

RDAP @ DNS Belgium

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dnsbelgium

.be

.brussels

.vlaanderen

Our RDAP incentives (Q1 2013)

Mailinglist participation

Design new internal application Abusetool

- Automated access all public WHOIS data
- Loosely coupled to registration platform

CERT.be

- Automated access all public WHOIS data

No solution in current services

→ Implement WEIRDS (RDAP)

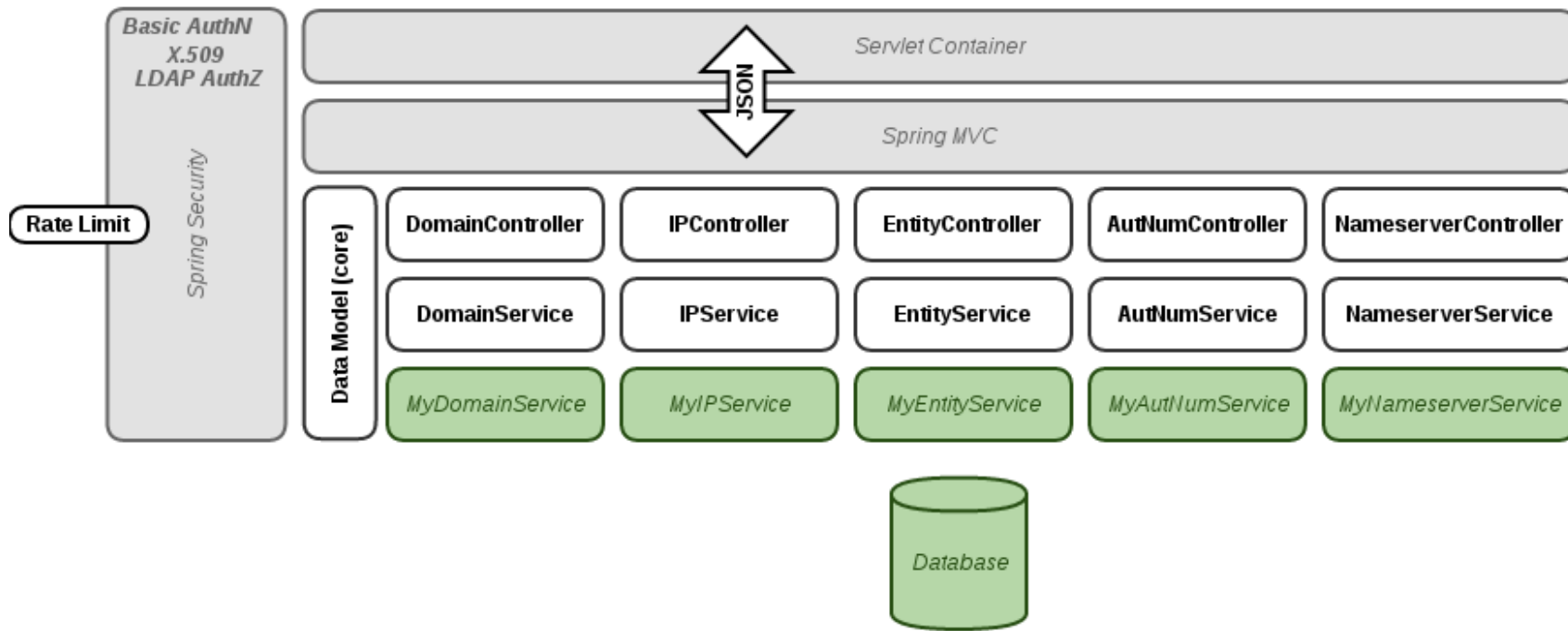
Implementing RDAP (Q2 2013)

DNS Belgium RDAP open source library

- Pluggable Java framework
- Presented at CENTR Jamboree, June 2013 Amsterdam
- <https://github.com/DNSBelgium/rdap>
- Not at standalone application, just a library:
 - REST endpoint definitions/mappings
 - Data Transfer Objects for JSON response format
 - Redirection for non authoritative response
 - Extensible

→ Just plug in your backend service(s)!

DNS Belgium RDAP library (Java)



Gray: Spring libraries
 White: DNS Belgium library
 Green: Your custom implementation

Extending default implementation

```
public class MyDomainService extends DefaultDomainService {

    @Override
    public Domain getDomainImpl(DomainName domainName) {
        String tld = domainName.getTldLabel().getStringValue();
        if (!supportedTlds.contains(tld)) {
            throw RDAPError.notAuthoritative(domainName);
        }
        Domain domain = domainDAO.getDomain(domainName);
        if (domain == null) {
            throw RDAPError.noResults(domainName.getStringValue());
        }
        return domain
    }
}
```

Deploying RDAP (Q3 2013)

Service up and running

- Authentication using X.509 certificates
- Only domain lookup possible
- Abusetool only current user
- CERT.be dropped their request
 - No external usage yet: no feedback
 - Service not publicly available

RFCs published (Q2 2015)

Updating open source library

- Implementation
- Documentation

Example implementation <https://github.com/DNSBelgium/rdap-server-sample-gtld>

Registry operator (Nic.at) assessing library

- Help them getting started

Next steps

Third party access ?

- Applied privacy to registrants in backend (same as WHOIS)
- Make service available publicly: TODO

Access for interested registrars in the future?

- Manageable like a third party

Access for general public in the future?

- Raises questions towards authentication?

Try conformance tests against library?

RDAP authentication options

No authentication

- Provide reduced service ?

Basic authentication

- User administration ☹️

Client certificates

- Certificate mgmt ☹️

OpenID Connect

- Draft submitted May 2015
- Possible federation trust issue ? ☹️
- Looks promising (based on our current OAuth 2.0 knowledge)

RDAP improvements?

WHOIS is not a domain availability service (DAS)

- Special cases like blocked or reserved domains
- Some registries build own DAS

Can RDAP provide uniform solution?

- Earlier discussion unconcluded
- RFC unclear (for us)
- The way forward to an real solution?

More clients!

- For registrars to use/incorporate?
- Any language! JS/ Java / Python/ Go / Perl / ...

Demo

Deployed sample app on AWS

<https://github.com/DNSBelgium/rdap-server-sample-gtld>

Uses DNS Belgium library

Converts newgTLDs WHOIS output to RDAP

Please try it and provide feedback

<http://row3-dnsbelgium-sample.elasticbeanstalk.com/rdap/domain/nic.brussels>

Conclusions

DNS Belgium

- Operational RDAP experience
- Java library: <https://github.com/DNSBelgium/rdap>
- Example server: <https://github.com/DNSBelgium/rdap-server-sample-gtld> <http://row3-dnsbelgium-sample.elasticbeanstalk.com/rdap/domain/nic.brussels>
- Seeks active collaboration
 1. Library implementation
 2. The way forward: authentication, new features, ...

Come talk to us!

Questions?

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