



# **RAI**

## **Registrar Administration Interface**

### **User Manual**

Version 2.9

## Imprint



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In eigener Sache

### RAI Howto

Das kleine  
handliche Howto  
im Pocket-Format  
für Neueinsteiger  
und Wiederein-  
steiger.



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# 1 Introduction to RAI

The Registrar Administration Interface is a web-based management tool. You can use it to view and partly process information relating to the registrar. In the RAI, registrar data are combined in profiles (RegAcc profiles) that are used to administer the registrar accounts (RegAccs). Each member has at least one RegAcc.

The RegAcc profile is also used to set up RRI accounts with existing or new handles. You need an RRI account for instance to register domains. Moreover, "General Request" and "Abuse Contact" can be created and updated and be output in response to a domain query on the DENIC website, if no General Request and Abuse Contact have explicitly been specified for a domain.

When you log in to the RAI for the first time with the account data and the one-time password you have received from DBS, you set up a two-factor authentication for future logins to your RAI. This is done for safety reasons.

## 2 Chapter Overview

- **Chapter 1 – Introduction to RAI:** An introduction to the Registrar Administration Interface.
- **Chapter 3 – Product Characteristics:** The technical characteristics of RAI - An overview
- **Chapter 4 – Preparatory Steps:** The e-mail to DENIC with the account data for RAI.
- **Chapter 5 – How to Log In to RAI:** How to perform the initial login to the user account with the DBS One-Time Password
- **Chapter 6 – RAI Main Menu:** An overview of the options of the main menu
- **Chapter 7 – How to Set Up a Two-Factor Authentication (2FA):** On the basis of an example it is shown how to establish the 2FA on a mobile device.
- **Chapter 8 – How to Edit the RegAcc Profile:** A description of all fields that can be edited
- **Chapter 9 – Definition of Terms:** Terms used in this manual are explained.

## 3 Product Characteristics

- SSL-encrypted web interface
- Session timeout
- Two-factor authentication with Time-based One-Time Password (OAH-TOTP)
- 3 different authorisation profiles (one profile for each RAI account)
- A message is sent to an e-mail address when a change has been made to the RegAcc profile.
- You can edit confirmation e-mails by sending a message to DENIC Business Services (Please send the message in a master-key-signed e-mail addressed to [dbs@denic.de](mailto:dbs@denic.de)).

## 4 Preparatory Steps

### How to Set Up your RAI Account

DBS creates a RAI account for you. To do so, they need some information from you.

If you are a **new member**, you will receive an e-mail from DBS with a reference to an on-boarding website. Here, you must enter the data that are required for RAI.<sup>1</sup>

If you are **already a DENIC member**, you must send a master-key-signed e-mail to DBS that must contain the information listed below.

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<sup>1</sup> For a RAI account, you need a user name in form of a DENIC handle. You will receive the DENIC handle when you create a contact via the RRI. When you are a new member, you have neither access to the RAI nor to the RRI at the beginning. Therefore, DBS creates a contact with a DENIC handle for you on the basis of the data you have entered on the on-boarding page. Once you have access to the RAI, you can create a login for RRI. You need the RRI login, for instance, to send domain or contact requests to the RRI.

### Mandatory data:

- A user name in form of a DENIC handle;
- A password in form of a MD5 hash;
- An e-mail address to which DENIC can send messages about changes made to the RegAcc profile;
- A telephone number DBS can use to contact you to communicate your initial one-time password;
- The environment for which the user name shall apply;
  - You can choose between
    - Live environment and Member Test environment;
    - You can also select both environments.

### Optional data:

- If you want to administer more than one RegAcc with your RAI account, please communicate the relevant RegAccs to DBS.
- Authorisation profiles:
  - **Read/Write Access**  
This is the standard authorisation profile. It is assigned automatically, if no details are entered for the authorisation profile.
  - **Read-only Access**  
This is the profile for RAI accounts that are only allowed to access RegAcc profiles in the print view.
  - **No Write Access to RRI Access Data**  
Additionally, read and write accesses are granted in the same way as for the authorisation profile.

## How to Request a One-Time Password from DBS

You enter the DBS one-time password together with your user name and your password on the RAI login page.

You will receive a DBS one-time password

- When DBS creates a new RAI account for you, or
- When you are no longer able to authenticate for an existing RAI account, for instance because you have lost your token. In that case, please contact DBS and request a new one-time password.

DBS will communicate your initial DBS one-time password by phone.

### NOTE

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**The DBS one-time password is valid for a limited period of twelve hours. If you do not use the DBS one-time password during this period, it expires automatically.**

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## How to Install the Password Generator

### NOTE

**Please contact DBS if you need assistance with the installation of your password generator.**

For logging in to RAI, two-factor authentication is mandatory. Two-factor authentication means that next to a first factor, which is your user name plus your password, you enter another factor when you log in to RAI. The second factor is a one-time password that is valid for a restricted period and for **one single** login only.

This changing password is generated for you by a password generator, which you install as an app on your mobile device (smartphone/tablet).

For iOS and Android devices, for instance you can use the **Google Authenticator** app.

### Google Authenticator



Android




iOS

You configure the password generator for RAI after you have logged in. For more detailed information go to the chapter **How to Set Up a Two-Factor Authentication (2FA)**.



## 5 How to Log In to RAI

<b>How to Call Up the RAI Login Page</b>	<ul style="list-style-type: none"><li>• Enter "denic.de" in your browser.</li><li>• Scroll down the page until you see the 4 coloured boxes.</li><li>• In the right-hand box titled "Are You a DENIC Member?" click "To DENIC Member Section".</li><li>• Log in via "Member Login" with your membership account.</li><li>• On the overview page <b>Tool Box for Registrars</b>, select the environment for which a RAI account has been set up in the box <b>Registrar Administration Interface (RAI)</b> at the bottom left.</li></ul> <div></div> <p><b>Figure 1: The RAI environments you can select</b></p> <ul style="list-style-type: none"><li>• On the next page, "Select a Service", click on "RegAcc profile maintenance".</li></ul>
<b>First login</b>	<div><b>NOTE</b></div> <div><b>When you log in for the first time, you must enter the one-time password you have been sent by DBS for your RAI account in the field "One-Time Password".</b></div>

	<div><h2>RAI Login</h2><p>Please log in with your RAI access code. If you have not yet received any login data, please contact <a href="#">Business Services</a>.</p><div><div>Username:</div><div></div></div><div><div>Password:</div><div></div></div><div><div>One-Time Password:</div><div></div></div><div><div>LOGIN</div></div></div>
After the first login	<p><b>Figure 2: Login page for RAI</b></p> <p>After you have logged in for the first time with your user name, password and the DBS one-time password, you must install the two-factor authentication.</p>

## 6 RAI Main Menu

### Registrar Account Selection

Here, you find a list of your registration accounts. Please select the RegAcc you intend to work on.

DENIC-99995

### Two-Factor Authentication

Active token:

TOTP-D36A302B

TOTP

Figure 3: RAI main menu

### How to Select a Registrar

Here you find a list of the RegAccs that are managed via the RAI account.

### Two-Factor Authentication

This menu item is used to replace the DBS one-time password by a token or to replace an old token by a new one.

## 7 How to Set Up a Two-Factor Authentication (2FA)

### NOTE

Once you activate a new token (orange button "Roll Out NEW SOFTWARE-Token (TOTP)"), any existing token will become invalid immediately.

When you print out the page with the QR code and store it safely, you can scan the QR code again, for instance if you have lost your mobile device.

Alternatively, DBS will create a new one-time password for you.

You set up your access for the **two-factor authentication** by scanning a QR code<sup>2</sup> with your mobile device.

Alternatively, you can enter the line that starts "secret=..." in your password generator (see Figure 6).

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<sup>2</sup>\*\*\* QR Code® is a registered trademark of Denso Wave Kapitalgesellschaft.

## Example: How to scan the QR code by means of the "Google Authenticator"

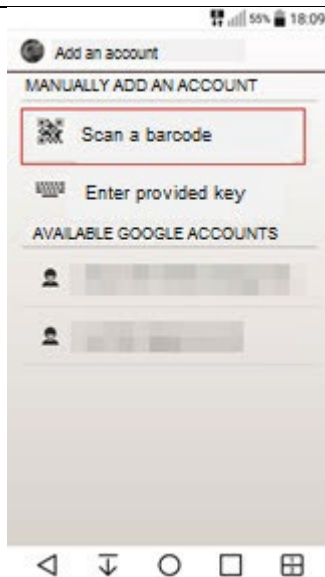


Figure 4: Calling the QR code scanner

- Click the **orange button "Roll Out NEW SOFTWARE-Token (TOTP)"** in the main menu.
- On the screen you will see a page that looks like the image in figure 6.
- Start the **Google Authenticator** app.
- Tap on **Scan barcode**.
- Hold the camera of the mobile device at the QR code displayed on the screen.



Figure 5: One-Time Password of limited validity

- The password generator will take over the token and generate a new time-based one-time password every 30 seconds, which is displayed as a six-digit code.
- When you log in to RAI, enter this code in the "One-Time Password" field.

Info: [19500000001] A new token has been generated successfully

OTP Token TOTP-C7A31496



otpauth://totp/TOTP-C7A31496?secret=TMGWHLL55ZVG5FVIETJKBSVVD7LXVRJ&counter=0&period=30&issuer=DENIC+eG+RAI+Live

Please scan the QR code above by means of your application (for instance Google Authenticator, free OTP).

Since it is impossible to generate the secret a second time, we recommend to save the QR code and to keep it in a safe place.

**Figure 6: Token webpage displaying a QR code**

## 8 How to Edit the RegAcc Profile

If you select a RegAcc profile for editing in the "Registrar Administration Interface" overview, you will be directed to the RegAcc profile maintenance.

<b>RegAcc profile maintenance</b>	In the "RegAcc profile maintenance" section you can see the individual fields of a RegAcc profile.
<b>Change/Save change</b>	If you want to edit the contents of your RegAcc profile, activate the editing mode by clicking on "Edit" at the end of the profile overview. When you have finished your editing, save the changes. RAI will then send a change notification to the e-mail address stored in RAI. This e-mail will inform you about the fields that have been edited.
<b>Printing the new profile</b>	If you need a printed version of your revised RegAcc profile, click on the "Print" button below your RegAcc profile data to print out the profile.

## Contact details

### NOTE

**The name of the RegAcc, the address and the login to RAI cannot be changed by you via the RAI.  
If you want to change these data, please contact DBS.**

The registrar must store data to ensure that they can be contacted by DENIC or other registrars. These data include the phone number and e-mail address.

Field name	Remark
<b>Phone</b> <sup>3</sup>	For Phone, the same regulations apply as for Fax.
<b>Fax</b> <sup>3</sup>	For the fax number of the RegAcc, the following characters are permitted: <ul style="list-style-type: none"> <li>• + (first character)</li> <li>• 0-9</li> <li>• . (dot)</li> <li>• x</li> <li>• blank</li> </ul> You must follow the notation defined by the ITU-T E.123 standard, including the country code. The maximum number of characters is 254.
<b>Email</b> <sup>3</sup>	The e-mail address must comply with the requirements of RFC 5322. The maximum number of characters is 254. Email is the fallback if no GeneralRequest has been specified.
<b>Url</b> <sup>3</sup> <b>ENUMUrl</b> <sup>3</sup>	The URL must be stated in a valid format.

<sup>3</sup> Mandatory field



<p><b>GeneralRequest</b> <b>GeneralRequestUriTemplate</b></p>	<p>DENIC handle of the REQUEST type</p> <div> <div>NOTE</div> <div><b>GeneralRequest is a mandatory field!</b></div> </div> <p>This information is output by the web-whois for all domains that are administered by the RegAcc (unless specific data are explicitly stated with the domain).</p> <p>The URI template includes an e-mail address and/or the link to a web template. You can also specify a wildcard for the domain as a variable.</p> <p>Specifications by DENIC:</p> <ul style="list-style-type: none"> <li>• The URI template string must not exceed 1024 characters in length.</li> <li>• You must use http, https or mailto for the URI schemata.</li> <li>• The URI template variable for ASCII code domains is <b>Alabel</b>.</li> <li>• The URI template variable for Unicode domains is <b>Ulabel</b>.</li> <li>• URI template variables are case-sensitive.</li> </ul> <p><b>Example:</b></p> <div> <pre>mailto:info@denic.de?subject=domain:{Ulabel}</pre> </div>
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<b>AbuseContact</b> <b>AbuseContactUriTemplate</b>	<p>DENIC handle of the REQUEST type</p> <p>This information is output by the web-whois for all domains that are administered by the RegAcc (unless specific data are explicitly stated with the domain).</p> <p>The URI template includes an e-mail address and/or the link to a web template. You can also specify a wildcard for the domain as a variable.</p> <p>Specifications by DENIC:</p> <ul style="list-style-type: none"><li>• The URI template string must not exceed 1024 characters in length.</li><li>• You must use http, https or mailto for the URI schemata.</li><li>• The URI template variable for ASCII code domains is <b>Alabel</b>.</li><li>• The URI template variable for Unicode domains is <b>Ulabel</b>.</li><li>• URI template variables are case-sensitive.</li><li>• The URI template is not displayed in an expanded way in the RAI.</li></ul> <p><b>Example:</b></p> <pre>mailto:info@denic.de?subject=domain:{Ulabel}</pre>
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## Mailing Lists

DENIC uses the mailing lists to inform you about technical changes or maintenance work. Moreover, DENIC discusses various topics with the members on the lists.

Field name	Description
<b>E-mail hostmaster list</b> <sup>4</sup>	This is the e-mail address for subscribing to the hostmaster-l. This mailing list is used for technical discussions between DENIC and its members.
<b>E-Mail tech-announce list</b> <sup>4</sup>	This is the e-mail address for subscribing to the tech-announce-l mailing list. DENIC uses this mailing list to make technical announcements.


## Data to Get Access to the Registration System

You can store user names and passwords for using the RRI, and PGP keys for the communication with DBS. Moreover, you will define IP addresses that will allow you to inquire additional information from the whois that is available to DENIC members only.

You can create RRI accesses independently in the RAI profile. When you click the button "SAVE CHANGES", a contact of the ORG type is created in the RAI profile with the following information: Handle (RRILogin), Name, Address, City, PostalCode, CountryCode and Email. Then the handle is saved in the RAI profile.

Field name	Description
<b>RRILogin</b>	DENIC handle for access to the RRI.  Valid for: .de, ENUM, .de and ENUM
<b>RRILoginPw</b>	Passwords of the DENIC handles. Requirements: <ul style="list-style-type: none"> <li>• Composed as MD5 hash</li> <li>• Lower case only</li> </ul>
<b>PGPKey</b>	The public PGP key is used for authentication when communicating with DBS. For further information on PGP keys, like the applicable conditions, please refer

<sup>4</sup> Mandatory field

	to the annex of document <b>DENIC-29</b> : Basic Information about GnuPGP and PGP.
<b>WhoisIP</b>	<p>This is the IP address or the IP address range authorised to submit inquiries to the member-whois.</p> <hr/> <p> Don't fill out the field!</p> <hr/> <p>The field is no longer needed.</p>

## Notification Channel for the Registration System

In your RAI profile, you specify e-mail addresses that will be used by the registration system to send notifications to you in specific application cases.

These include notifications relating to deletions in the name of DENIC's Legal Department that are sent to the e-mail address stored in the profile for legal matters. If no address is stated in the field **EmailLegal**, the **EmailTo** address is used

Field name	Description
<b>EmailTo</b> <sup>5</sup> <b>ENUMEmailTo</b> <sup>5</sup>	This is the e-mail address to which the .de or the ENUM registration system will send e-mails.
<b>EmailLegal</b> <b>ENUMEmailLegal</b>	This is the e-mail address to which e-mails relating to legal aspects of .de or ENUM domains are sent.
<b>EmailChprovIn</b> <sup>5</sup> <b>ENUMEmailChprovIn</b> <sup>5</sup>	This is the e-mail address to which notifications to the RegAcc are sent in case of provider transfers (CHPROV) for .de or ENUM-domains that were initiated by the RegAcc.
<b>EmailChprovOut</b> <sup>5</sup> <b>ENUMEmailChprovOut</b> <sup>5</sup>	This is the e-mail address to which notifications to the RegAcc are sent in case of provider transfers (CHPROV) for .de or ENUM domains that must be confirmed.

<sup>5</sup> Mandatory field

<b>MsgFeed</b> <sup>5</sup> <b>ENUMMsgFeed</b> <sup>5</sup>	<p>This is the type of delivery for notifications from the .de or ENUM registration system.</p> <ul style="list-style-type: none"> <li>• rri: notifications are collected via RRI</li> <li>• mail: notifications are delivered by e-mail</li> </ul>
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## 9 Definition of Terms

Concept	Description
<b>RegAcc (Registration Account)</b>	Contrary to the "Member Account", MemberAcc in short, which has an administrative function, the RegAcc is the technical access to the registration system. A RegAcc is always assigned to a MemberAcc.
<b>TOTP</b>	Time Based One-Time Password, pursuant to RFC 6238

## Document History

Version	Date	Chapter	Change	Release
2.5	01 Nov 2018	10 Contact details	RegAcc <b>GeneralRequest</b> , RegAcc <b>AbuseContact</b> added	Hildebrandt
2.6	18 Jan 2019	10 Contact details	RegAcc <b>GeneralRequest</b> , RegAcc <b>AbuseContact</b> updated GeneralRequest <b>UriTemplate</b> , AbuseContact <b>UriTemplate</b> added	Hildebrandt
2.7	04 Feb 2019	Complete document	Document was completely revised and new texts were added	Hildebrandt
		8 How to Edit the RegAcc Profile, Paragraph/Table: Contact Details	Texts of obsolete fields deleted: RegAcc <b>ChprovInC</b> , RegAcc <b>ENUMChprovInC</b> , RegAcc <b>ChprovOutC</b> , RegAcc <b>ENUMChprovOutC</b> , RegAcc <b>LegalC</b> , RegAcc <b>ENUMLegalC</b> , RegAcc <b>TechC</b> , RegAcc <b>ENUMTechC</b>	

		8 How to Edit the RegAcc Profile, Table: Contact Details	RegAcc <b>Sip</b> obsolete, deleted	
		8 How to Edit the RegAcc Profile	Prefix "RegAcc" as field name is no longer applicable.	
		8 How To Edit The RegAcc Profile, Paragraph: Contact Details Notification Channel for the Registration System	RRI access via RAI  For <b>MsgFeed</b> and <b>ENUMMsgFeed</b> the option "mri" was changed to "mail" because MRI has been discontinued.	
2.7	08 Feb 2019	4 Preparatory Steps, How to Set Up your RAI Account	New procedure for creating the RAI account for new members and for existing members	Hildebrandt
2.8	01 Oct 2019		Version October	Hildebrandt
2.9	08 Dec 2022	In chapter "8 How to Edit the RegAcc Profile" and there in subchapter "Data to Get Access to the Registration System"	Added the note that the "WhoisIP" no longer needs to be specified.	Hildebrandt