RTR

Wir stehen für Wettbewerb und Medienvielfalt

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Central reference database for telephone numbers – ZR-DB

ZR-DB-Team

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3. WHAT exactly is mapped in this database?
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WHAT exactly is the ZR-DB?

The ZR-DB (Central Number Database) is a database in which, in the future, the status of each individual assigned telephone number concerning

- decision holder (of an allocation notice)
- associated current communications service provider (=porting status)
- associated current 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 call number) and
- the associated anchor communications service provider (=usually the decision holder)

is recorded and retrievable.

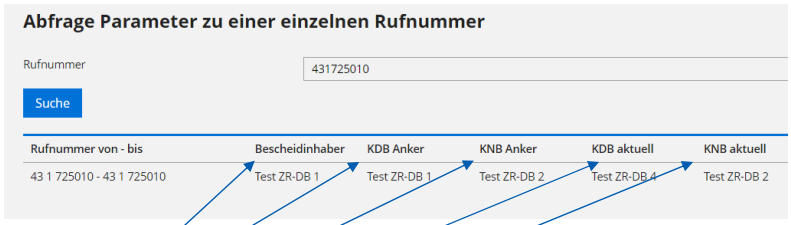
In the future, the status of EVERY assigned telephone number can be retrieved via this database!

The ZR-DB is an administrative database, no processes are mapped!

Furthermore, it serves as a reference for the routing tables of the operators, which also supports a quick correction of errors or "**direct routing**" (= saving transit fees via the anchor network).

WHAT exactly is the ZR-DB?

Example Query status of a phone number:



Legend:

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

KDB anchor: Usually the decision holder; exception: Numbers without independent administration (without RTM), RNs 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).

WHY (again) a new database, PURPOSE?

- Partially "outdated" exchange process regarding ported numbers among operators: ported numbers are sometimes sent by e-mail once a week to all operators concerned
- **Incorrect** or inconsistent data delivery regarding usage notifications to be sent to RTR
  - Lack of up-to-dateness of the recorded porting data (which must be submitted with a usage notification)
  - Depending on the number range, usage notifications are sent either weekly, monthly or quarterly, which is not always very informative.
  - Specifications for data formats are often ignored => great effort required to read in the data
- Complete lack of recording of mobile number usage
- Unauthorized transfer of phone numbers
  - Only noticeable when customer wants to port numbers
- Purpose: Collection of CURRENT (daily updated) porting data, retrieval of CURRENT phone number data for communications network and service operators
- Advantage for network operators
  - In the future, efficient "**DIRECT routing**" will be possible due to the daily updated data

  Direct routing: Every network operator who knows the direct destination of a call delivery has the possibility to deliver directly to this network operator - who is currently responsible for a phone number - and to save the so-called "anchor transit". The routing principle usually applied at present is "onward routing": this means that even with a ported number, traffic is delivered via the anchor network operator, who then forwards the call to the network operator actually responsible. This means costs and resource expenditure in the anchor network.

WHAT exactly is mapped in this database?

The following parameters are mapped in the database:

- Decision holder,
- current responsible communications service provider (KDB current),
- current communications network operator including any additional routing information (KNB current),
- the anchor communications network operator (KNB anchor),
- the anchor communications service provider (KDB anchor),
- information concerning the rights associated with the respective call number (right to pass, right to manage),
- tariff and service provider,
- Blocking (incl. reasons)

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

KDB anchor: As a rule, the holder of the official notice; exception: Numbers without independent administration, RNs 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).

WHAT exactly is mapped in this database?

Example:

Abfrage Parameter zu einer einzelnen Rufnummer

Rufnummer: 43810500900

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: As a rule, the holder of the official notice; exception: Numbers without independent administration, RNs 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 on whether this number has the right to be passed on to other communications service providers.

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

Tariff: Tariff for the number in the case of numbers subject to destination network tariffs (usually "value-added service numbers").

WHO is REQUIRED to participate/register?

- **Communications service providers** who have been assigned telephone numbers by RTR by official decision and who have these numbers set up or switched or who provide services to other decision holders (e.g., 05 private networks).
- **Communications service providers** who import telephone numbers to themselves and who have optionally received telephone numbers from other communications service providers (holders of telephone numbers subject to official decisions).
- **Communications service providers** who pass on telephone numbers EXCLUSIVELY to other communications service providers
- **Communications network operators** who implements, re-implements numbers in their network as well as "technically port" numbers to their network due to porting (=new receiving network).

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.

WHEN does the registration of new Data begin?

Registration of fixed-line numbers, numbers from the (0)720 range and service numbers:

- Registration of NEW "business cases" can take place **as of 07.10.2021**.
- In general, NO "historical" business cases (e.g., portings, installations, etc.) that lie in the past need to be reported.
- Obligation to correct the entry of phone numbers NOT carried out during the initial filling (corresponding error reports will be sent, instructions for correcting the errors will be created and made available for download on www.rtr.at/zrdb or with transmission of the error log on 07.10.2021, early).

HOW can be participated?

The submission 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 perform the submission process automatically. For all operators who want to connect directly to the ZR-DB, e.g. to automate their systems of data submission 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 required by an operator via a browser (= front end of the REST interface). This web interface offers the possibility to submit data via forms (to initiate business cases), to manage authorizations and notifications, to view submitted submissions 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 access to the ZRDB portal (WEBGUI) can be found at: https://zrdb-portal.rtr.at

HOW can be registered for participation?

Creating, registering new users for the ZR-DB and assigning permissions for the ZR-DB is done in 2 steps:

- Step 1:

New users must always be created by the MAIN USER via eRTR (master data management). This procedure should already be known (create user, generate user ID/password, assign roles/permissions). Link to the eRTR portal: https://egov.rtr.gv.at/

After creating a new user via eRTR, the user must be granted permission to access the ZRDB in the eRTR portal via the menu item "Permissions". MAIN USERS of a company GENERALLY have full access to the ZR-DB. No special permissions are required.

- Step 2:

Afterwards, the main user in the ZR-DB portal (https://zrdb-portal.rtr.at) must again assign specific authorizations on the business case level to the newly created user under the menu item "Authorizations" (read, read/write, authorizations for ALL business cases or only for very specific business cases). A ZR-DB user who does NOT have the role of MAIN USER can only view his own authorizations in the ZR-DB without being able to make any changes.

To enter the ZRDB portal (WEBGUI), please visit https://zrdb-portal.rtr.at
The manuel for the ZR-DB WEBGUI can be found at https://www.rtr.at/zrdb.

WHAT business cases can be carried out?

The following "business cases" must be registered in the database:

- Implementation up of telephone numbers in a network(**GF "Implementation"**)
- Changing anchor or current network operator (**GF "Change anchor", GF "Change KNB**")
- Porting of telephone numbers to network level (porting with change of communication network) (**GF "Porting KNB"**)
- Number porting at KDB level (porting without changing the communications network) (**GF "Porting KDB"**)
- Port backward of numbers (customer has cancelled without porting on) (**GF "Port backward"**)
- Transfer of numbers to other communications service providers (**GF "Pass exclusive" or "Pass optional"**)
- Usage notifications (as of 01.02.2022)

PLEASE NOTE that for some business cases an "interaction" of communications network operator and communications service provider is necessary (initiation of a business case, confirmation of a business case).

The manual for the ZR-DB-WEBGUI can be found at https://www.rtr.at/zrdb.

WHO must participate in WHICH business cases?

- **Implementation of telephone numbers**
  - communications service provider responsible for a telephone number
  - communications network operator in whose network the telephone number has to be implemented
- **Changing Anchor or current network operator (numbers are "transferred" to another network)**
  - communications service provider responsible for the number
  - communications network provider in whose network the number is to be set up.
- **Porting of telephone numbers to network level**
  - communications service provider to which this telephone number is ported
  - communications network provider in whose network the telephone number will be routed in the future
- **Porting of numbers at KDB level (porting without changing the communications network)**
  - communications service provider to whom this number is ported
- **Porting backward of telephone numbers (customer has terminated without further porting, number goes back to KDB-Anchor)**
  - communications service provider who was responsible for the telephone number until termination
- **Transfer of numbers to other communications service providers**
  - Pass optional
  - Pass EXCLUSIVE
- **usage notifications** (from 01.02.2022, after start of ZR-DB)

HOW is the initial filling of the database done?

The initial filling of the ZR-DB is carried out by:

- **RTR (allocations) AND**
- **by the communications network operators responsible for a given number (implementation, imports), as well as**
- **by the usage notifications sent to RTR-GmbH.**

The format for initial filling was defined in advance in consultation with the network operators involved (see Sections 3 and 5 "Initial filling concept V1.02," https://www.rtr.at/zrdb).

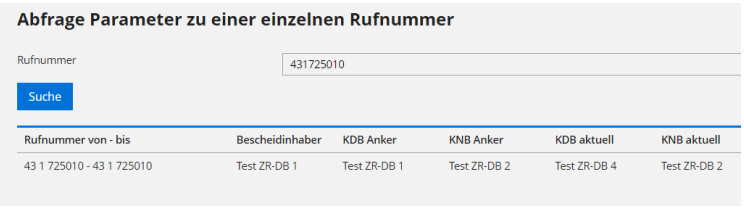
EVERY communications network operator that has imported telephone numbers into its network will provide a complete file of ALL telephone numbers imported into its network, together with the name of the communications service provider responsible for this number.

In addition, the usage reports submitted to RTR regarding imports (in order to map porting at the communications service provider level) are taken into account and "blended" with the data submitted by the communications network operators.

HOW does error correction take place?

Error correction can be performed at different levels and depends on the type of error:

When an "error log" is received, it is recommended to query the status of each individual phone number contained in the error log via the ZR-DB portal (menu item "Phone number download", last query).



If ONLY the information on the responsible communications service provider (current KDB) is incorrect: Then execute the business case "Porting KDB".

In all other cases, we recommend either using the "Data correction" business case or contacting the responsible network operator!

RTR will provide a detailed description of error correction in due course.

Step-by-step plan for individual fillings/obligations?

07.10.2021: Go-live of all business cases EXCLUDING "notifications of use".

01.02.2022: Transmission of usage notifications via ZR-DB

The system of transmitting notices of use will remain as is until February 2022. The obligation to transmit notices of use via the ZR-DB will not come into force until February 1, 2022 (https://www.rtr.at/zrdbv). Implementation of the new system for transmitting notices of use in the ZR-DB has not yet been completed.

There will also be the possibility to submit usage on a daily basis on a single number basis as well as to upload files via the ZR-DB web interface.

We will inform you as soon as this system is ready for testing.

01.07.2022: Routing obligation (direct or indirect) to the communications network operator or routing destination entered in the ZR-DB.

Brief overview of the ZR-DB web interface

- Overview of business cases (confirmation of business cases)
- Initiation of new business cases
- Management of authorizations
- Settings notifications
- Download options

OTHER questions about it?

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Auf Wiedersehen!

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