



DENIC

Host Presentation CCNSO-TechDay

ICANN78 Hamburg October 2023

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Welcome to Hamburg





Founded 1996 as a cooperative

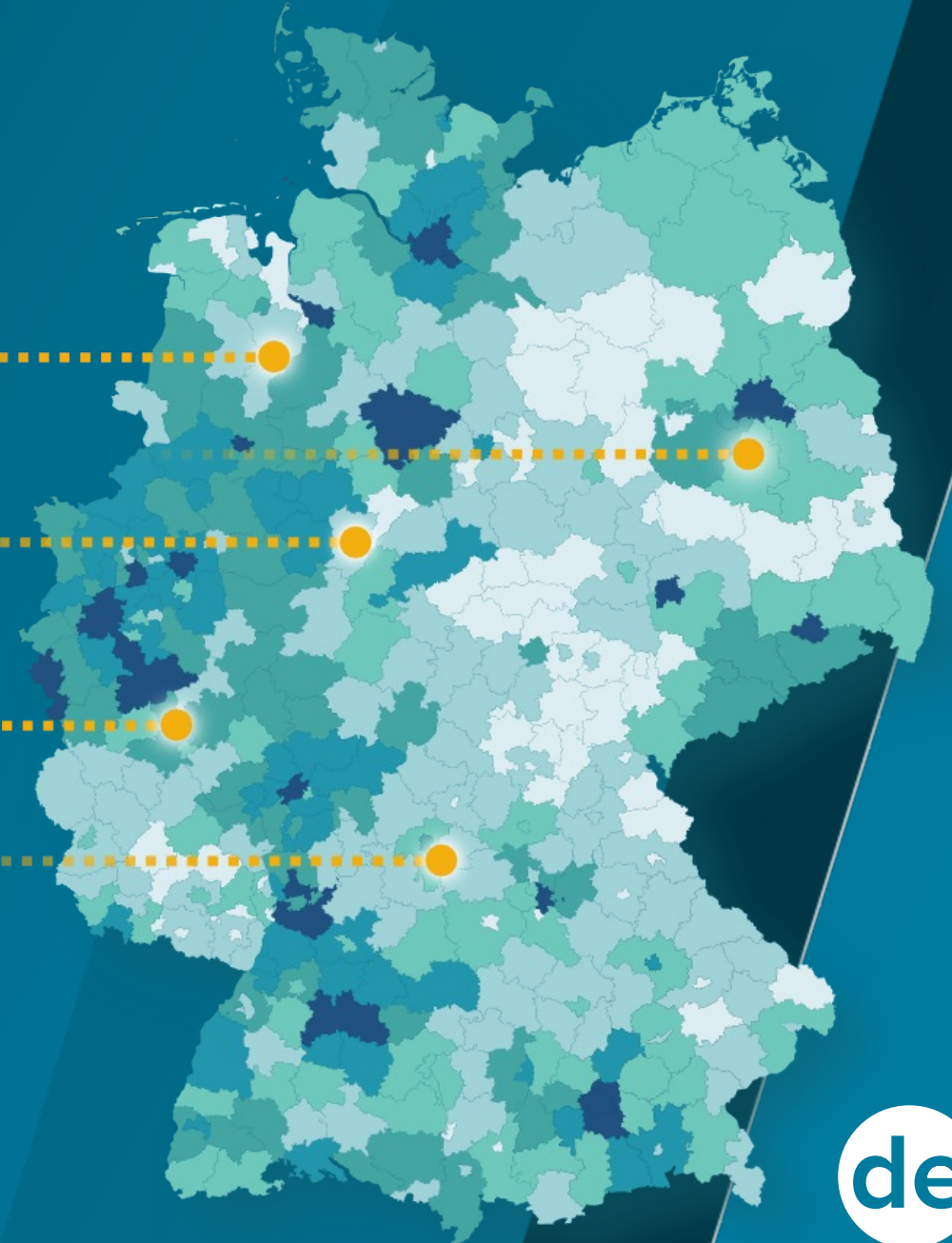
Located in Frankfurt/Main, Germany

- Neutral, non-discriminating and independent
- Membership Organisation
- Not-for-profit
- Critical infrastructure operator DNS and Registry



.de Domain

- 60% Market Share
- 3rd largest TLD globally
- 1.5% Growth YoY
(vs. 1.2% market Avg.)
- Local Presence and Trust
- Clarity & Neutral Image
- Technical Reliability



290

Members

327 RegAccs

17.6

Million

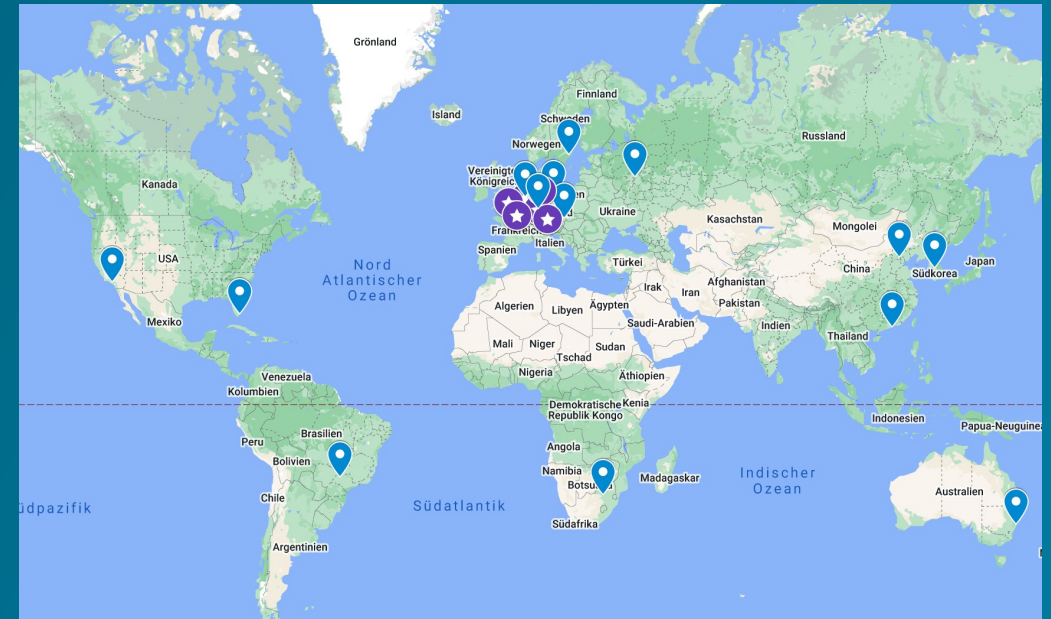
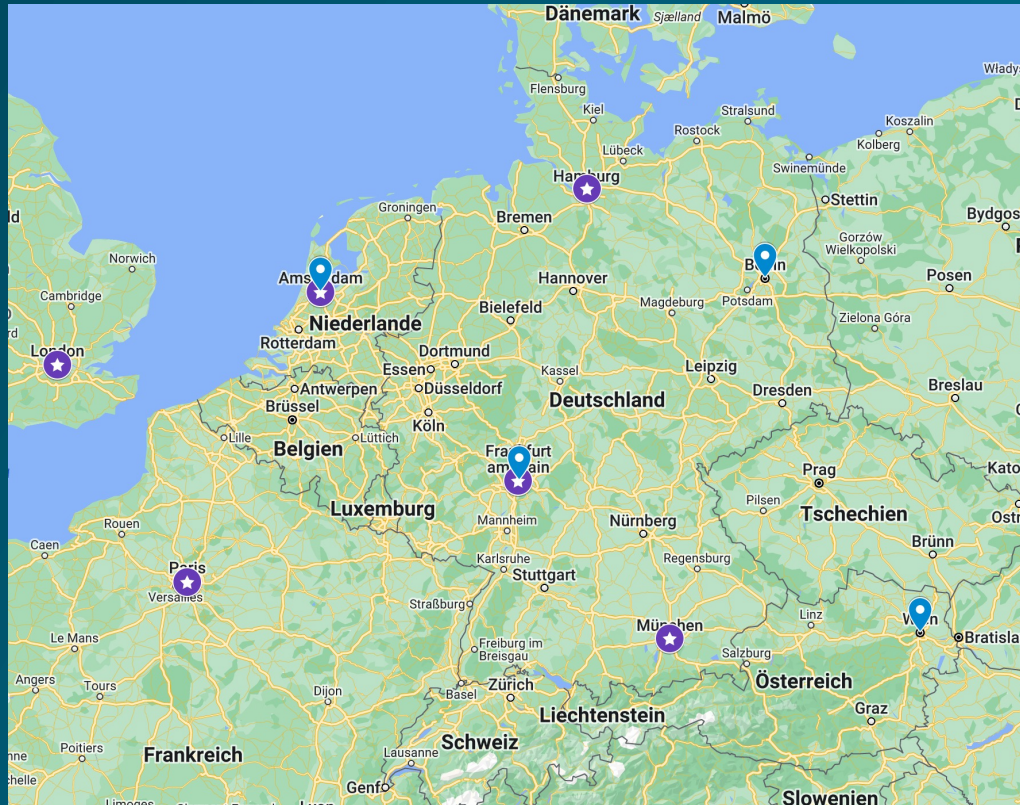
Registrations

What we do

- Manage Germany's namespace .de on the Internet
 - Registry for second-level domains for .de and ENUM
 - DNS service – 19 Global Locations
 - In-house registrar of last resort (TRANSIT process)



DENIC Infrastructure



What we also do

- **Provide B2B infrastructure via DENIC-Services**
 - DNS Anycast Services for registries (16 TLDs, ~18M DuMs)
 - Data Escrow Services for ICANN-accredited registrars and registries
 - Digital Escrow

**Protect the critical
business data** and digital
goods from misuse and loss

**Highest security and safety
guaranteed**

- ISO/IEC 27001 (Information Security)
- ISO 22301 (Business Continuity Management)



Community Engagement



I E T F[®]



DNS-OARC



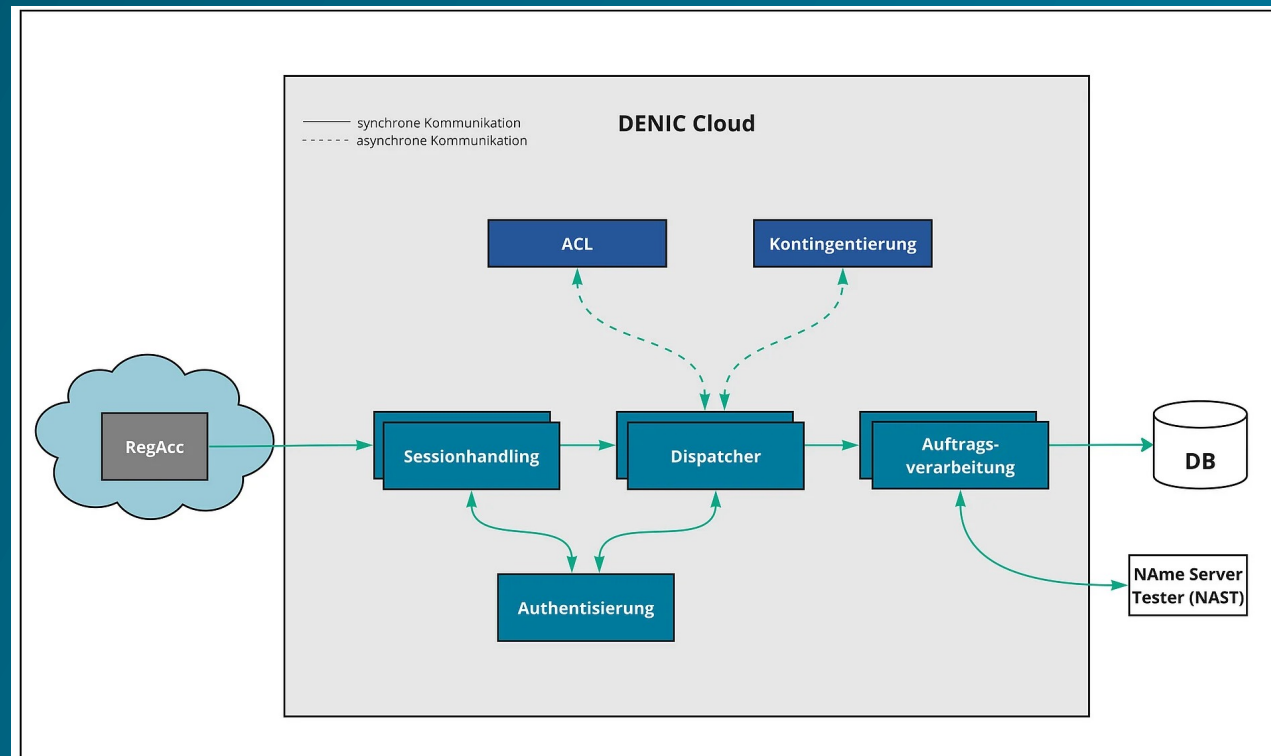
DENIC Focus

- Zone resilience and security:
 - NIS-2 / KRITIS
 - DNSSEC (now at 1,6%)
 - Registry Lock adoption
- Data capabilities
 - Member Dashboards
 - Data accuracy check
- Renovation of the technical systems
 - Move services to DENIC-Cloud
 - Modern tooling for internal functions as well as registrars including REST APIs
 - SSO and Authorization services



RRI interface - new architecture

- Microservice architecture
- Container & K8s in the DENIC-Cloud



Constraints

- Client compatibility
 - new software and libraries!
- Load (during purge phase)
 - new architecture and platform!
 - 30-40m requests / day
- “Small” architectural changes
 - Active / Active, session count, rate limits...

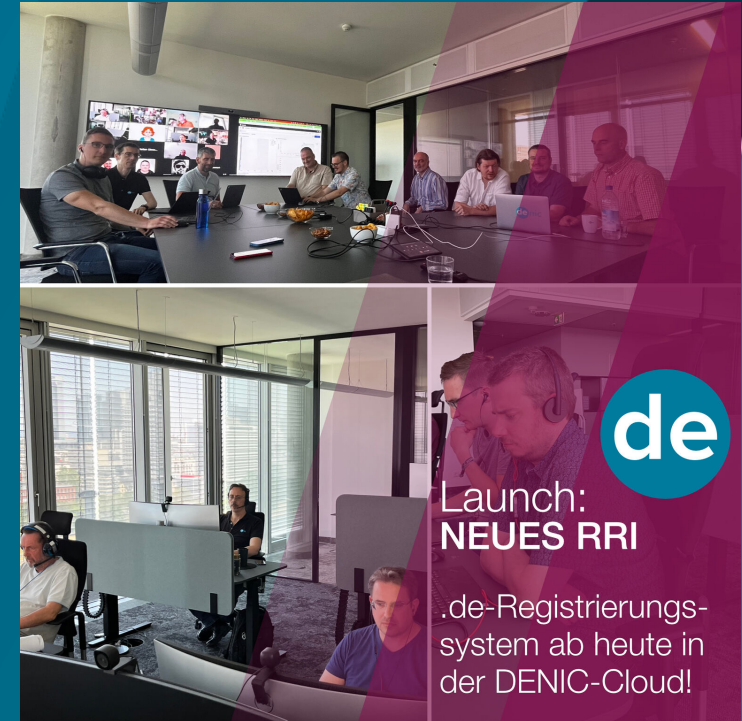


Outreach

- Phase I
 - Contact registrars / key players
 - Announce test phase to registrars
- Phase II
 - Dedicated testing of purge phase with biggest domain investors

Launch

- Go Live on 13th June
(just in time before the summer holidays)
- Smooth sailing
including purge phase
- Some registrars encountered issues
 - Less sessions
 - Different XML library
 - 2 packets != 1 packet



NIS2 Directive

- **Article 28**
- **Owner Data for Organizations back in whois**
- **Verification as part of the Registration Process**

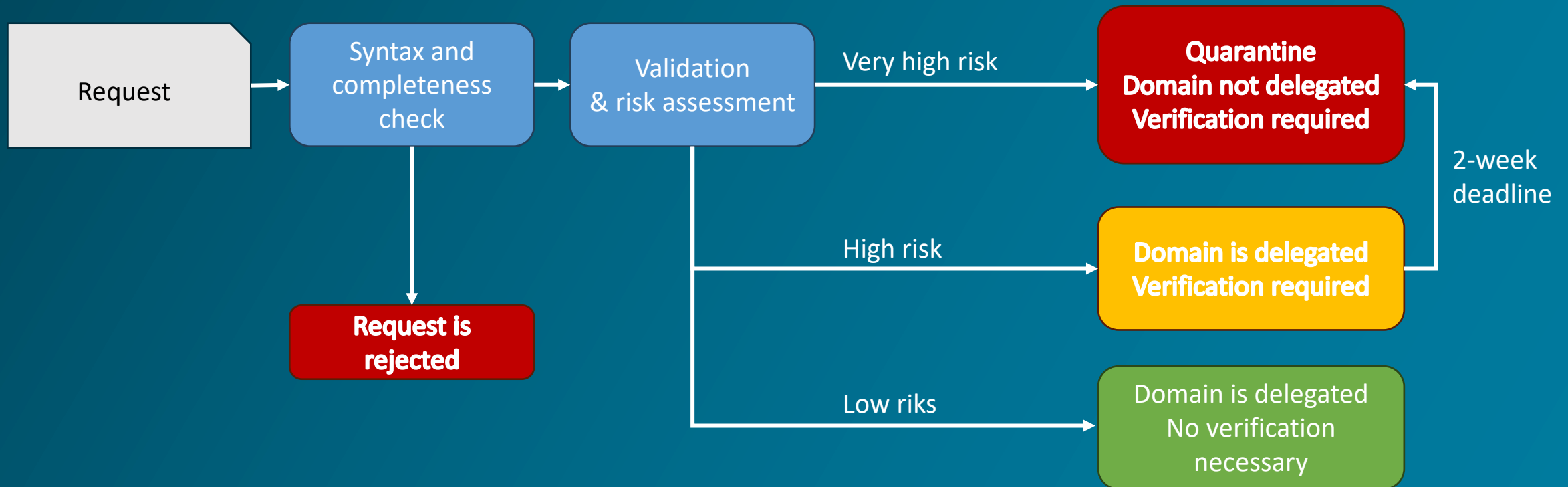
Principles

- Future-oriented, scalable in a flexible, risk-based approach
- Regular check only for new/updated/transferred domains
- Check of domains already in our inventory only in case of complaints or irregularities
- Ex post and ex ante verification possible
- Verification can be used again, even for different TLDs

Verification

- **To be verified (risk-based):**
 - Name -> Existence of Person or Organization
 - Address -> Existing / Fake or not
- **Communication method:**
 - E-Mail – with every holder (independent of verification)
- **Not verified:**
 - Phone Number

Generic Process with Traffic-Light Risk Assessment



Who will verify?

The DENIC Member (Registrar) is obligated to execute the verification and prove it upon request.

Wide variety of allowed verification methods enables members to find the best fit to their business model.



Data Quality Dashboards for members



- Data Quality Dashboards available in open beta version
- Heuristics incorporated for handle types that have been mixed up
- Handle IDs can be downloaded as csv/xls

Technical Challenges behind NIS-2 implementation

- Many TLDs will have different processes due to local legislation
- Different processes consist of basic building blocks (use-cases) which shall have unified protocols and data models (EPP extensions, RDAP, statuses etc.)
- Work started at CENTR to consolidate current existing solutions and best practices
- Harmonization and standardization is a key to avoid fragmentation!



THANK YOU!

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