

# CRISP: Common Registry Information Service Protocol

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# Overview

- Comparison of CRISP effort & cited RIR/ARIN Rwhois issues
- Overview of CRISP's view on solving the problem

# Typical users and uses of registry information services

- Network administrators – locating contact responsible for a domain (domain registrar whois) or an IP address (RIR services, ARIN rwhois) when there are network problems (or spam)
- Law enforcement agencies – seeking to find the people behind domains or IP addresses active in illegal activities

# Challenges of registry information services

- Need to know which server contains the data you're looking for
- Data mining of the registry information databases
- Inaccurate data supplied – dodging the mining problem, or privacy concerns
- These are global services; need mechanisms that will support a wide variety of local policies

# What is RWhois?

- A distributed system for query and maintenance of network information that:
  - Provides network and contact information
  - Portrays utilization
  - Decentralizes data storage
  - Moves queries closer to the data source
  - Offers local control

(Borrowed from ARIN presentation at APNIC, Feb 2003)

# Deficiencies As Identified by ARIN DBWG

- What is wrong with it? •
- Query routing doesn't work
- Uses a non-standard database format
- Insufficient documentation
- Set-up and administration is too difficult

# What Is CRISP?

- Cross Registry Information Service Protocol
- IETF Applications Area Working Group
  - First meeting held at IETF 54, Yokohama, Japan, in July, 2002.
  - <http://www.ietf.org/html.charters/crisp-charter.html>

# CRISP Goals

- Currently: A better whois access protocol for domain registries.
- Not a science project.
- Distributed, not centralized.
- Support policy decisions, not define them.
- To be unencumbered by the shackles of port 43.
- Maybe: A better whois for domain registries and RIRs?



# The Benefits of Unity

- While the data contained in the different registries isn't the same, they all have common base requirements.
  - Data mining prevention
  - Need for machine consumable data
  - Access control
  - Etc...
- One standard, not 3 or 4 or 5.
- A common understanding.

# The Benefits of An Open Standard

- Provides a known direction for implementers.
- Allows input from end-users.
- Helps with the development of common code bases.
- Encourages ideas not yet imagined.

# The State of CRISP

- Requirements draft near completion.
  - draft-ietf-crisp-requirements-03.txt
- Two protocol solutions submitted.
  - LDAP-Whois
  - IRIS (XML-based)

That's nice.

But what does this mean to me?

# Access Control

- New policies?
  - only operators can see contact data
    - passwords, digital certificates
  - only you can see your data
  - email addresses not shown to anonymous users
  - ???
- A better protocol can support newer, more flexible policies.

# Machine Consumable Results

- Integration with other processes, databases
- Better clients

The screenshot displays the Pimmit - IRIS Graphical Query Tool interface. The main window shows search criteria and a tree view of results. Two detail windows are open, providing structured data for specific entities.

**Main Window Search Criteria:**

- Entity Name: verisignlabs.com
- Entity Class: domainName
- Registry Type: urn:ietf:params:xml:ns:dreg1
- Authority: regy.verisignlabs.com

**Results Tree:**

- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- VERISIGNLABS.COM
- VERISIGNLABS-COM-HLDR
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1
- iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1

**Detail Window 1: VERISIGNLABS-COM-HLDR**

Type	Value
Contact Handle	VERISIGNLABS-COM-HLDR
Common Name	VERISIGN INC.
Organization	VERISIGN INC.
Address	21345 RIDGETOP CIRCLE
City	DULLES
Region	VA
Postal Code	US

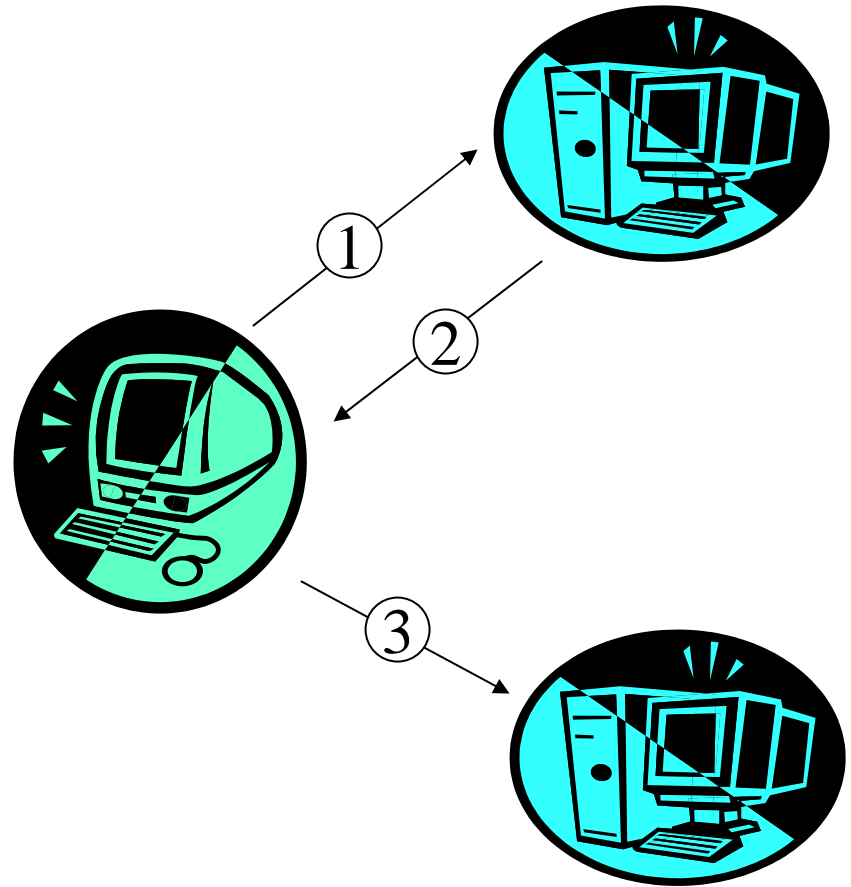
**Detail Window 2: iris://regy.verisignlabs.com/urn:ietf:params:xml:ns:dreg1**

Type	Value
Authority	regy.verisignlabs.com
Registry ID	urn:ietf:params:xml:ns:dreg1
Entity Class	hostHandle
Entity Name	NSW6555-HST

**Host: 10.131.252.227 Port: 7034**

# Server Coordination

- This is what I know
  - You may find more over there.
- Server A makes the referral
  - Server B keeps track of how many referrals were sent via Server A



# Resource Location

- Which whois server do I use?
- Where do I start?
  - The first step in finding any resource should not be hard-coded to a specific server.
- The information I'm after is in two different servers. Which one do I want?



# Pointers

- Server A would like to talk about data in server B.
- People have multiple “personalities” in multiple servers.
  - When it is not by choice, it can be maddening.
  - Why can’t server A just say “person XYZ is the tech contact, and if you want to know more about XYZ, go ask server B” ?

# The Universe Keeps On Expanding and Expanding

- Today
  - there are 3 common types of administrative databases
    - domain, RIR, IRR
- Near Future
  - but other types are coming
    - abuse, LIR
- Closer than you think
  - ENUM, other VoIP, keyword services, web services
- But the basic needs & uses remain the same:  
finding information about the registrant to resolve network or related problems

# CRISP Goals

- Minimal technical reinvention
  - no new schema languages
  - no new transport protocols
  - this is not a science project
- Focused on supporting services for administrative information registries (i.e., not a general purpose directory service or protocol)
- Capable of being repurposed
  - many of the administrative databases will share the same requirements
  - it would be nice if they all had the same feel

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# The State of IRIS

- Drafts are part of the CRISP working group
  - latest versions are -01
- -00 implementation available at <http://iris.verisignlabs.com/>
  - RDBMS backed server
  - Small in-memory testing server
  - Client API
  - Command-line client
  - Graphical client

# Conclusion

- Your comments, opinions, and ideas are welcome.
  - CRISP web page:  
<http://www.ietf.org/html.charters/crisp-charter.html>
  - CRISP mailing list: [ietf-not43@lists.verisignlabs.com](mailto:ietf-not43@lists.verisignlabs.com)
  - To subscribe:  
<https://lists.verisignlabs.com/mailman/listinfo/ietf-not43>