IETF 123 Hackathon
RPP (RESTful Provisioning Protocol)

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Goals

RPP

- Alternative to EPP, for domain names creation/management

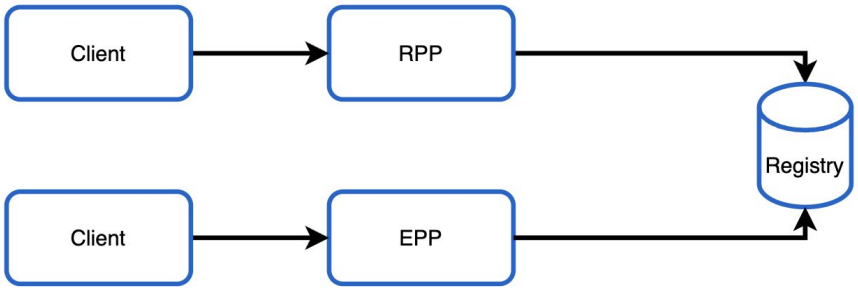
Prototyping

- Experimental implementations of RPP (draft-wullink-rpp-core)
- Experiments with alternative representation of DNS data draft-simmen-rpp-dns-data

Discussion:

- Data modelling for provisioning objects
- Refinement of RPP drafts:
  - draft-ietf-rpp-requirements-01
  - draft-kowalik-rpp-architecture-02
  - draft-wullink-rpp-core-01
  - draft-simmen-rpp-dns-data-00

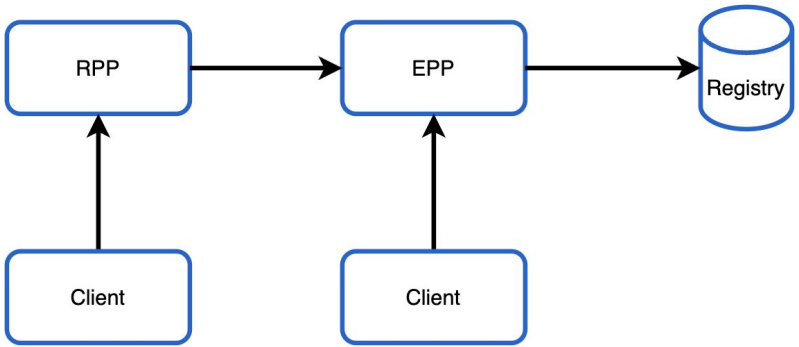
Deployment - Parallel / Native



Working implementations:

- DENIC
  - Basic Flow was compatible with existing endpoints
  - Transfer @DENIC is custom but worked with small additions
  - New OAuth2 Login Flow instead of the proprietary DENIC login flow
- Afnic
  - Very simple “RPP” server in Python (and curl + a Zig program as the client)

Deployment - RPP/EPP Proxy



Working implementations:

- SIDN
  - Py-rpp: RPP to EPP adapter for compatibility testing, Most EPP commands working.
- RPP Testbed
  - Working CREATE/INFO/DELETE for Domains and Contacts with xpanel/epp open source server
- Q
  - Added RPP frontend to epp-proxy
  - Check, create, info, and delete implemented for domains, contacts, and hosts
  - Tested against the real Identity Digital EPP server

Results

- 5 working implementations, 3 connected to real registry systems
- Aligned URL structure in the draft
- Quite a few different proposals to data representations of provisioning objects
- Added generic proposal for handling EPP security token
- Representation of error responses using Problem Detail documents

Future work

- Publicly available test environment for testing the latest RPP specification(s);
  - Online running sandbox (Cloud)
  - Docker
- Finalize requirements document
- Design of API spec and data model
- Update existing prototypes

References

Drafts:

- https://datatracker.ietf.org/doc/draft-ietf-rpp-requirements/
- https://datatracker.ietf.org/doc/draft-kowalik-rpp-architecture/
- https://datatracker.ietf.org/doc/draft-wullink-rpp-core/
- https://datatracker.ietf.org/doc/draft-simmen-rpp-dns-data/

Open API Specifications (both WIP):

- https://pawel-kow.github.io/ietf-rpp-api-typespec/
- https://sidn.github.io/py-rpp/swagger.html

References

Implementations:

- RPP API in TypeSpec https://github.com/pawel-kow/ietf-rpp-api-typespec
- Q - RPP frontend to epp-proxy https://github.com/AS207960/epp-proxy/tree/root/src/rpp
- RPP/EPP Proxy Python: https://github.com/pawel-kow/ietf-rpp-api-epp-proxy-python
- PyRPP (RPP/EPP proxy, tested with SIDN and Nominet systems): https://github.com/SIDN/py-rpp
- Afnic server software https://github.com/bortzmeyer/RPP-Afnic

Instances:

- Afnic test server: https://wiki.ietf.org/en/group/rpp/hackathon/hackathon-123

Thank you