



Reverse DNS Delegations, Templates and RWS

Andy Newton
Chief Engineer

Changes Coming Soon

- Switching from a network-based reverse DNS data model to a delegation-based reverse DNS data model
 - **Changes in template processing**
 - **New Whois-RWS and port 43 queries**
 - **New Registration RESTful Web Service**
- A couple of smaller changes to ARIN Online and Whois-RWS

Why the Reverse DNS Change?

- Enables DNSSEC support in the Reverse DNS
- Enables much better LAME delegation checking in the Reverse DNS
- Asked for by ARIN's community

What does it mean?

- Currently nameserver info is associated with IP networks. But multiple layers of IP networks may fall between reverse DNS delegation points
- The Change:
 - Delegation points become “first class entities”
 - Nameservers relate to delegation points
 - Networks relate to delegation points

Needed Changes

- Backward compatible template processing changes.
- New Whois-RWS/Whois queries
- Introduction of the new Registration RESTful Web Service
- Introduction of DNS Management in ARIN Online
- See “MANAGING YOUR DELEGATIONS IN DNSSEC” announcement of Aug 17, 2010
 - <http://lists.arin.net/pipermail/arin-announce/2010-August/001057.html>

Template Changes

- Version 3 templates to be retired
- Version 4 templates will continue to be processed, but:
 - **Nameserver information will be ignored.**
 - **This prevents accidental modification of this information, and enables backward compatibility**
- Version 5 templates to be introduced

API Keys for Templates

- Version 4 & 5 templates will require API Keys
- How?
 - In the subject line
 - In the mail-from address
 - Line 00 of the template
 - Or associate the API Key to the sending email address via ARIN Online. No changes needed to your template system

Managing DNS

- ARIN Online

WEB ACCOUNT

POC RECORDS

ORGANIZATION DATA

MANAGE RESOURCES

TRACK TICKETS

LISTING SERVICE

DOWNLOADS

ASK ARIN

[log out](#)

IPv6 ENABLED

Manage Reverse DNS

The chart below shows each reverse DNS zone you are authoritative for, any nameservers delegated to that zone, any Delegation Signer (DS) resource record key tags registered to that zone, and the names of any organizations in Whois who have the authority to manage the delegation for the reverse DNS zone. If you have SWIPed address blocks to customers in ARIN's Whois, you may see their organization name listed in the Authorized Organizations column.

Note: For IPv4, zones are created at the octet boundary (/8, /16, /24) based on the size of the directly-issued address block(s) from ARIN. For the customer to have authority, the SWIPed address block must fall within the same octet level of the directly-issued network. If a network is reassigned out of multiple net blocks, it is possible that authority to manage reverse DNS will be given for only some of the zones. The same applies to IPv6, though zones are created at the nibble boundary.

Using the check boxes below, select the reverse delegation(s) you wish to modify. If you choose more than one delegation, the new nameservers or DS records you specify will automatically apply to ALL the delegations you select.

[Select All](#) / [Deselect All](#)

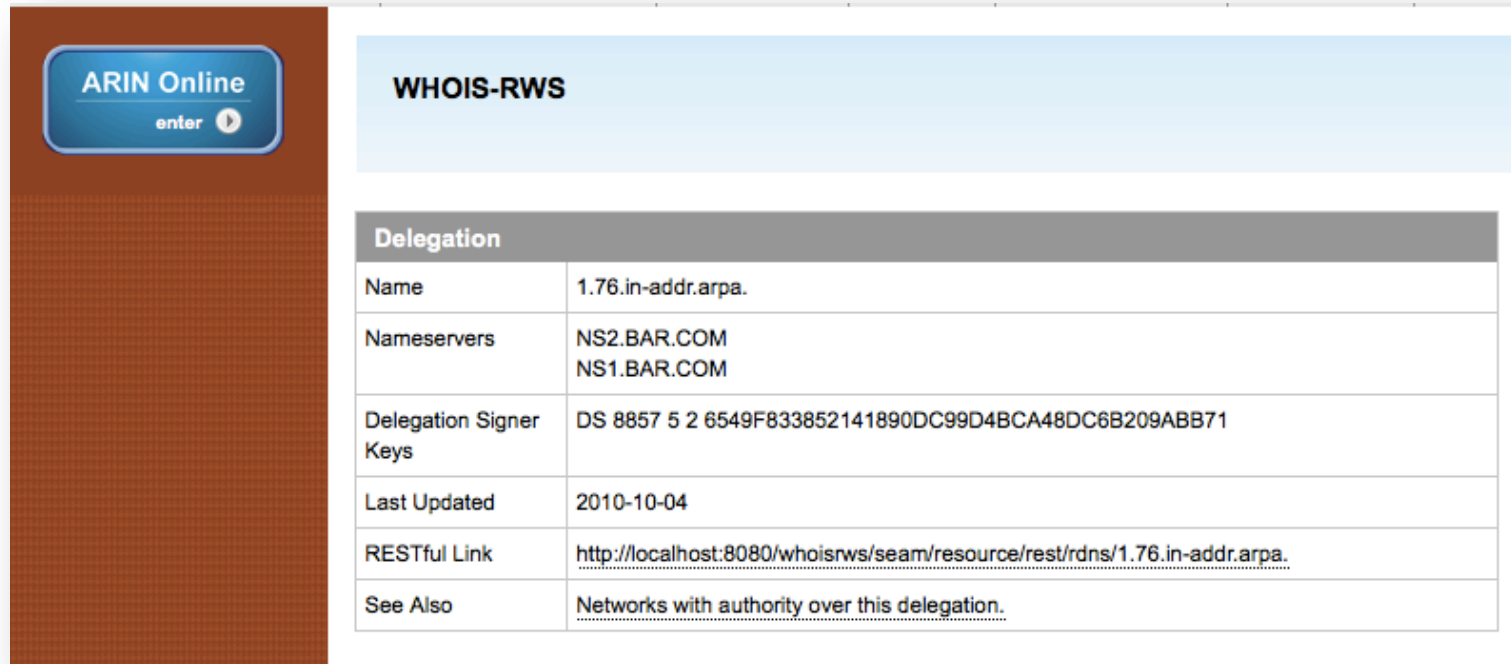
REVERSE DNS INFORMATION FOR NET-76-32-0-0-1

SELECT	DELEGATION	NAMESERVERS	DS RECORD KEY TAGS	AUTHORIZED ORGANIZATIONS
<input type="checkbox"/>	0.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	1.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	2.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	3.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	4.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	5.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	6.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	7.32.76.in-addr.arpa.			American Registry for Internet Numbers
<input type="checkbox"/>	8.32.76.in-addr.arpa.			American Registry for Internet Numbers

[MODIFY NAMESERVERS](#) [MODIFY DS RECORDS](#)

Looking Up Delegations

- To be put into Whois-RWS and Whois (port 43)



The screenshot displays the ARIN Online WHOIS-RWS interface. On the left is a vertical brown sidebar with a blue button labeled "ARIN Online" and "enter" with a right-pointing arrow. The main content area has a light blue header with the text "WHOIS-RWS". Below this is a table with a grey header row labeled "Delegation". The table contains the following information:

Delegation	
Name	1.76.in-addr.arpa.
Nameservers	NS2.BAR.COM NS1.BAR.COM
Delegation Signer Keys	DS 8857 5 2 6549F833852141890DC99D4BCA48DC6B209ABB71
Last Updated	2010-10-04
RESTful Link	http://localhost:8080/whoisrws/seam/resource/rest/rdns/1.76.in-addr.arpa.
See Also	Networks with authority over this delegation.

Delegation Queries

- Whois
 - “d ! NET_HANDLE”
 - Lists the delegations for the given network handle
 - “d n DELEGATION_NAME”
 - Retrieves delegation specific information
- Whois-RWS
 - /net/NET_HANDLE/rdns
 - /rdns/DELEGATION_NAME
 - /rdns/DELEGATION_NAME/nets

Query Examples

- Whois
 - **"d ! NET-192-136-136-0-1"**
 - Lists the delegations for the given network handle
 - **"d n 136.136.192.in-addr.arpa"**
 - Retrieves delegation specific information
- Whois-RWS
 - **/net/NET-192-136-136-0-1/rdns**
 - **/rdns/136.136.192.in-addr.arpa**
 - **/rdns/136.136.192.in-addr.arpa/nets**

Preview of Other Changes

- Whois-RWS
 - PFT Pseudo-Resource
 - Better CIDR Support
- ARIN Online
 - RPKI

Whois-RWS PFT Psuedo-Resource

- Yields ORG & POC data for networks, ASNs, and network lookups by IP address
 - **Mimics port 43 behavior for web browsers**
- Enables viewing of this information on a single web page
- How it works: append “/pft”
 - **/net/NET-192-136-136-0-1/pft**
 - **/ip/192.136.136.1/pft**

Better CIDR Support

- Enable CIDR support in the search box on the web page
 - “/less” semantics by default
 - Uses “/pft” by default
- Better support in Whois (port 43).
 - Currently supports exact match
 - Use of hierarchy flags for “/less” and “/more” semantics

RPKI in ARIN Online

- Manage Resource Certificates and ROAs

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Information

Some RPKI description should go here...

RESOURCE CERTIFICATE

Issuer: **CN=RTA,CN=RPKI,CN=ARIN,CN=NET**

Subject: **CN=CXA,CN=ARIN**

Serial: **1**

Validity: **2010-10-04 00:00:00.0 - 2014-10-04 00:00:00.0**

ROUTE ORIGIN AUTHORIZATIONS


Name: **Cox to Verizon**


Origin AS: **701**

Validity Period: **10-04-2010 00:00:00 - 10-04-2014 00:00:00**

Resources: **216.54.64.0/18**
216.54.0.0/17 max length 20

Manage RPKI

 create resource certificate

 create roa

Q&A

- New email list for technical questions:
 - **ARIN Technical Discussions**
 - For all technical topics relating ARIN services
 - Combines all our previous topic specific technical lists so there is one place to do to ask technical questions
 - **arin-tech-discuss@arin.net**
 - **<http://lists.arin.net/mailman/listinfo/arin-tech-discuss>**