



RTR

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Central Reference database for Austrian telephone
numbers (ZR-DB)

„usage notifications - new“

ZR-DB-Team

18.05.2022 – usage notifications ZR-DB



Overview of today's topics

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2. WHY usage notifications - What are usage notifications needed for?
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5. WHO is REQUIRED to provide usage notifications, which number ranges are covered by usage notifications?
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WHAT are usage notifications?

Definition of usage:

The capability of reaching the target within the public communications network or the communications services addressed by the telephone number

Usage indications are used to

- indicate the status of a telephone number / telephone number block at RTR-GmbH Status: (active - in operation = used, inactive - switched off = not used)

as well as

- in the case of value-added service numbers, the current information service provider for the number in addition to the usage status is reported

There is a well-established process for this purpose; usage notifications are transmitted to RTR in a defined format at defined intervals and then processed. This process is now being revised or relaunched.

Notification of use is mandatory (see following pages)!

TODAY: Art. 15 KEM-V 2009: Communications service providers or communications network operators must notify RTR of the start and end of use of allocated numbers in the electronic format specified by RTR.



WHY usage notifications?

Usage Notifications result from RTR's responsibilities:

Efficient administration of the communications parameter plan, in particular for recording usage (Art. 114 Par. 1 in conjunction with Art. 194 TKG 2021):

- Efficient administration requires monitoring of the utilisation of number ranges.

Assignment of communications parameters to users and operators of communications networks and services:

- The assignment of communications parameters by means of an official decision is generally limited to a period of at least 180 days.
- Pursuant to § 10 para 1a KEM-V 2009, an assignment for numbers in use is converted into an unlimited assignment if a notification of use pursuant to § 15 KEM-V 2009 is made before expiry of the period specified in the official decision. The notification must be submitted in the format specified by RTR.
- Subsequent assignments of numbers only if a certain degree of use already exists

Maintenance and publication of a directory of numbers for number-based services provided by third-party providers, which also includes the name and address of the service provider (= directory of value-added services - § 131 para 3 TKG 2021).

Mapping of usage rights for porting

Statistical purposes



WHY a new format and a new procedure?

NEW: Obligation to submit usage notifications via the ZR-DB as of 01.03.2022.

- § 12 para 1 ZR-DBV:
- "Communications service providers are obliged to submit the usage status of each telephone number for which they are registered as communications service providers within 14 days of the cut-off date of 31 March of each year or to keep the usage status up-to-date on an ongoing basis."

With regard to used numbers, the ZR-DB will in future be used to record the use of numbers. It is primarily intended to enable efficient administration of communication parameters and to replace the previous procedure of registration by e-mail.

- Current system "outdated" and inflexible
- Usage Notifications (imports) not up to date (weekly, quarterly notification)
- Usage rights of numbers (for porting and transfer) via ZR-DB are updated daily, therefore no longer necessary in usage notifications (except for value-added service numbers)
- Currently different formats for geographical numbers / service numbers
- Aim to give providers maximum flexibility (daily updated registration, registration by file upload).

→ Therefore, the current system of usage notifications will be replaced by a new one

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WHAT exactly is the ZR-DB?

The ZR-DB is a database in which the status of **each individual assigned telephone number** concerning

- decision holder of an allocation notice/decision
 - associated communications service provider (=porting status)
 - associated communications network operator (= to which communications network the number is currently ported / routed)
 - associated anchor communications network operator (=which communications network has taken over the anchor network function of a telephone number) as well as
 - the associated anchor communications service provider (=usually the decision holder of the notice)
- is recorded and retrievable.

The status of EVERY assigned telephone number can be retrieved via this database.

Serves as a reference for the routing tables of the operators, thus supporting "**direct routing**" in the future (= saving transit fees via the anchor network).

In future, the recording of usage (usage notification) will be integrated in this database!

DATABASE fully operational since October 2021!



WHAT exactly is the ZR-DB?

example:

Abfrage Parameter zu einer einzelnen Rufnummer

Rufnummer

Suche

Rufnummer von - bis	Bescheidinhaber	KDB Anker	KNB Anker	KDB aktuell	KNB aktuell	RTP	RTM	Tarif
43 810 500900 - 43 810 500999	TEST_Poigenfuerst & TK-Services GmbH	TEST_Poigenfuerst & TK-Services GmbH	TEST_Poigenfuerst & TK-Services GmbH	TEST_Poigenfuerst & TK-Services GmbH	TEST_Poigenfuerst & TK-Services GmbH	true	false	0,1

Decision holder: Holder of an allocation decision issued by RTR.

KDB anchor: Usually the decision holder; exception: Numbers without independent administration (without RTM), numbers assigned to non-KDBs.

KNB anchor: The network operator where a number assigned by RTR is hosted.

KDB current: The communications service provider which currently maintains a retail relationship for this number (e.g., this number is ported to this KDB).

KNB current: Communications network operator in whose network the number is currently located (in whose network the number may have been ported and in whose network the number is routed).

RTP: Information/flag whether this telephone number has the right to be passed on to other communications service providers.

RTM: Information/flag whether this telephone number has the right to be passed on to an end customer.

Tariff: Tariff for the telephone number in the case of target network tariffed telephone numbers (usually "value-added service numbers").

18.05.2022 – usage notifications ZR-DB



WHAT exactly is the ZR-DB?

- Since October 2021, every communications network and service provider has been obliged to keep its data on a telephone number up to date via the "business cases" defined in the ZR-DB!
- Each network setup, network change, porting, transfer... must be registered by the responsible communications network and service providers and the successful execution has to be confirmed!

More information to ZRDB: See <https://www.rtr.at/zr-db - Presentation InfoDays 2021.09.21> (available in English)

!!! ATTENTION !!!

USAGE NOTIFICATIONS do NOT change the attributes of the numbers contained in the ZR-DB !

- Usage notifications are processed completely independently of the other business cases in the ZR-DB and have NO influence on the data shown in the ZR-DB! These will NOT be changed by the usage notifications!
- In the future, the ZR-DB will only be used to record the utilization / upload usage reports (files)



WHO is REQUIRED to provide usage notifications

Obligation to report the use of telephone numbers concerns:

- Communications service providers who are **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 range).
- Communications service providers who have been exclusively passed numbers by a decision holder and use these numbers themselves or have assigned numbers to subscribers for use.
- Communications service providers who operates or import numbers from the 8xx and 9xx ranges to themselves.

Included telephone 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 "**")



HOW can be participated?

The registration of data or processing of business cases can be done in 2 different ways or via 2 different interfaces:

- **REST interface:** REST interface for ZR-DB users who want to connect their systems directly to the ZR-DB in order to be able to carry out the submission process automatically. For all operators who want to connect directly to the ZR-DB, e.g. in order to automate their systems for data entry or business case processing, a REST interface is available for this connection. For the connection to the ZR-DB via REST and for the necessary testing of the interface, a separate test environment is also available to the operators. Contact for operators interested in a direct connection to the ZR-DB via REST interface: zrdb@rtr.at
- **Web GUI:** Web interface that enables the operation of all functions necessary for an operator via a browser (= front end of the REST interface). This web interface offers the possibility to enter data via forms (to initiate business cases), to manage authorisations and notifications, to view entered entries via a separate view (business case view) ("view, edit, confirm business cases") as well as to perform data queries / downloads. The WEBGUI manual can be found at: <https://www.rtr.at/zrdb>
- The ZRDB portal (WEBGUI) can be accessed at: <https://zrdb-portal.rtr.at>



KEY POINTS "Usage Notification NEW" Specification: <https://www.rtr.at/zr-db>

With one exception, only the use of

- own assigned numbers (allocation by RTR),
- exclusively passed on (=retained) numbers,
- for other serviced numbers (e.g.: 05)

have to be registered.

EXCEPTION: Value-added service numbers (ranges 8xx9xx)

The use of value-added service numbers must be registered on a daily basis with information on the service provider (name and address of the service provider) - also in the case of porting (IMPORT).

Other portings (imports/exports), optional passed numbers and back-portings are processed automatically via the ZR-DB; each porting, optional transfer and back-porting automatically triggers a usage notification (activation/deactivation).

Legend:

Pass optional: A single telephone number is passed on to (must be a communications service provider) another communications service provider (only applies to mobile telephone numbers, geographical telephone numbers, telephone numbers from the (0)720 range)

Pass exclusive: The exclusive passing on of a number range by a decision holder (must be a communications service provider) to another communications service provider.



Key points of the "new usage notification"

Registration intervals (2 possibilities):

- daily (telephone number ranges 8xx, 9xx must ALWAYS be registered daily).

or

- at least once a year a "fullfile" with overall status (with cut-off date 31.03 of each year, maximum 14 days thereafter).

If the registration is not updated on a daily basis, a total status of used numbers per category with a cut-off date of 31.03.202X must be submitted at least ONCE A YEAR by means of FILE-UPLOAD, but "full files" can also be uploaded several times a year (e.g. if a usage level must be proven for subsequent assignments).

A detailed description of the usage reports and the file structure is available at: <https://www.rtr.at/zr-db>

Documentname: Nutzungsanzeige V1.01, also available in English!

Introduction of usage statuses:

- A usage status must be specified for each telephone number

Registration via the ZR-DB:

- via API endpoint (individual registration) or
- via WEBGUI (individual registration, file upload)

3 usage categories (for file upload):

- Geographical/720, mobile and service numbers, in future SINGLE format for all categories.

Telephone numbers must ALWAYS be entered in INTERNATIONAL FORMAT! e.g. 43512200200



PARAMETERS Usage Notification

Parameters to be transmitted:

Parameter	Explanation	Content
number_start	Telephone number starting in the format 43 + NDC + SN	obligatory
number_end	Telephone number ending in the format 43 + NDC + SN, when registering a single number: number_end = number_start	obligatory for REST-IF / WEB-GUI optional for file upload:
date_reported	Reporting date of usage	obligatory
type	Usage status of the telephone number (UA, UT, UR, UI, UM, US)	obligatory
csp	Name and summonable address of the information service provider	obligatory for 118, 8xx and 9xx optional for all other ranges
note	corresponding-0800 for "*". Remarks for all ranges	obligatory for "*". optional for all other ranges

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STATUS OF USE

In future, a usage status must be specified for each telephone number:

Status	type	Note
subscribers assigned	UA	telephone number active, assigned to a subscriber for use
reserved	UR	numbers reserved for use. Example: Prepaid SIM cards that have been issued to traders but not yet activated.
technical usage	UT	telephone numbers for technical use in own networks. Example: MSRN numbers in mobile networks etc.
M2M	UM	telephone numbers which are used for machine-to-machine communication.
SMS	US	telephone numbers which are used for SMS services.
Inactive	UI	telephone number has been deactivated, no longer assigned to a subscriber or no subscriber is served under this telephone number.



Usage notifications of individual telephone numbers (= daily usage notification)

The term "up-to-date" means that every change in the use of a number or number range must be registered (including numbers no longer in use) in order to comply with the requirement to "keep the data up-to-date" (cf. § 12 para. 1 ZR-DBV and explanatory remarks).

To be registered is therefore:

- Activation
- Deactivation
- Change of service provider behind value-added service numbers

The use of value-added service numbers in the 8xx9xx range must be registered on a DAILY basis!

Registration directly via the API, endpoint /number-administration/usage-indication or WEBGUI (business case "Usage notifications").


Access to the ZR-DB portal (WEBGUI) is at <https://zrdb-portal.rtr.at>

Manual for the ZR-DB-WEBGUI can be found at <https://www.rtr.at/zr-db>

The use of this endpoint or this type of usage notification is also possible for interim usage entries, e.g. usage notification in connection with time limits or interim activations of telephone numbers in the 05 range, etc.!



Usage notification of individual telephone numbers (View WEBGUI)

Auswahl Geschäftsfall	
Kategorie *	<input type="text" value="Nutzungsanzeige"/>
genutzte Rufnummern	
Rufnummer von *	<input type="text" value="43900600600"/>
Rufnummer bis	<input type="text" value="43"/>
Stichtag *	<input type="text" value="30.04.2022"/> 
Nutzungsart *	<input type="text" value="genutzt"/>
Diensteanbieterdaten *	<input type="text" value="RTR-GmbH, <u>Mariahilferstraße 77-79</u>, A-1060 Wien"/>
Zusätzliche Informationen	<input type="text"/>



Usage notifications via file upload

KEY POINTS:

- File upload can only be done via WEBGUI (zrdb-portal.rtr.at), is not supported via REST!
- Business case in WEBGUI: "Usage notification upload".
- 3 categories: mobile numbers, service numbers, geographical numbers and numbers from the 720 service number range: Ranges 5, 10, 86, 89, 96, 97, 111, 118, 718, 8xx, 9xx and "*".
- Uniform file format for all categories
- Permissible formats for upload are "csv" (columns separated by semicolons) and "ZIP" (must again contain one or more CSV file(s))
- Maximum size 50 MB
- A TOTAL of used telephone numbers per category must always be transmitted (but no imported numbers).
- Deactivated numbers are not to be included, exception: deactivation of an complete number range.
- It is also possible to transmit total statuses in relation to individual NDCs.

Examples:

- For mobile numbers, for example, several files related to mobile NDCs can be uploaded, e.g. a full file for NDC 664, a full file for NDC 665.
- Transmission of the usage status of individual local networks, if this is required for the proof of the usage level for subsequent applications.



Usage notifications via file upload

Fields in the file:

number_start;number_end;date_reported;type;csp;note

File name: : aaaa_TYP_yymmdd.csv

- aaaa: Operator code of the KDB (KDB-ID) transmitting the file
- TYP: range of telephone numbers to be transmitted
 - **mobile:** mobile telephone numbers
 - **fix-720:** geographical numbers and service numbers from the (0)720 range
 - **DRN:** service numbers from the ranges f. private networks (05), 86, 89, 96, 97, 111, 118, (0)718, (0)8xx and (0)9xx

yyymmdd: Date of file creation. If several files are used by an operator for this data transmission according to this point, the differentiation of the individual files must be made in the file name.

Examples for file names:

- 9999_mobile_20220331 (full file of mobile telephone numbers)
- 9999_fix-720_20220331 (Fullfile for geographical/720)
- 9999_DRN_20220331 (Fullfile for service numbers)

9999 Operator code for ZR-DB dummy operator

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Usage notifications via file upload

examples:

mobile:

```
number_start;number_end;date_reported;type;csp;note  
43676000000;436760900000;2021-09-30;UT;;  
436761000000;436761099999;2021-09-30;UR;;  
436762345678;436762345678;UA;;  
436762345800;436723465899;UA;;
```

services:

```
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;;  
43810111111;43810111111;2021-09-30;UA,Call-In-Company;Thaliastrasse 15, A - 1160 Wien;;  
4359700;4359700;2021-09-30;UA;;;
```

Geographical/720:

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

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Usage notifications via file upload

WEBGUI:

Auswahl Geschäftsfall	
Kategorie *	<input type="text" value="Nutzungsanzeige-Upload"/>
Nutzungsanzeige-Upload	
Unterkategorie *	<input type="text" value="Nutzungsanzeige geo-720"/>
Upload Datei	
Upload *	<input type="button" value="Dokument hinzufügen"/>
Zusätzliche Informationen	<input type="text"/>

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WHEN does the "Usage notifications NEW" start?

FULLFILES/Fileupload:

- First transmission of full files (overall status): Status of all numbers in use dated with **30.06.2022**
- File upload must take place no later than 14 days after the cut-off date (thus for the first time no later than 14.07.2022 eod).
- Thereafter at least once a year with cut-off date 31.03 of each year maximum 14 days after cut-off date
- **Daily registration / registration use of individual telephone numbers:** possible from 01.07.2022 onwards



Error messages / error logs

Daily registration / registration of the use of individual telephone numbers:

- Error validation takes place immediately when the entry is sent
- If validation is unsuccessful, the transaction is rejected

FULLFILES/Fileupload:

- Error message during upload, if format is not correct or file is too large
- Error evaluation after processing the file
- Sending of error logs as before to the contact person(s) stored in the eRTR regarding usage notification ("AP NA")



TEST OPTIONS

OWN "ZR-DB test environment available

Until the start of the "usage notification-NEW", testing can be carried out in a separate "ZR-DB test environment":

API: <https://zrdb-api-test.rtr.at/api/v1>

WEBGUI: <https://zrdb-portal-test.rtr.at>

Business cases: "Notification of use" and "Notification of use - upload"

ATTENTION:

- Currently ONLY TEST NUMBERS (for registered test operators) included in the database.
- Filling of the test system with REAL DATA (transfer of data from the productive system) will take place at the end of May.
- From the time the real data is transferred (in the area of mobile telephone numbers, only defined areas are transferred), testing is equally available for ALL operators. Credentials for LOGIN are the same as for the PROD system.

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Questions?

E-Mail: zrdb@rtr.at



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