1100-1145 – Panel Discussion: CDS and CSYNC (CSN) Implementation – What is the Policy Impact?

Moderator: Jacques Latour, CIRA

Panelists:
- Erwin Lansing, DK Hostmaster
- Jacques Latour, CIRA
- David Lawrence, Akamai
- John Levine, Taugh
- Paul Wouters, RedHat

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CDS and CSYNC (CSN) Policy Impact

What is the Policy Impact? This panel will take a forward look at the policy impact that CDS and CNS implementation will have.

- What will CDS and CSYNC (CNS) look like in the future?

- Who will leverage the benefit of CDS and CSYNC (CNS) ?

- What is the role of the DNS Operator in this future?

- Will the DNS operator needs to be recognized in the RAA framework

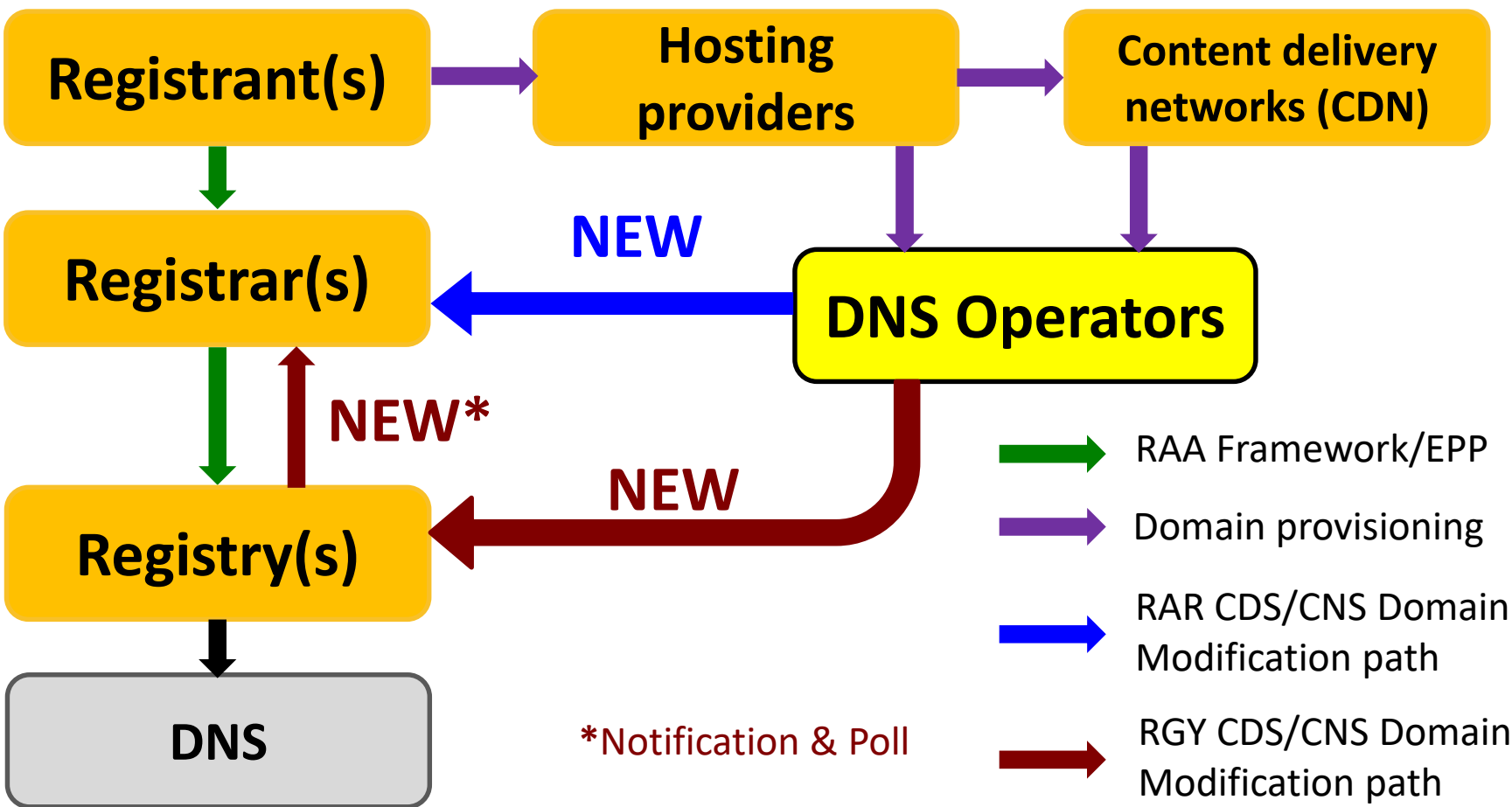- Do we need to focus on policies and community outreach?

DOMAIN REGISTRATION INFORMATION FLOW

Registrant(s)

↓

Registrar(s)

↓

Registry(s)

↓

DNS
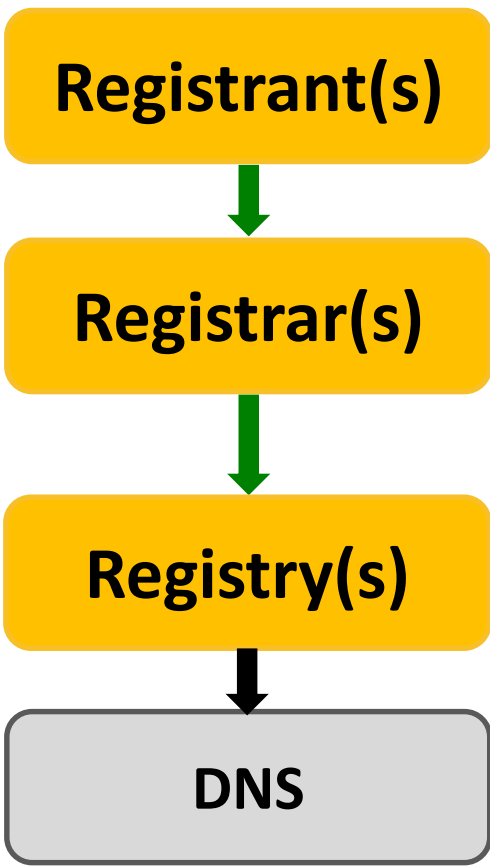
→ RAA Framework/EPP

TAKE AWAY: This is the preferred method to update Name Server and DS records information. But when it's not available...

DOMAIN REGISTRATION INFORMATION FLOW

Registrant(s) → **Hosting providers** → **Content delivery networks (CDN)**

Registrar(s)

NEW

DNS Operators

NEW*

NEW

Registry(s)

DNS

→ RAA Framework/EPP
→ Domain provisioning
→ RAR CDS/CNS Domain Modification path
→ RGY CDS/CNS Domain Modification path

*Notification & Poll

TAKE AWAY: DNS Operator providing instruction to Registrar/Registry via the DNS, with CNS/CDS records

DOMAIN REGISTRATION
-- NEW FLOWS --

- We are developing DNSSEC Automation technologies (CNS, CDS) to enhance the stability of the DNS
- Registrar/Registry will have the ability to update domain registration with DNSSEC information as published by DNS Operators.
- Notification mechanisms will have to be developed.
- This framework will eventually lead to registrars & registries updating the name servers properties of a domain information as published by DNS Operator (CNS). This is a big thing!
- Updating name servers will have an impact on certain policies. Need to take a close look at this.

FLOW 1 - DNS Operator → Registrar

DNS Operator(s)

NEW (1)

Registrar(s)

NEW (2)

'Domain'
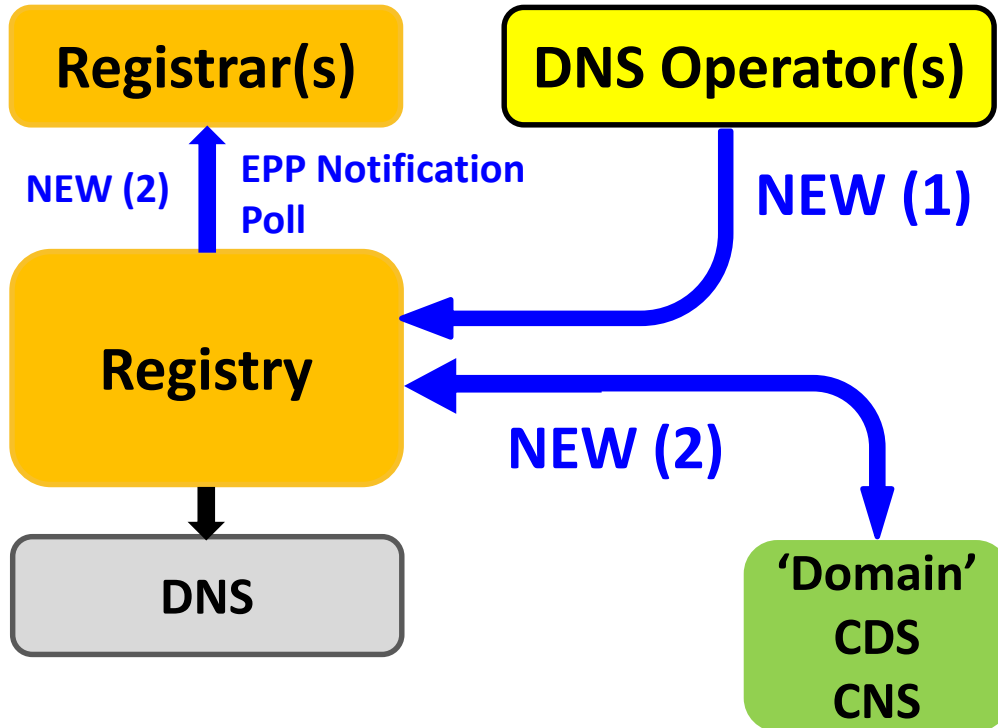**CDS**
CNS

(3)

Registry

DNS
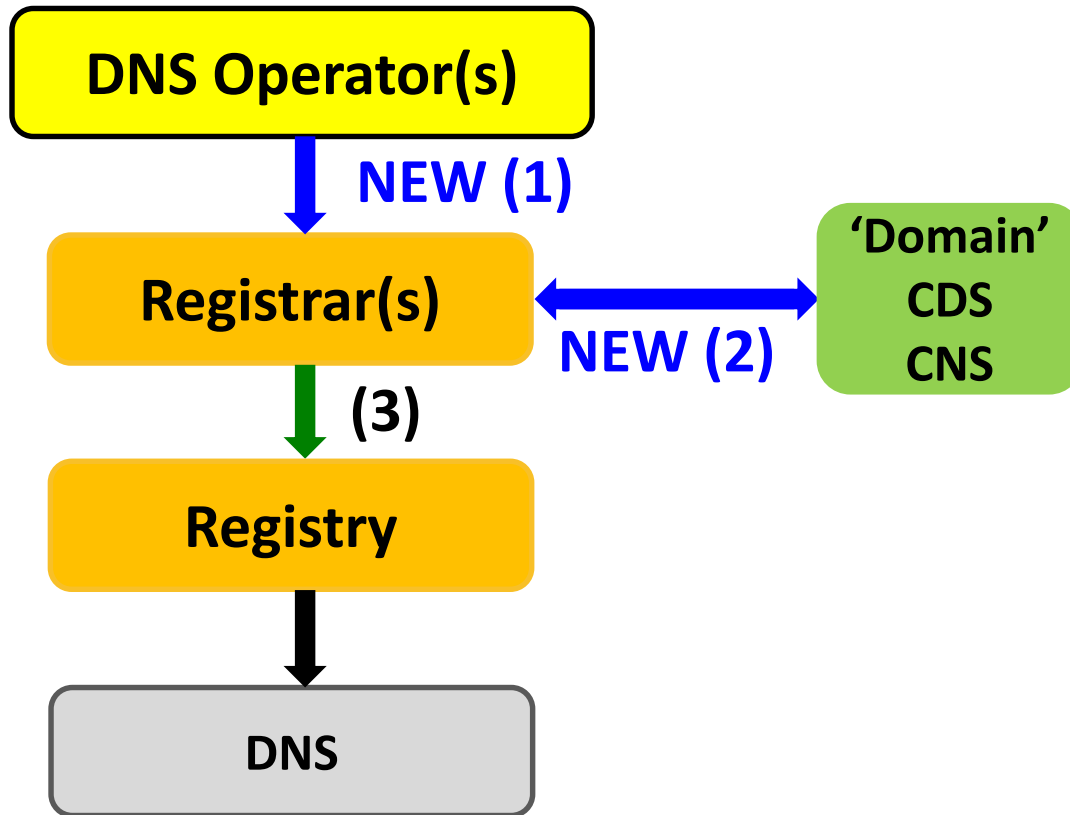
(1) The DNS Operator notifies the Registrar to look at CDS and CNS instructions in 'Domain'

(2) The Registrar polls the 'Domain' and executes the instructions as defined by CNS and CDS

(3) Registrar update Registry DNSSEC keys or Name Servers information

TAKE AWAY: Policy impact of registrar accepting notifications/instructions from a DNS Operator
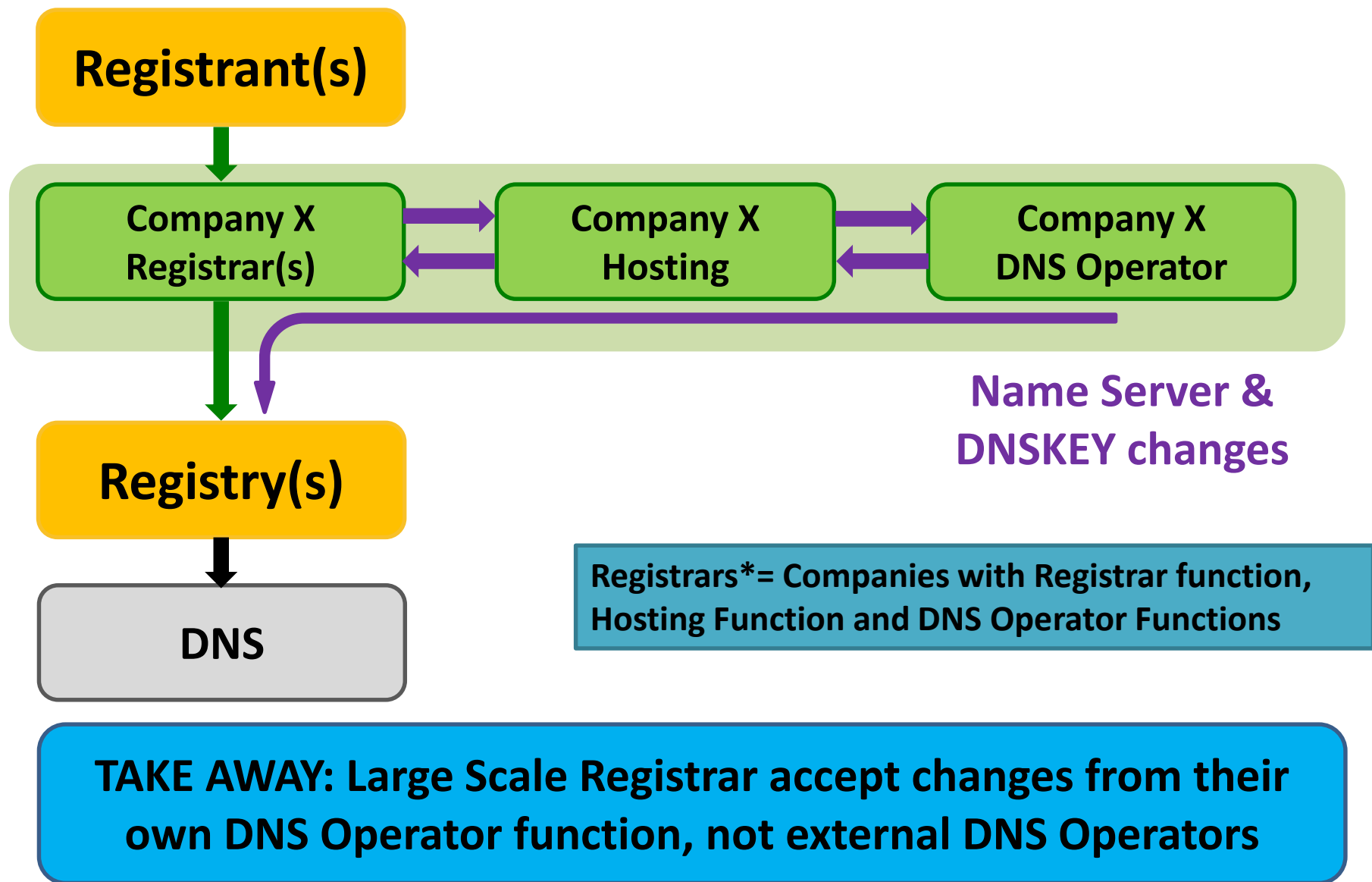
FLOW 2 - DNS Operator → Registry

Registrar(s)

DNS Operator(s)

NEW (2)

EPP Notification Poll

Registry

NEW (1)

NEW (2)

DNS

**'Domain'
CDS
CNS**

(1) The DNS Operator notifies the Registry to look at CDS and CNS instructions in 'Domain'

(2) The Registrar polls the 'Domain' and executes the instructions as defined by CNS and CDS

(3) Registry updates Registry DNSSEC keys or Name Servers information

TAKE AWAY: Need do design in a way to remove 'authoritative data' conflict between Registrar and Registry.

Large Scale Registrars* do this today

Registrant(s)

Company X Registrar(s) → **Company X Hosting** → **Company X DNS Operator**

Name Server & DNSKEY changes

Registry(s)

DNS

Registrars*= Companies with Registrar function, Hosting Function and DNS Operator Functions

TAKE AWAY: Large Scale Registrar accept changes from their own DNS Operator function, not external DNS Operators

- The Discussion -

- ... the difficulty with EPP is that in the model the view of **the state of a domain is to be mirrored between registry and registrar.** That said, EPP itself is designed only for move of data from registry to registrar and that is also how most contracts are set up.

- This simply because that model is the easiest from the standpoint of "who has the correct view of the domain name in the case of difference between registry and registrar**". I.e. how to do dispute resolution.**

- Exactly how this is to be setup will depend (of course) on how this is to be designed in the registry, and there is because of this **tons of work that must be done in the PDP for the various TLDs out there.**

- Remember that notification/poll is not that easy and not developed solidly in EPP systems out there. This simply because there is a race condition and conflict resolution that parties up to date have not been forced to implement. The information gathered via poll is either special state changes that only the registry can do, or similar.

- Because of this, once again, **it is important this is deployed not by accident but after really careful consideration and EVERYONE in the same TLD must agree on how it is to be implemented.**

- (input from : Patrik Fältström)

And it is THAT discussion we want to trigger.