ARIN's RPKI (so far)

Andy Newton
Chief Engineer

Pilot

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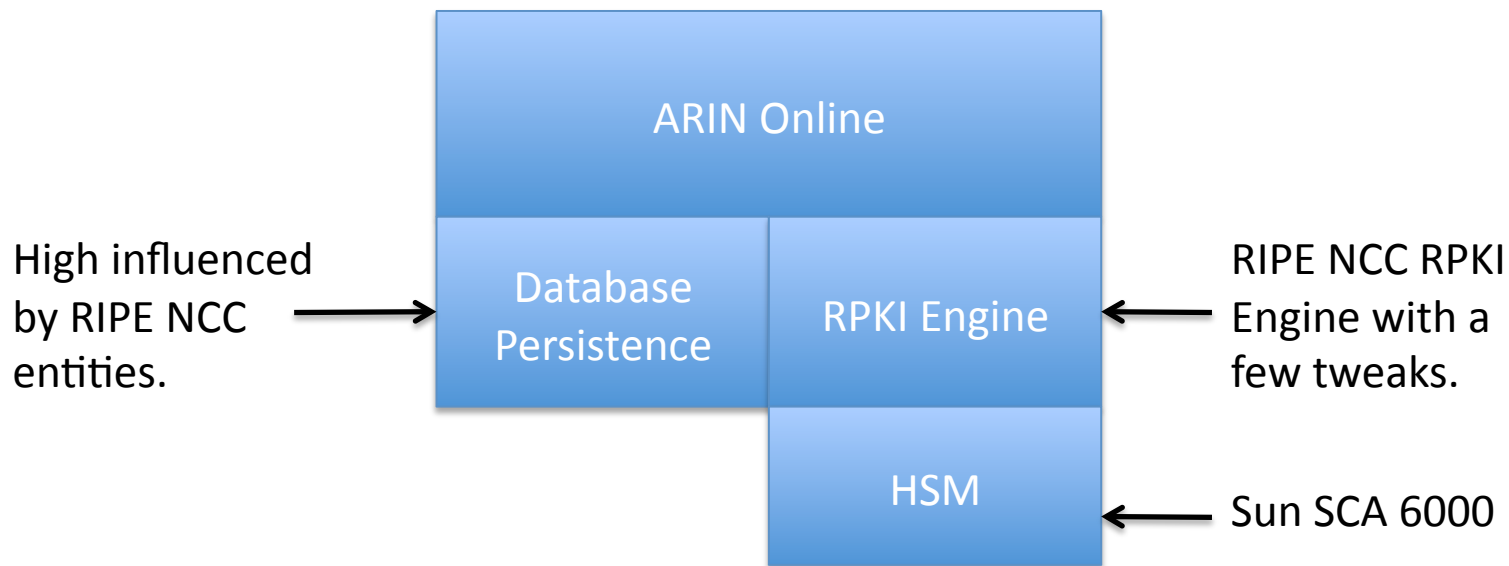- 45 organizations participating

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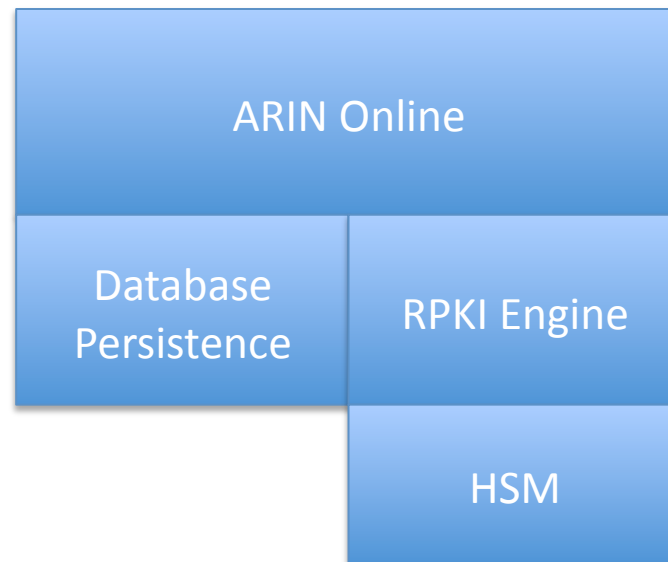
Tight coupling between resource certificate / ROA entities and registration dataset at the database layer. Once certs/ROAs are created, they must be maintained if the registered dependents are changed.

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.

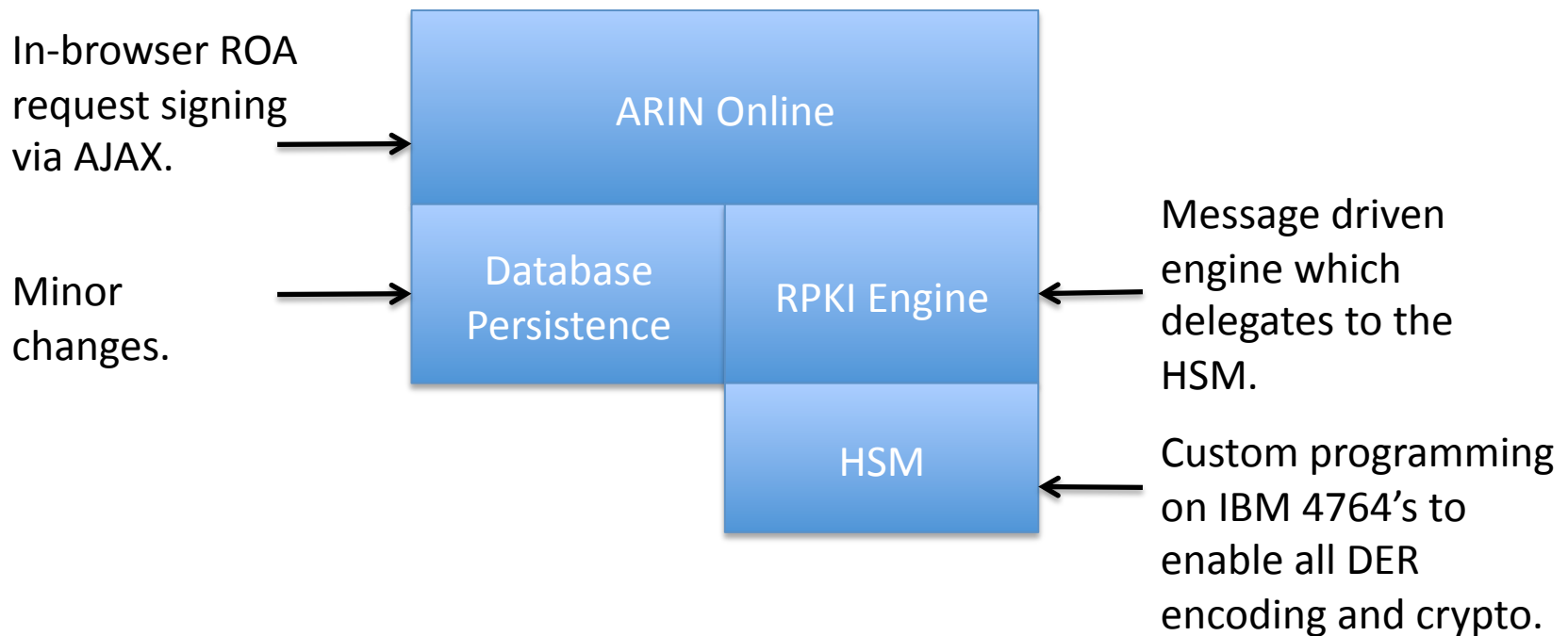High influenced by RIPE NCC entities. →

ARIN Online
Database Persistence	RPKI Engine
	HSM

← RIPE NCC RPKI Engine with a few tweaks.

← Sun SCA 6000

Everything is Java, JBoss, Hibernate.

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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

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Changes Underway

In-browser ROA request signing via AJAX.

Minor changes.

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Database Persistence

RPKI Engine

Message driven engine which delegates to the HSM.

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.

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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