in range 5. The notification can either be done together with the current status of the numbers in range 89 or independently of it. In any case, however, the upload file must contain at least one of the last used numbers in area 5 with the status inactive (UI). After all other phone numbers in area 5 are not included in this file, their usage status is set to inactive.

Example 2:

If an upload file contains the numbers 43810 100 100 and 43930 600 600, this means that in the ranges 0810 and 0930 only these two call numbers are notified as used. All other call numbers in the ranges 810 and 930 are thus notified as inactive.

Example 3:

1. if all subscriber numbers behind a NDC are to be reported as inactive, an upload file with a single subscriber number behind this NDC with the status inactive (UI) is to be transmitted. After all other numbers behind this NDC are not included in this file, their usage status is set to inactive.

#### 4.2.1 Structure - file format upload files

##### Fileformat:

csv; field separator: ; (semicolon); record separator: CR-LF

NOTE: SEMICOLONS may ONLY be used for column separation!

##### File contents:

number\_start; number\_end; date\_reported; type; csp; note.

- number\_start\*: number starting in format 43 + NDC + SN
- number\_end\*\*: number ending in format 43 + NDC + SN, when notifying a single number, number\_end = number\_start.
- date\_reported\*: key date of notification format "YYYY-MM-DD".
- type\*: Usage status of the phone number (see point 3.1)
- csp\*\*\*: name and address of the content service provider
- note\*\*\*\*: Comments

\* mandatory field

\*\* may be omitted for individual numbers, in which case an empty string must be passed.

\*\*\* Mandatory field for call numbers from the ranges 118, 8xx and 9xx

\*\*\*\* Mandatory field for public short numbers with star: The corresponding phone number from the (0)800 number range must be entered here, behind which the service for the notified abbreviated number with a star can also be reached. The entry must be made in international format.

Optional field for all other ranges: for possible remarks

##### Filename:

Filename: Usage\_notification\_KAT \_yyymmdd.csv

- KAT: range of phone numbers to be transmitted:
  - **mobile**: mobile phone numbers
  - geo-720: geographical numbers and service numbers from the range (0)720
  - services: service numbers from the ranges 5, 10, 86, 89, 96, 97, 111, 118, 718, 8xx, 9xx and "\*".
- yyymmdd: date of file creation.



Examples of file names:

- Nutzungsanzeige\_mobile\_20220331 (file of mobile phone numbers)
- Nutzungsanzeige\_geo-720\_20220331 (file for geographic/720)
- Nutzungsanzeige\_Dienste\_20220331 (file for service numbers)

**Examples of file content:**File für mobile Rufnummern:

```
number_start;number_end;date_reported;type;csp;note
436760000000;436760900000;2021-09-30;UT;;MSRN
436761000000;436761099999;2021-09-30;UR;;
436762345678;436762345678;2021-09-30;UA;;
436762345800;436723465899;2021-09-30;UA;;
```

File für geografisch/720-Rufnummern:

```
number_start;number_end;date_reported;type;csp;note
43158058;4358058;2021-09-30;UA;;
4315805900;435805999;2021-09-30;UA;;
435223290581;435223290581;2021-09-30;UA;;neue Nutzung
43720999000;43720999000;2021-09-30;UA;;
```

File für Diensterufnummern:

```
number_start;number_end;date_reported;type;csp;note
43900600600;43900600600;2021-09-30;UA;Oesterreichischer Rundfunk,
Würzburggasse 30, A - 1136 Wien;
43930888999;43930888999;2021-09-30;UA;TELECHAT, Mariahilferstraße 55, A -
1060 Wien;
43800100100;43800100199;2021-09-30;UA;Österreichische Post AG, Poststrasse 1,
A - 1010 Wien;
438101111111;;2021-09-30;UA;Call-In-Company,Thaliastrasse 15, A - 1160 Wien;
4359700;4359700;2021-09-30;UA;;
43*1234;;2021-09-30;UA;;43800123456
```

**NOTE:**

When specifying the content service provider (csp), NO semicolons ";" are allowed in the content service provider details! (analogous to the "old" usage notifications).

In the case of usage notifications for public abbreviated numbers with a star, the corresponding telephone number from the (0)800 number range behind which the service for the indicated abbreviated number with a star can also be reached must be entered in the note field. The entry must be made in international format.

## **5 Introduction of usage notifications by means of ZR-DB**

For the first usage notification in the ZR-DB, one or more upload files per category with all used telephone numbers (as of 31.03.2022) must be submitted within two weeks, i.e. no later than 14.04.2022. For each category, an upload file with all the numbers used in this category or upload files with all the numbers used behind one or more area codes can be submitted. For example, separate files can be transmitted for each mobile area code with a total status of used subscriber numbers behind this NDC.