



SWITCH

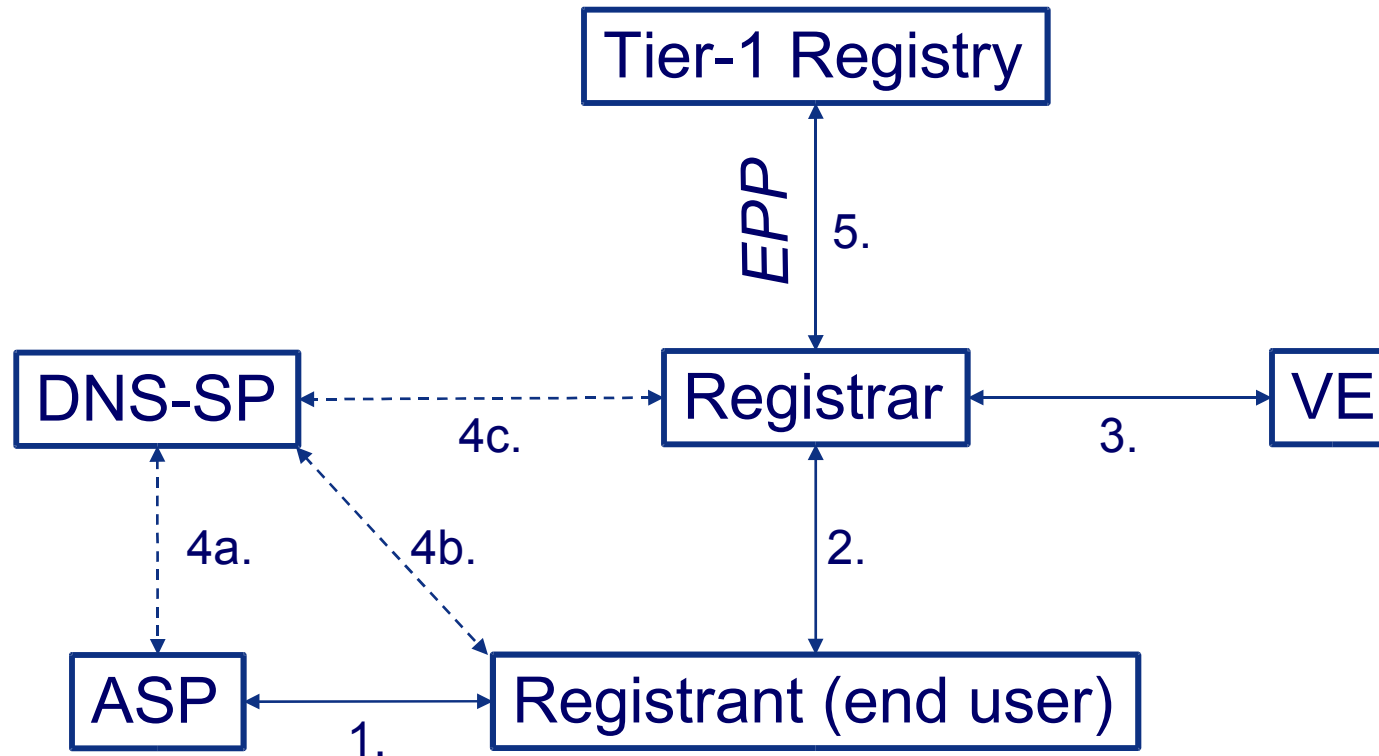
The Swiss Education & Research Network

The Swiss ENUM Trial

**Framework for the operation of the Tier-1 Registry
and Validation**

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- Model, Roles and Duties in ENUM provisioning
 - Registrars
 - Validation Entities
 - Validation
 - EPP
 - IETF work on validation
- Status of the Swiss ENUM Trial
 - Further Information

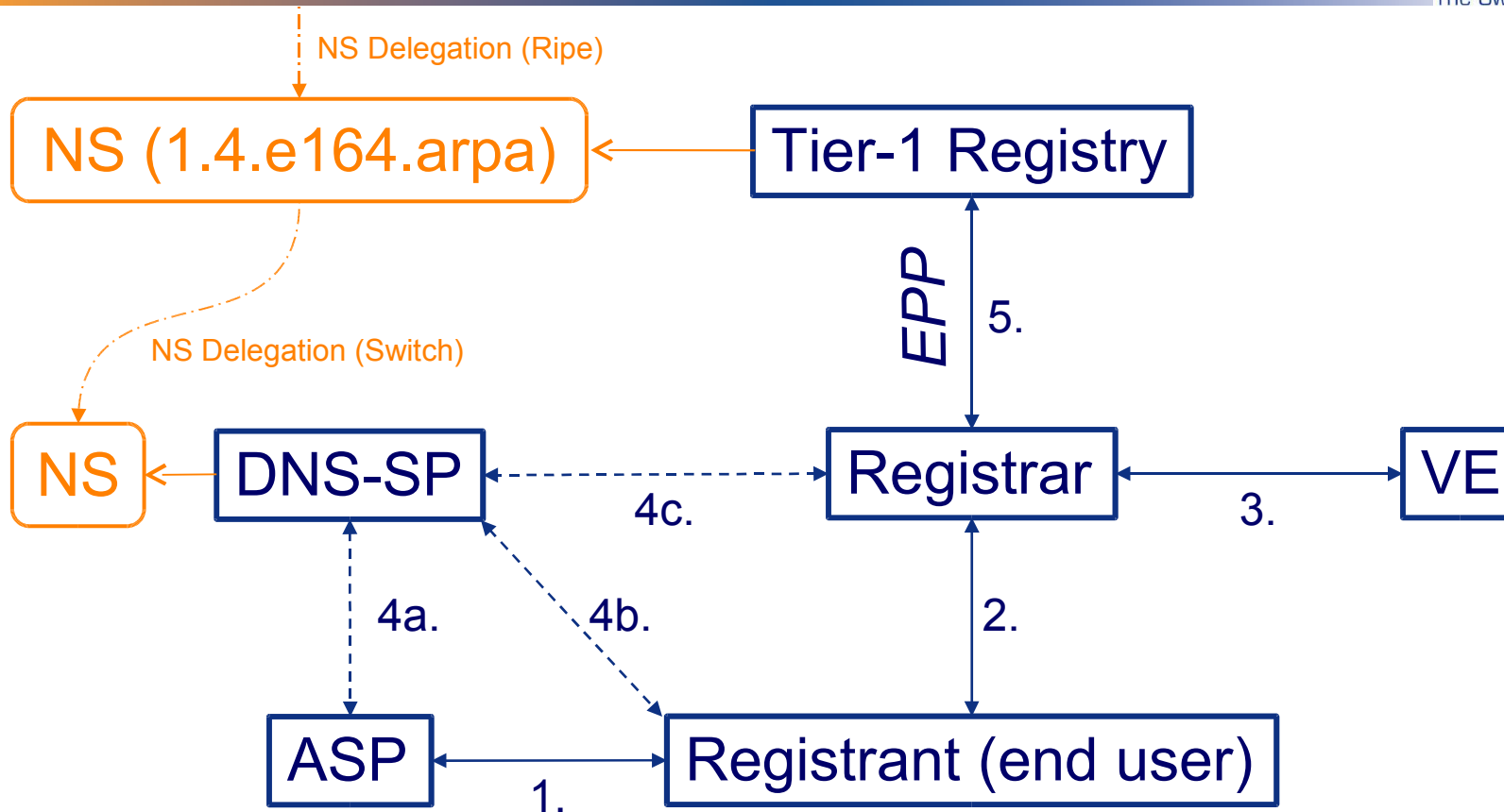


Note that one party can operate more than one of these entities together; for example the Registrar, the DNS-SP, and the ASP entities could be offered in a combined service package.

Legend:

VE: Validation Entity
ASP: Application Service Provider
DNS-SP: DNS Service Provider

Involved Entities and Interfaces



Note that one party can operate more than one of these entities together; for example the Registrar, the DNS-SP, and the ASP entities could be offered in a combined service package.

Legend:

VE: Validation Entity
ASP: Application Service Provider
DNS-SP: DNS Service Provider

Role:

- Similar as in the "ordinary" domain name registration world
 - Primary contact to the Registrants (end-users)
- Must **ensure** that **validation** has been applied before registration at the Registry

Preconditions:

- Interest in taking part in the Swiss ENUM Trial
- Signed MoU (Memorandum of Understanding)
- Procedure to ensure validation
 - Use a 3rd party Validation Entity, or
 - Registrar acts also as Validation Entity
- EPP (Extensible Provisioning Protocol) client implementation
 - including EPP extension for transport of validation related information

Role:

- **Execute validation** (based on approved validation methods)

Preconditions:

- Interest in taking part in the Swiss ENUM Trial
- Signed MoU (Memorandum of Understanding)
- Approved validation method(s)
 - VE sends a description of the validation method to the Registry for approval
 - Registry evaluates the validation method

- Aim of validation:
 - Ensure: Registrant ENUM domain name == Assignee E.164 number
 - Ensure identification of the Assignee
 - Ensure active agreement of the Assignee (opt-in)
- Some aspects of validation methods to be documented:
 - Number types (according to OFCOM E.164 numbering plan) to be validated
 - Used for initial and/or recurring validations?
 - Validity of validation in question
 - Different handling needed for organizations and private persons?
 - Different handling needed for single numbers and number blocks?
 - Storing of documents / archiving
 - Other relevant aspects of a validation method

- EPP = Extensible Provisioning Protocol
- IETF protocol developed for Domain Name Provisioning
- EPP is used for automated Communication between the Registrars and the Registry
 - Registry operates an EPP Server
 - » TCP/TLS Server for real time operations
 - Registrars use an EPP client
 - » Registrars can perform all operations needed for registration or modification of ENUM domain names, address updates, etc.
- EPP requests and replies are XML documents
- ENUM specific extension for transport of validation information

draft-mayrhofer-enum-validation-arch

- General description of validation
- Requirements
- Provisioning model and roles
- Process and trust assumptions

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- Transport of validation data in EPP
- Example for a simple validation data format

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- Advanced validation data format
- Optional cryptographic signature

- Successful start of the EPP registration application
 - Mon 11th of April 2005 at 2 p.m.
- Current Registrars:
 - FirstCom Group: <http://www.swissexnum.ch/>
 - OSS Outsource Services: <http://www.enum-schweiz.ch/>
 - Three further companies have signed the MoU and are about to deploy an ENUM registrar service
- Some Statistics
 - Over 32'000 Swiss E.164 numbers are ENUM enabled
 - NAPTR RRs are mostly for **sip**
 - Further NAPTR RRs for tel, http, mailto, h323, iax2

- ENUM activities in the field of research and education
 - The ETH Zurich (Swiss Federal Institute of Technology) has a project to make all staff and students reachable by means of ENUM and SIP:
<http://www.polyphone.ethz.ch/>
 - » ETH is the 1st SIP.edu participant outside the US
 - Further activities going on at different universities
- Information about the Swiss ENUM-Trial:
 - <http://www.switch.ch/enum/>
 - email: hoeneisen@switch.ch


```
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          </domain:hostAttr>
        </domain:ns>
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