ARIN’s RPKI (so far)

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Pilot

• Available since June, 2009
  – http://rpki-pilot.arin.net
  – ARIN branded version of RIPE NCC software

• 45 organizations participating
General Architecture

Tight coupling between resource certificate / ROA entities and registration dataset at the database layer. Once certs/ROAs are created, they must be maintained if the registered dependents are changed.
As of December 2010

With a few finishing touches, ready to go Jan 1, 2011 with Hosted Model, Delegated Model to follow end of Q1.

High influenced by RIPE NCC entities.

Everything is Java, JBoss, Hibernate.
And then...

- Intense review of liabilities by legal team in December, 2010 caused...
  - Completely new requirements for non-repudiation in ROA generation for hosted CAs
  - Completely new requirements to thwart “Evil Mark” (rogue employee)
  - Further intense review of liabilities by legal team and Board of Trustees
Changes Underway

In-browser ROA request signing via AJAX.

Minor changes.

Message driven engine which delegates to the HSM.

Custom programming on IBM 4764’s to enable all DER encoding and crypto.

HSM coding is in C as extensions to IBM CCA. Libtasn1 used for DER coding.
Status

- Hosted CA anticipated in May at the earliest
- We intend to use RIPE NCC up/down code for delegated model
- Awaiting approval by our Board of Trustees for both models of deployment