



Service Catalogue

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Document History

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3.3	2023-12-13	Hildebrandt	11	New service hours on Friday from 16:00 - 18:00 CE(S)T
3.3	2023-12-13	Hildebrandt	28	Service standards table for hotline was revised
3.4	2024-02-16	Hildebrandt	Points of Measurement and Services	Update of the column "Technical Services", designations were updated
3.4	2024-02-16	Hildebrandt	Public-whois and domain query	<ul style="list-style-type: none">The item "Holder data" was removed from the "Objects that Can Be Queried" list.In the "Availability" table, line on domain query was added.Response times for ENUM were deleted from the Service Standards.

Version	As of	Person in charge	Page/ Position	Changes
3.4	2024-02-16	Hildebrandt	Realtime Registration Interface (RRI)	In the table on the Service Standards, the availability classes were updated and the headlines for the response times corrected.
3.4	2024-02-16	Hildebrandt	Mailing Lists	Table was completely revised.
3.4	2024-02-16	Hildebrandt	Glossary	Description of downtimes was added.
3.4	2024-02-16	Hildebrandt	Maintenance	The paragraph on maintenance was revised.
3.4.	2024-02-16	Hildebrandt	RDAP	The paragraph on RDAP was added.
3.4.	2024-03-04	Hildebrandt	NAST	Information on the REST-API was added.

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1 General Information

1.1 Why a Service Catalogue?

Background Information

Transparent Performance

The Service Catalogue defines performance goals and commitments to our members and the internet community. The aim of the catalogue is to make our services and performance transparent, comprehensible and comparable.

Service Standards

Service standards form the basis for the structure of technical and organisational workflows and the qualitative and quantitative use of resources.

DENIC defines the intended quality of a service by means of measurable parameters and thus ultimately describes binding requirements and expectations of the DENIC members, domain holders and internet users.

Our Commitment

The Service Catalogue and the Service Standards in particular represent our commitment to our members and the internet community to maintain and continuously improve the high availability and quality of the DENIC services.

1.2 Notes

Conventions

Links

References to websites are underlined in [blue](#). cross-references in the service catalog are highlighted in grey.

Symbols Used in the Tables

-, a value or a statement is not applicable

x, a value or a statement is applicable

Downloads

DENIC Documents

All DENIC documents listed in the Service Catalogue are available for download on the DENIC member website at <https://member.secure.denic.de/en/service/denic-documents>.

Service Catalogue

You can download a current version of the Service Catalogue on the member website at <https://member.secure.denic.de/en/service/service-level-standards/>.

Glossary

Terms We Use

Term	Description
Service Hours	This is a period in which personal services are available and which is based on Central European Time and Central European Summer Time.
Service Standards	The Service Standards contain target values for technical services and personal services. Monthly performance data, consisting of measurements for selected technical member services, are determined for the target values of average response time, maximum response time and availability and published for download at https://member.secure.denic.de/en/service/service-level-standards/ .
Response Time	<p>The response time is a measurement period expressed in milliseconds (ms) which starts when a request to a technical service is sent and extends until the receipt of a correct response by the service.</p> <p>If personal services are measured, the period is expressed in minutes, hours or days. It starts with the receipt of a request and extends until the receipt of a first reply by a member of the DENIC staff.</p>
Measuring Interval	This is a measurement performed for a limited period.
Operating Time	<p>The operating time is part of the Service Standards. It defines the period during which a service should be available without failure.</p> <p>The Service Standards define an operating time of 24 hours on 365 days a year for all technical services.</p>
Downtimes	Downtimes are times during which a technical service is not available. When determining the downtimes, times of requested, planned and/or announced maintenance is not taken into consideration, except for services of availability class 1.

Availability Class (AC)	<p>The availability classes are defined by means of percentage values resulting from the availability of a service. The availability is calculated from the target value of the operating time, taking into account the downtime.</p> <p><u>Calculation of availability</u></p> $\text{Availability} = \frac{(\text{Operating time} - \text{Downtimes})}{\text{Operating time}} * 100$ <p>Operating time and downtime in minutes per month Availability in percent</p>
Point of Measurement (PoM)	The PoM is a point of measurement or a sum of points of measurement used to determine the service quality.
PoM Internet	This is a point of measurement close to DENIC that can be used by third parties to access the technical services on the internet. Performance data are determined on the basis of selected technical services.
PoM RIPE	This is a neutral measurement method based on RIPE NCC DNS Monitoring Services , whose measured values are used to determine performance data. Information on RIPE NCC DNS Monitoring Services can be found at http://dnsmon.ripe.net/dns-servmon/guide.html#whatis .
First Call Resolution (FCR)	This is the percentage of all calls during which a concern is completely resolved by the first call.
Service Level	This is the percentage of calls defined to be answered within a specific time limit. A specification such as 90/20 means that 90 percent of all calls are answered within 20 seconds.

Definition of Target Value

Response Time

Average Response Time	The average response time is an average value that is calculated monthly from the response times of all measuring intervals for a service.
Average Response Time (95%)	This value is calculated in the same way as the average response time, except that 5 percent of the longest response times of all measuring intervals are deducted at the beginning.
Maximum Response Time (95 %)	Five percent of the longest response times are deducted for each measuring interval. The maximum response time (95%) is the highest value of the remaining set of measured values of all measuring intervals.

Availability Classes

The following availability classes have been determined:

- AC1: 100%
- AC2: 99.90%
- AC3: 99.50%
- AC4: Best Effort

Where to Get Assistance with Questions on Technical Services

Contact

Hotline, DENIC Business Services (DBS), and 24/7-Service (emergency service), Key Account Management & Marketing, Policy & PR

Target Group

DENIC Members

Availability

see Service Hours

Service Hours and Contact Options

Service Hours

Time Day	00:00 - 08:00	08:00 - 16:00	16:00 - 18:00	18:00 - 24:00
Monday	24/7 Service	Hotline, DBS	Hotline, DBS	24/7 Service
Tuesday	24/7 Service	Hotline, DBS	Hotline, DBS	24/7 Service
Wednesday	24/7 Service	Hotline, DBS	Hotline, DBS	24/7 Service
Thursday	24/7 Service	Hotline, DBS	Hotline, DBS	24/7 Service
Friday	24/7 Service	Hotline, DBS	24/7 Service	24/7 Service
Saturday	24/7 Service	24/7 Service	24/7 Service	24/7 Service
Sunday	24/7 Service	24/7 Service	24/7 Service	24/7 Service
Public holidays in Hesse	24/7 Service	24/7 Service	24/7 Service	24/7 Service
German national public holidays	24/7 Service	24/7 Service	24/7 Service	24/7 Service
24 December	24/7 Service	24/7 Service	24/7 Service	24/7 Service
31 December	24/7 Service	24/7 Service	24/7 Service	24/7 Service

Contact Options

Responsibility	Phone +49 (0) 69 27 235 -	Fax +49 (0) 69 27 235 -	E-mail	Chat	Contact
Hotline	270	238	info@denic.de	-	Direct Services
DBS	290	234	dbs@denic.de	https://memberchat.denic.de	DENIC Business Services
24/7 Service	299	-	sos@denic.de Please use "SOS:" in mail header	-	Emergency Service
Public Relations	274	234	presse@denic.de	-	Key Account Management & Marketing, Policy & PR

Postal address

DENIC eG
(contact)
Theodor-Stern-Kai 1
60596 Frankfurt am Main
GERMANY

Note: Please replace **(contact)** with the contact listed in the **contact** column in the table **Contact Options** (not applicable for 24/7 service).

Maintenance

Maintenance Table

Type of Maintenance	Maintenance Window	Announcement
Technical Services	Tuesday, 16:00 to 20:00 CE(S)T	By Friday of the previous week at the latest

Restrictions and Failures

Maintenance work that leads to disruptions in technical services will be announced on the website and via the mailing list.

Emergency Maintenance

Emergency maintenance can take place outside the maintenance windows and will be announced on the website and via the mailing list.

Software Rollouts

Since DENIC applies the Continuous Delivery Principle, unannounced software rollouts that will result in temporary disconnections or a shift of the PoS between DENIC's data centers may be performed outside the maintenance window.

Points of Measurement and Services

General Information

Type of Measuring Point	Technical Services
PoM Internet	<ul style="list-style-type: none">Public-whoisDomain queryRDAPRealtime Registration Interface (RRI)RRI web clientRegistrar Administration Interface (RAI)Mailing listsHash generatorIDN web converterNAST Predelegation Check
PoM RIPE	<ul style="list-style-type: none">Name server service

2 Technical Services

2.1 Information Services

Domain Query

Brief Description

This service enables web-based queries for the status and data of objects.

Service Description

This service can be used for .de domains and ENUM domains (under 9.4.e.164.arpa).

Objects that Can Be Queried

- Domain name
- Technical data
- Contacts for General Request and Abuse Contact
- Holder data, visible for domain holder and to a limited extent to third parties

Availability

Whois Address	Environ- ment	.de	ENUM	DENIC Members	General Public
https://webwhois.denic.de/?lang=en	Live	X	X	X	X

Security Features

Improper use is restricted since the number of queries is limited

- per network, and
- per time unit.

Service Standards

Available for	.de	ENUM
Operating Time	24 hours x 365 days	24 hours x 365 days
Availability Class	3	4

Public-whois

Brief Description

This service can be used to query the status and data of objects. The public-whois has been implemented in compliance with RFC 3912.

Service Description

The service can be used for .de domains

Objects that Can Be Queried

- Domain name
- Technical data

Availability

Whois Address	Environ- ment	.de	ENUM	DENIC Members	General Public	TCP Port
Public-whois whois.denic.de	Live	x	-	x	x	43

Security Features

Improper use is restricted since the number of queries is limited

- per network, and
- per time unit.

Service Standards

Available for	.de
Operating Time	24 hours x 365 days
Availability Class	3
Response Times for Status Queries	
Average Response Time	< 1000 ms
Maximum Response Time (95%)	< 1500 ms
Response Times for Query	
Average Response Time	< 1500 ms
Maximum Response Time (95%)	< 2000 ms

Registry Data Access Protocol (RDAP)

Brief Description

This service can be used to query the status and data of objects. The RDAP has been implemented in compliance with RFC 7482.

Service Description

- Internationalisation
- Structured data format

Availability

<https://rdap.denic.de>

Service Standards

Operating Time	24 hours x 365 days
Availability Class	4

Security Features

- Authentication of the server
- Authentication and authorisation of the inquirer
- Encrypted data transmission.

2.2 The Registration System

Realtime Registration Interface (RRI)

Brief Description

You can use RRI to create and maintain contacts and domains in an automated way.

Service Description

Requests are processed in real time.

Availability

Live Environment	Test Environment	.de	ENUM	TCP Port
rri.denic.de	rri.test.denic.de	x	-	51131
rri.enum.denic.de	rri.enum.test.de	-	x	51131

Frame Conditions

- DENIC operates the RRI server.
 - RRI is accessible via a client developed by the member themselves and via the RRI web client.
 - Password management is performed via RAI or with a master key-signed e-mail to dbs@denic.de
-

Security Features

- TLS encrypted interface
 - RRI server authentication
 - RRI client authentication with login and password
-

Service Standards

Available for	.de	ENUM
Operating Time	24 hours x 365 days	24 hours x 365 days
Availability Class (including and excluding purge period)	2	4
Response Times		
Request (PoM Internet)		
Average Response Time	< 500 ms	< 500 ms
Maximum Response Time (95%)	< 800 ms	< 800 ms
Request including positive Predelegation Check (PoM Internet)		
Average Response Time	< 3000 ms	< 3000 ms
Maximum Response Time (95%)	< 5000 ms	< 5000 ms

Reference to Other Documents

- DENIC-29 (DENIC Registration System for .de)

RRI Web Client

Brief Description

The RRI web client is a web interface-based access to the RRI server; members can use it instead of or in addition to a self-developed client.

Service Description

- All request types of the RRI can be used.
-

Availability

Live Environment	Test Environment	.de	ENUM
https://member.secure.denic.de/en/service/tools/rri-web-client-live	https://member.secure.denic.de/en/service/tools/rri-web-client-member-test	x	x

Security Features

- TLS encrypted interface
 - Member authentication via RRI login
-

Service Standards

Available for	.de	ENUM
Operating Time	24 hours x 365 days	24 hours x 365 days
Availability Class	3	4
Response times		
Queries		
Maximum Response Time (95%)	< 2000 ms	< 2000 ms
Requests		
Maximum Response Time (95%)	< 5000 ms	< 5000 ms

Reference to Other Documents

- DENIC-29 (DENIC Registration System for .de)
 - DENIC-23 (Nameserver Predelegation Check)
-

Registrar Administration Interface (RAI)

Brief Description

RAI is a profile administration tool the members can use to administer their RegAcc profiles themselves.

Service Description

Availability

Live Environment	Test Environment
https://member.secure.denic.de/RAI/faces/en/index.jsp?sessionid=A93296B3054BABA033CE8C7435BE8F56?lang=EN	https://member.secure.denic.de/RAI-mtest/faces/en/jsf/auth/login.jsp?lang=EN

Frame Conditions

- Set up users for RAI by sending a master key-signed e-mail to dbs@denic.de
 - You must store a confirmation e-mail address for updates to the RegAcc profile.
-

Security Features

- A notification is sent to the stored e-mail address, as soon as a RegAcc profile is updated.
 - You can change the confirmation e-mail address by sending a master-key-signed e-mail to dbs@denic.de.
 - TLS encrypted interface
 - Two-factor authentication via login and Time-based One-Time Password (TOTP)
 - Session timeout
-

Service Standards

Operating Time	24 hours x 365 days
Availability Class	3
Maximum Response Time	< 2000 ms

Reference to Other Documents

- DENIC-22 (RAI Registrar Administration Interface)
-

Mailing Lists

Brief Description

DENIC offers the general public and its members mailing list subscriptions, each of which has a different focus. They include, for example, general news on the subject of domains, technical or organisational changes and innovations at DENIC, but also discussions in which suggestions or ideas are communicated to us.

Service Description

Not all mailing lists are available to the general public.

	Subscriptions for General Public	Subscriptions for Members
Mailing Lists		
public-l	x	x
maintenance-l	x	x
hostmaster-l	-	x
DENICmembers-l	-	x
DENICtech-announce-l	-	x
technews-review-l		x
Special Features:		
		Subscription to the member mailing lists is managed via the master data and RAI.
		RSSfeed for hostmaster-l and tech-announce-l.
		tech-announce-l (read only)
	Subscription to and archive of all mailing lists. https://list.denic.de/	Archive of all mailing lists. https://list.denic.de/
Subscription Conditions and Information		
	https://www.denic.de/en/service/mailling-lists/	https://member.secure.denic.de/en/service/member-mailing-lists

Frame Conditions

A subscription is required to participate in the mailing lists.

Service Standards

Operating Time	24 hours x 365 days
Availability Class	4

Hash Generator

Brief Description

There are access restrictions for various DENIC services; they can only be accessed by means of password authentication. DENIC verifies access to these services by means of encrypted password strings (hashes) that were created with the **hash generator** and are stored in the DENIC database.

Service Description

Members can create their own password strings with different encryption types.

Availability

- <https://www.denic.de/en/service/tools/hash-generator>, or
 - <https://member.secure.denic.de/en/service/tools/hash-generator>
-

Frame Conditions

A password must consist of at least 12 and no more than 256 characters.

Encryption Types

Storing an AuthInfo	SHA-256
RRI and RAI	MD5

Security Feature

DENIC receives the encrypted versions of the passwords via master-key-signed e-mails.

Service Standards

Available for	General public and members
Operating Time	24 hours x 365 days
Availability Class	4

IDN Web Converter

Brief Description

The IDN web converter converts domain names to and from the formats that are valid for internationalised domain names (IDN) and ASCII-compatible encodings.

Availability

<https://www.denic.de/en/service/tools/idn-web-converter>

Service Standards

Operating Time	24 hours x 365 days
Availability Class	4

2.3 DNS and Name Servers

Name Server Service

Brief Description

This service is used for name resolution and zone distribution for .de and 9.4.e164.arpa ENUM zones.

Availability

Accessible via UDP port 53.

Security Features

- Zone distribution to the name server locations (NSL) is performed via VPN connection.
- Production and management environments are separated in the NSL networks.

Service Standards

Available for	.de	ENUM
Operating Time	24 hours x 365 days	24 hours x 365 days
Query Service		
Availability Class	1	4
Response Time	< 50 ms	< 50 ms
Zone Update Interval	2 h	2 h

NAST Predelegation Check

Brief Description

The NAST (Nameserver Test) Predelegation Check can be used to check the name server configuration and the zone data (where applicable) in accordance with the DENIC guidelines. In this way, possible technical problems can be minimised before the registration process is started.

Service Description

The name server check is performed via

- NAST web client
 - NAST command line client in Python
 - NAST REST-API
-

Availability

NAST web client: <https://nast.denic.de/>

NAST REST-API: <https://nast.denic.de/v2/check>

Service Standards

Operating Time	24 hours x 365 days
Availability Class	4

Reference to Other Documents

- DENIC-23 (Nameserver Predelegation Check)
<https://member.secure.denic.de/en/service/denic-documents>
 - DENIC-23 (Nameserver Predelegation Check), commented
https://nast.denic.de/docs/spec/spec_en.html
-

2.4 Websites

Public and Member Websites

Brief Description

The public website provides the internet community with a range of general information and services. DENIC also operates a range of special services for members.

Availability

- The member website is available at <https://member.secure.denic.de/en/>. Access is password-protected.
 - The public website is available at <https://www.denic.de/en/>.
-

Service Standards

Available for	.de
Operating Time	24 hours x 365 days
Availability Class	2

Member Dashboards

Brief Description

The dashboards are a web-based information service. Members can call up key figures and metrics on business processes.

Availability

- <https://dashboards.denic.de>
-

Special Features:

Members can

- view developments and trends at a glance,
 - monitor the effects of marketing actions, and
 - compare their performance with that of other members with the same business model.
-

Security Features

- TLS encrypted interface
 - Two-factor authentication via login and Time-based One-Time Password
-

Service Standards

Operating Time	24 hours x 365 days
Availability Class	4
Response Time	< 50 ms

3 Non-Technical Services

3.1 General Public

Hotline

Target Group

Domain holders, internet community, providers, DENICdirect customers, TRANSIT customers, general public

Brief Description

This is DENIC's central public help desk.

Service Description

- Accepting and processing of queries and requests.
- Forwarding calls to the specialist departments.

Service Standards

Phone	
Service Level	80/20
Service Tickets (e-mail, fax, letter)	
Response Time (75% of all service tickets)	1 working day
Maximum Response Time (95% of all service tickets)	3 working days

3.2 Members and Customers

DENIC Business Services

Target Group

DENIC Members

Brief Description

DENIC Business Services is the central point of contact for all services for members of the Cooperative and for business customers.

Service Description

Acceptance and requests submitted by members

Member chat via

- Chat software Mattermost <https://memberchat.denic.de>
- Chat server installation at DENIC
- Discussion channels:
 - three public channels
 - direct messages to other members and DBS
- Chat clients:
 - Browser
 - Clients of manufacturers for various operating systems and devices
- DENIC service page: [Information how to use this channel](#)

Phone	
Service Level	90/20
FCR	70%
E-mail	
Average Response Time	4 hours
Maximum Response Time (95%)	1 working day
Fax, Letter	
Average Response Time	1 working day
Maximum Response Time (95%)	2 working days
Member Chat	
Response Time	Best effort (availability class 4)

Key Account Management & Marketing

Target Group

DENIC, members, media representatives, internet community, associations and partner organisations, public institutions, academic environment

Brief Description

- Managing DENIC's perception by the external and internal public, including brand management and reputation management
 - Central point of contact for the interested public for information about the Cooperative, its tasks, activities and positioning
-

Service Description

- Planning and implementation of communication measures
 - Media information
 - Information and other events
 - Event communication
- Conception and creation of
 - Information material
 - Brochures
 - DENIC blog, and
 - other publications
- Maintenance of the DENIC websites
- Processing requests for information within the scope of public relations

24/7 Service

Target Group

DENIC Members

Brief Description

Receive notifications of and process operational failures of the

- the name servers,
 - the mail servers,
 - the web servers,
 - the whois servers, and
 - the registration system.
-

Service Description

The emergency team is available to the members outside normal service hours for high-priority technical services and components of the DENIC infrastructure, a failure of which would have a massive impact on business operation.

Frame Conditions

This service is available to all members.

Service Standards

Phone	
Service Level	95/900