



EPP for NIS2

The .at Approach

2024-06-04 · Alexander Mayrhofer · Head of R&D

Agenda

- The .at ccTLD
- Our (Draft!) NIS2 Article 28 process
- The „Verification Report“ Idea
- EPP Command Examples (Draft!)
 - Contact Update
 - Contact Info
 - Domain Info

The .at ccTLD and NIS2

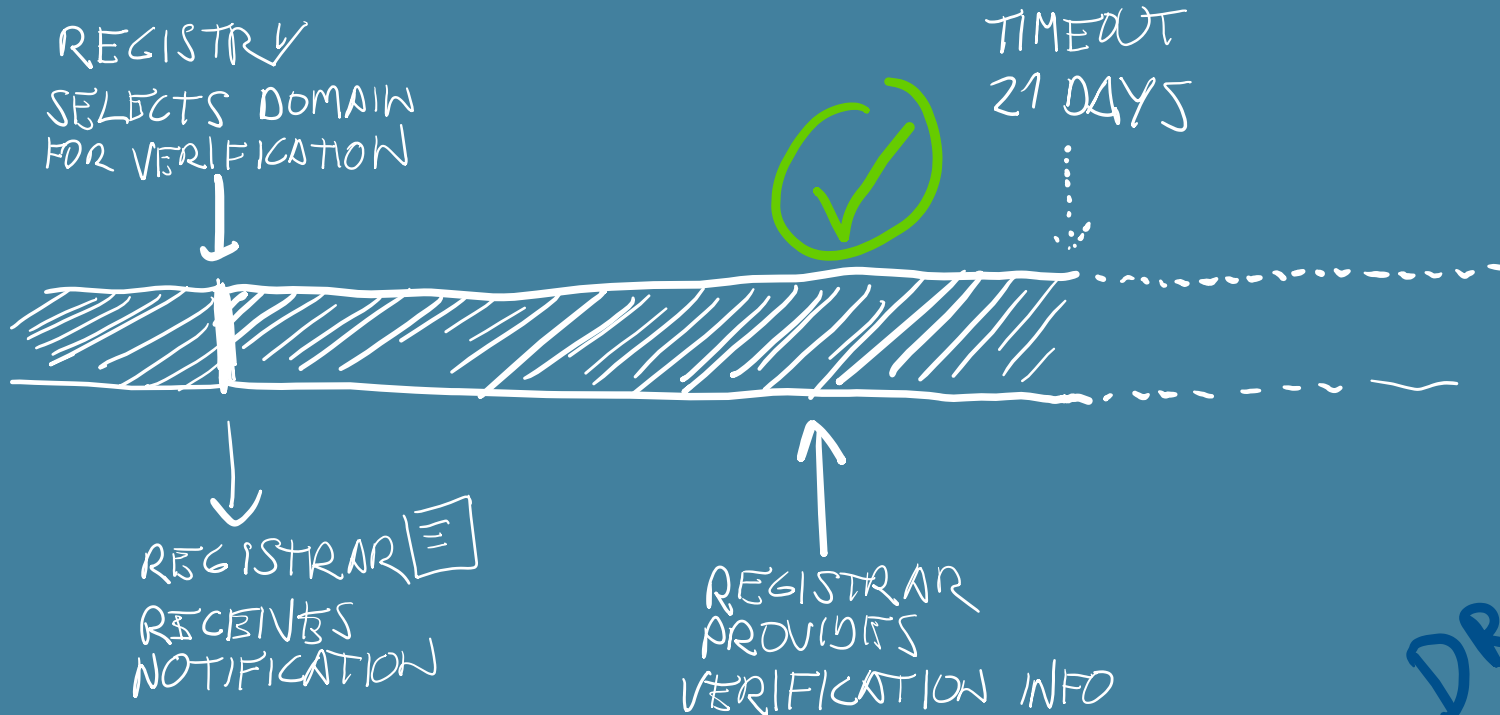
- ~1.5 Million active registrations, retention rate ~90%
- Operated by nic.at since 1997
- ~450 Registrars

- NIS2 Implementation ongoing
 - Registry will **select Domains for Verification**
 - Registrar will **verify Owner and provide Info to Registry**

Our (Draft) NIS2 Process

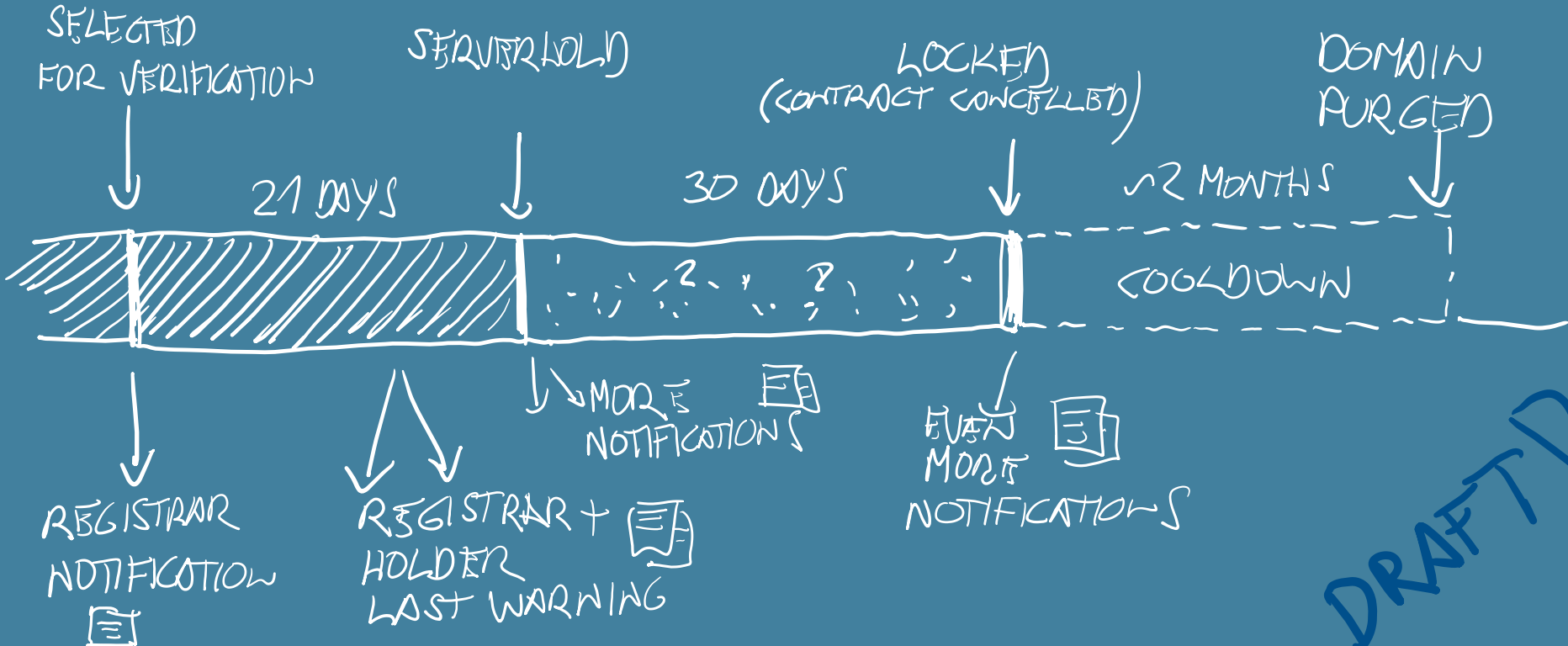
Implementing Article 28

.at NIS2 Process – Happy Path!



DRAFT!

.at NIS2 Process – „Death Row“ Path



DRAFT!

The „Verification Report“ Idea

- Verification Data is independent from Contact Attributes
 - „Meta Data“
 - Shouldn't stick „directly“ on the contact
- What the Registry receives is a **Report** of a **Verification** by the Registrar
 - It's up to the Registry to decide on the „effect“ of such report on contacts/domains/etc.
- The „Verification Report“ was born
- Similar to „Restore Report“ – see RFC 3915

„Verification Report“ contents

- „**result**“ – outcome of the verification process
- „**timestamp**“ – date/time of completion of verification process
- „**method**“ – Identifier/Description of the method used to verify the contact
- „**referencenumber**“ – an identifier of the ticket/etc at the entity that performed the verification
- „**agent**“ – name of the entity that performed the verification

EPP Extension

Implementing the „Verification Report“ and Status Values

Extension Basics

- Command/Response Extension
- Affected Commands
 - Contact Update
 - Contact Create
 - Contact Info
 - Domain Info
- Notifications
 - Extending nic.at's proprietary notification extension

Contact Update (+ Contact Create)

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <command>
    <update>
      <contact:update xmlns:contact="urn:ietf:params:xml:ns:contact-1.0" xsi:schemaLocation="urn:ietf:params:xml:ns:contact-1.0 contact-1.0.xsd">
        <contact:id>myhandle</contact:id>
        <contact:chg/>
      </contact:update>
    </update>
    <extension>
      <verification:update xmlns:verificationReport="http://www.nic.at/xsd/at-ext-verificationReport-1.0"
xsi:schemaLocation="urn:ietf:params:xml:ns:verificationReport-1.0 verificationReport-1.0.xsd">
```

<verification:report>

<verification:result>success</verification:result>

<verification:timestamp>2003-11-26T22:00:00.0Z</verification:timestamp>

<verification:method>passportcopy</verification:method>

<verification:referencenumber>Vorgang#321</verification:referencenumber>

<verification:agent>RegistrarA</verification:agent>

</verification:report>

```
</verification:update>
</extension>
<clTRID>ABC-12345</clTRID>
</command>
</epp>
```

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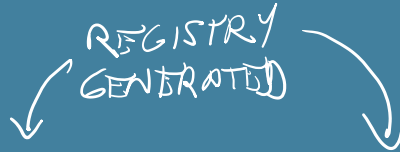
Contact Info

```

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <resData>
      <contact:infData
        xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        {{ übliche contact info data hier }}
      </contact:infData>
    </resData>
    <extension>
      <verification:infData {{ XML NS definition}}>
        <verification:report submitTimestamp="2024-03-26T22:00:00.0Z" submitclID="123">
          <verification:result>success</verification:result>
          <verification:timestamp>2003-11-26T22:00:00.0Z</verification:timestamp>
          <verification:method>passportcopy</verification:method>
          <verification:referencenumber>Vorgang#321</verification:referencenumber>
          <verification:agent>RegistrarA</verification:agent>
        </verification:report>
        <verification:status s="verified"/>
      </verification:infData>
    </extension>
    <trID>
      <clTRID>ABC-12345</clTRID>
      <svTRID>54322-XYZ</svTRID>
    </trID>
  </response>
</epp>

```

REGISTRY
GENERATED



DRAFT!

```

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0
    epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <resData>
      {{ übliche domain info daten entfernt }}
    </resData>
    <extension>
      <verification:infData xmlns:verification="http://www.nic.at/xsd/at-ext-verification-1.0"
        xsi:schemaLocation="http://www.nic.at/xsd/at-ext-verification-1.0.xsd">
        <verification:verificationStatus s="pendingVerification"/>
        <verification:actionUntil>2025-11-26T22:00:00.0Z</verification:actionUntil>
      </verification:infData>
    </extension>
  </response>
</epp>

```

DRAFT!

Next Steps

- This is the first public Presentation!
- Presentations to .at Registrars in the coming days
- Will refine Idea/Extension
 - Particularly multi-domain scenarios are challenging
 - Notifications will be fine-tuned
 - Schema creation
- Specification (Policy!) / Implementation
- (If resources and interest permits, might create an Internet Draft)

Summary

- **.at** is the **ccTLD of Austria**, nic.at manages about **1.5 million registrations**
- **NIS2 Process in a sentence:** Registry requests verification, Registrar provides Verification Info
- **„Verification Report“** similar to RFC3915 will encapsulate that data
- **EPP Extension** affects contact create, contact update, contact info, domain info
- Currenty in **Draft**, will be refined in coming weeks

Questions?

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