Development of Open Source RESTful WHOIS

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WHOIS Protocol (RFC 3912) has problems

WHOIS has never been internationalized

- WHOIS was defined for ASCII only

WHOIS also has no data model

- The WHOIS protocol (RFC 3912) does not define query formats or encoding, has no structure for replies and error messages

The WHOIS protocol does not offer any differential service

- No authentication mechanisms
- Authentication makes user authorization, access control or rate limit possible

- IETF WEIRDS (Web Extensible Internet Registration Data Service) working group was formed on May 16, 2012

- The WG aims to:
  - Standardize a single data framework
  - Use standard features of HTTP to support differential service levels to different classes of user
  - Produce a simple, easy-to-implement protocol that supports internationalized registration data

- WG drafts
  - draft-ietf-weirds-using-http (CNNIC co-author)   draft-ietf-weirds-rdap-query   draft-ietf-weirds-json-response
  - draft-ietf-weirds-rdap-sec (CNNIC co-author)   draft-ietf-weirds-rdap-redirects
- Individual drafts
  - draft-hollenbeck-weirds-rdap-search   draft-zhou-weirds-dnrd-ap-object-inventory(CNNIC)
  - draft-zhou-weirds-rdap-restful-search (CNNIC)
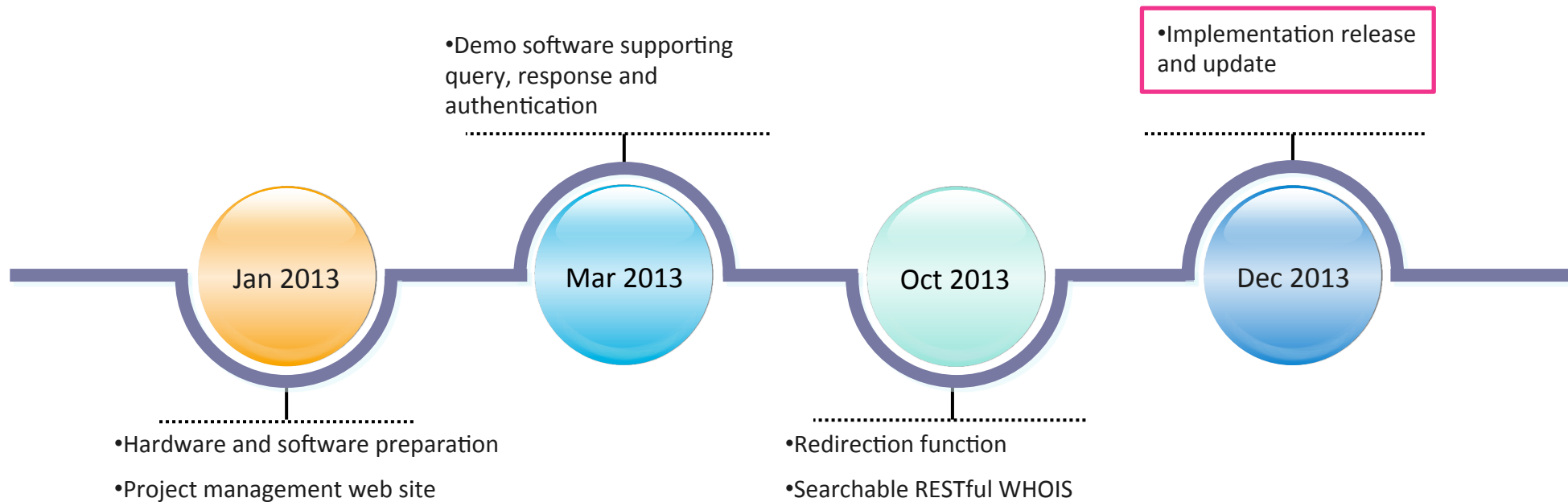
中国信息社会重要的基础设施建设者、运行者和管理者

In May 2012, ICANN began to invite tenders in the global scale to assume the open source RESTful WHOIS program so as to implement The open source RESTful WHOIS in accordance with the IETF standards.

CNNIC applied for this RFP. In total 10 proposals were submitted.

Going through the evaluation and the teleconference defense, CNNIC got the highest score from the panel experts, thus successfully won the bid.

CNNIC Selected to Implement RESTful WHOIS

CNNIC and ICANN executed the collaboration agreement for development of a RESTful WHOIS open-source server in 26th Oct, 2012 .

• CNNIC will assume the exclusive role of open source RESTful WHOIS development program.

•The RESTful WHOIS server will be implemented according to the WEIRDS WG protocols to meet the needs of the community.

- Demo software supporting query, response and authentication

- Implementation release and update

Jan 2013 — **Mar 2013** — **Oct 2013** — **Dec 2013**

- Hardware and software preparation
- Project management web site

- Redirection function
- Searchable RESTful WHOIS

Server preparation

1

2

www.restfulwhois.org

for project management

RESTful WHOIS

Call for volunteers to join in the development team

3

4

- Software requirement specifications
- Architecture
- Database design

www.restfulwhois.org

Wiki | Timeline | Roadmap | Browse Source | View Tickets | New Ticket | Search

wiki: WikiStart

Start Page | Index | History

Restful Whois

Restful Whois Reference Implementaion is an open source software which is designed to facilitate the evaluation and adoption of the RDAP (Registration Data Access Protocol). IETF WEIRDS working group is now working on the specifications of this protocol.

There are currently five drafts in the process of discussion in the working group. For more details, please see below:

- Using the Registration Data Access Protocol (RDAP) with HTTP
- Registration Data Access Protocol Query Format
- JSON Responses for the Registration Data Access Protocol (RDAP)
- Security Services for the Registration Data Access Protocol
- LACNIC's Redirection Service for Number Resource RESTful WHOIS Queries

Project Background

In May 2012, ICANN called for proporals for an Open-Source Reference Implementation of a RESTful-based Domain Name Registration Data Access Protocol. In total 10 proposals were submitted. All responses were technically competent and CNNIC (operator of .CN) received the panel's highest recommendation. The cooperative agreement between ICANN and CNNIC took effect on 26th Oct, 2012.

CNNIC (China Internet Network Information Center), founded as a non-profit organization, is the entity responsible for the operation and administration ".CN" country code Top Level Domain (ccTLD). CNNIC has expertise on providing critical registry functions including DNS, DNSSEC test, WHOIS, and SRS/EPP and is dedicated to serving regional and global Internet community.

If you are interested in being a developer of this project. Please mail to ✉here.We are looking forward to your participation.

Announcement

- The file of software requirements specification has been posted. Please refer to Software Requirements Specification. 2013-1-15
- Preliminary architecture figure 2013-1-31
- If you have any questions,please use the 'New Ticket' funtion to leave us a message.

Development

Last modified 13 days ago

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http://trac.edgewall.org/

If you have product development experience in JAVA, strong understanding of algorithms and software engineering, relevant experience with database design and SQL etc., please click here to join us!

Please mail to ✉here.

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- Manage this project by Scrum approach that is an iterative and incremental agile software development method

- Volunteers will attend a 10-15 min daily teleconference

- New tickets will be created for everyone's tasks. Find them on the "View Tickets" page.
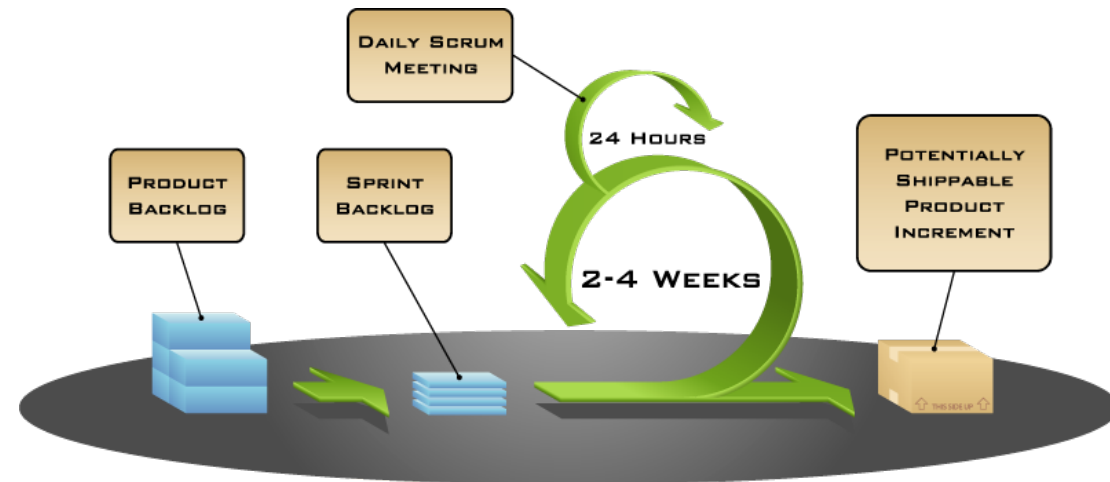
Software

- Developed by JAVA 6
- Web server – Apache httpd (v2.0 or above)
- Web container – Tomcat (v6.0 or above)
- Database – MySQL (v5.0 or above). System is also compatible with other databases such as Oracle
- Client – CMD Client and browser

Hardware

- 1 Database Server
- 3 servers used for RESTful WHOIS server, Port 43 proxy server and redirect server

Preliminary Software Architecture
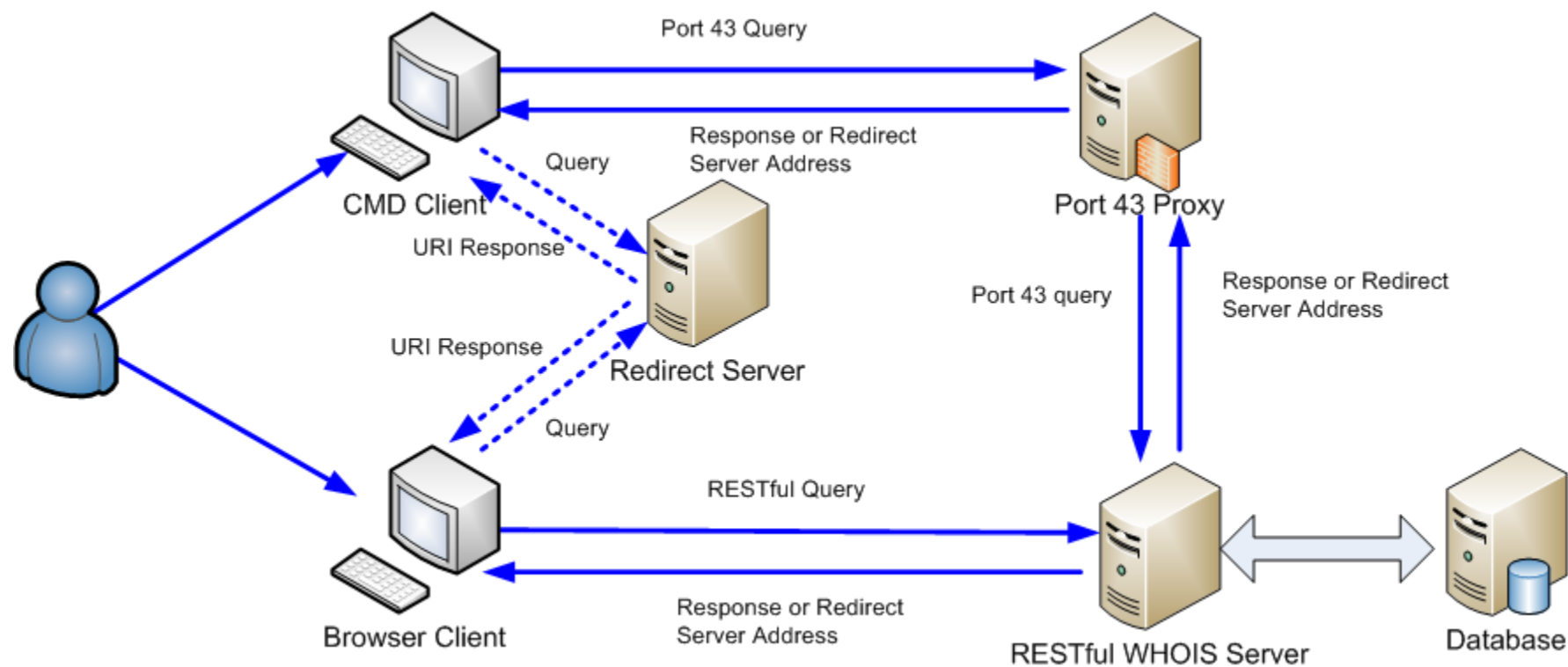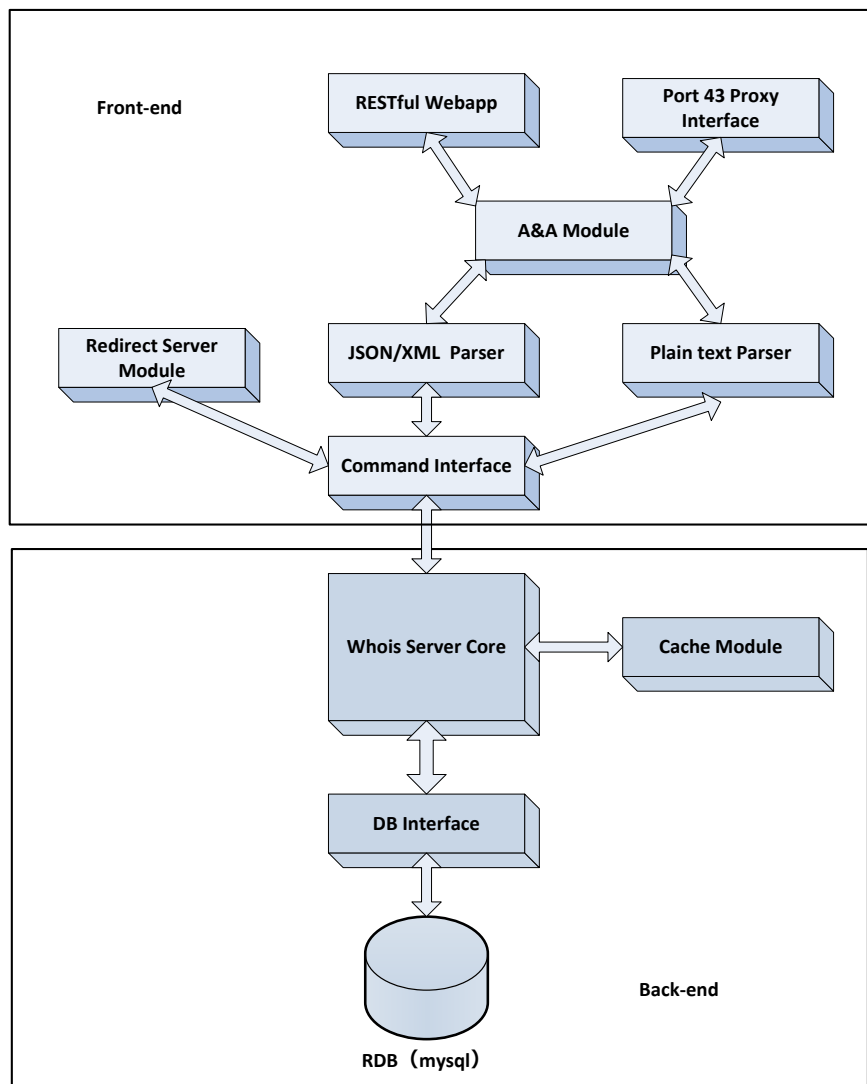
Front-end

- Command Interface – Interface for WHOIS server core access
- JSON/XML Parser – Convert to JSON or XML format
- Plain text Parser – Convert to plain text format
- Redirect Server Module – RDAP redirect service
- A&A module – Authentication and authorization
- RESTful Webapp – Client based on REST component
- Port 43 Proxy Interface – Change Port 43 query to REST query

Back-end

- RDB – Relational database (MySQL)
- DB Interface – Data access interface
- WHOIS Server Core – Support RDAP functions
- Cache Module – Simple cache control

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Whois

Sitemap | Page Notes

Show Links and Options

- adminURL
  - adminMain
- userURL
  - usermain

Login

- ○ IP
- ○ AS Number
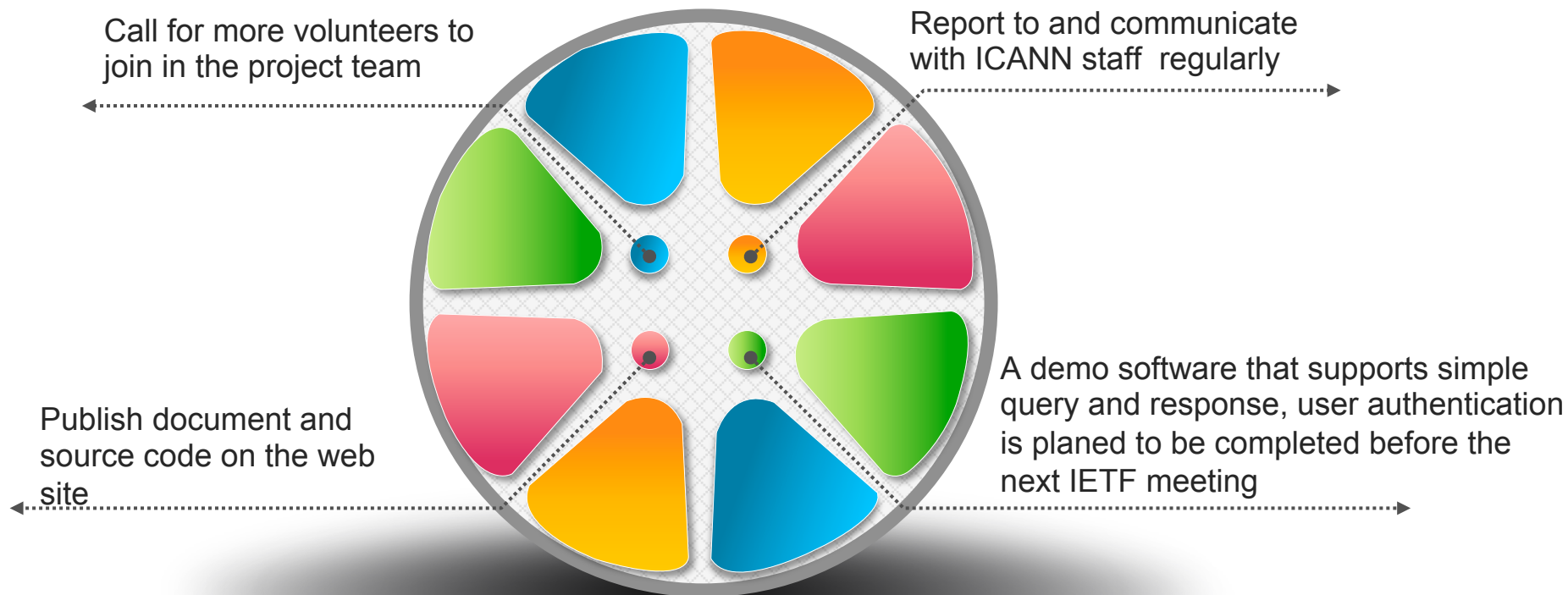- ◉ Domain
- ○ Name Server
- ○ Entity

[Query]

[json] [xml]

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If you are interested in being a developer of this project. Please mail to here.We are looking forward to your participation.

Will be refined soon

Call for more volunteers to join in the project team

Report to and communicate with ICANN staff regularly

Publish document and source code on the web site

A demo software that supports simple query and response, user authentication is planed to be completed before the next IETF meeting

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