

RESTful EPP, Version 01

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About RESTful EPP

- Mapping EPP commands to a RESTful API
- Focus on
 - Scalability
 - Performance
 - Usability
 - Security
- Limited use of XML/JSON messages

Changes between 00 and 01

- Created new base XML schema, based on RFC5730 schema
 - Removed commands that are obsoleted
 - Renamed RPC style `<command><check|info..>` to request style `<request><body>`
- Removed EPP extension
- Focussed on usability
 - Made request message optional where possible



Example: Updated XML schema

EPP:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<epp xmlns="urn:ietf:params:xml:ns:repp-1.0"
     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xsi:schemaLocation="urn:ietf:params:xml:ns:repp-1.0 repp-1.0.xsd">
  <command>
    <info>
      <!-- Object-Info-specific elements. -->
    </info>
  </command>
</epp>
```

REPP:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<repp xmlns="urn:ietf:params:xml:ns:repp-1.0"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="urn:ietf:params:xml:ns:repp-1.0 repp-1.0.xsd">
  <request>
    <body>
      <!-- Object-Info-specific elements. -->
    </body>
  </request>
</repp>
```

Example: Domain Check

Request

```
HEAD /repp/v1/domains/example.nl  
HTTP/2  
Host: repp.example.nl  
Authorization: Bearer <token>  
Accept: application/epp+xml  
Accept-Language: en  
REPP-Cltrid: ABC-12345  
REPP-Svcs:  
urn:ietf:params:xml:ns:domain-1.0
```

No request message required

Request encoded in:

- Method
- URL
- Headers

Response

```
HTTP/2 200 OK  
Date: Wed, 24 Jan 2024 12:00:00 UTC  
Server: Example REPP server v1.0  
REPP-Cltrid: ABC-12345  
REPP-Svtrid: XYZ-12345  
REPP-Check-Avail: 0  
REPP-Check-Reason: In use  
REPP-result-code: 1000  
Content-Length: 0
```

No response message

Response encoded in:

- Headers

Additional document for JSON format

JSON: Mapping EPP XML schema to JSON schema

- Reuse established semantics for existing XML object mappings (domain, host, contact ...)

<https://datatracker.ietf.org/doc/draft-wullink-restful-epp-json>

<https://github.com/SIDN/ietf-epp-restful-json>

Open Questions

- Is it a RFC5730 protocol mapping?
- How to:
 - Handle EPP extensions?
 - Include support for JSON?
 - Conversion of XML or XML schema?

Discussion

- What is the path forward?
 - Adoption by WG?

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