# DNSSEC and DNS Operators

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- Afilias makes Internet addresses more accessible and useful through registry services, Managed DNS, and mobile Web services like goMobi® and DeviceAtlas®.
    - Second largest registry service provider
    - Have one of the largest DNS infrastructures
- Started with DNSSEC in 2008
    - Signed ORG in June 2009
    - Found bug in DNSSEC extension to EPP
    - ORG offered signed delegations in June 2010
    - Signed all TLDs and offered signed delegations soon after
    - Root signed in July 2010

DNSSEC Works
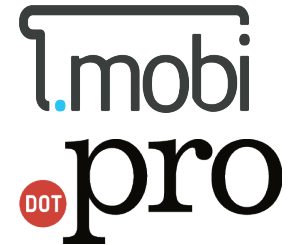
- Most registrants use bundled services – registrar provides registration services and DNS services (among other services)

- Registrar, as the DNS provider, signs domain and handles all key management

- Registrar has direct access to registry (through EPP) to submit DS record information
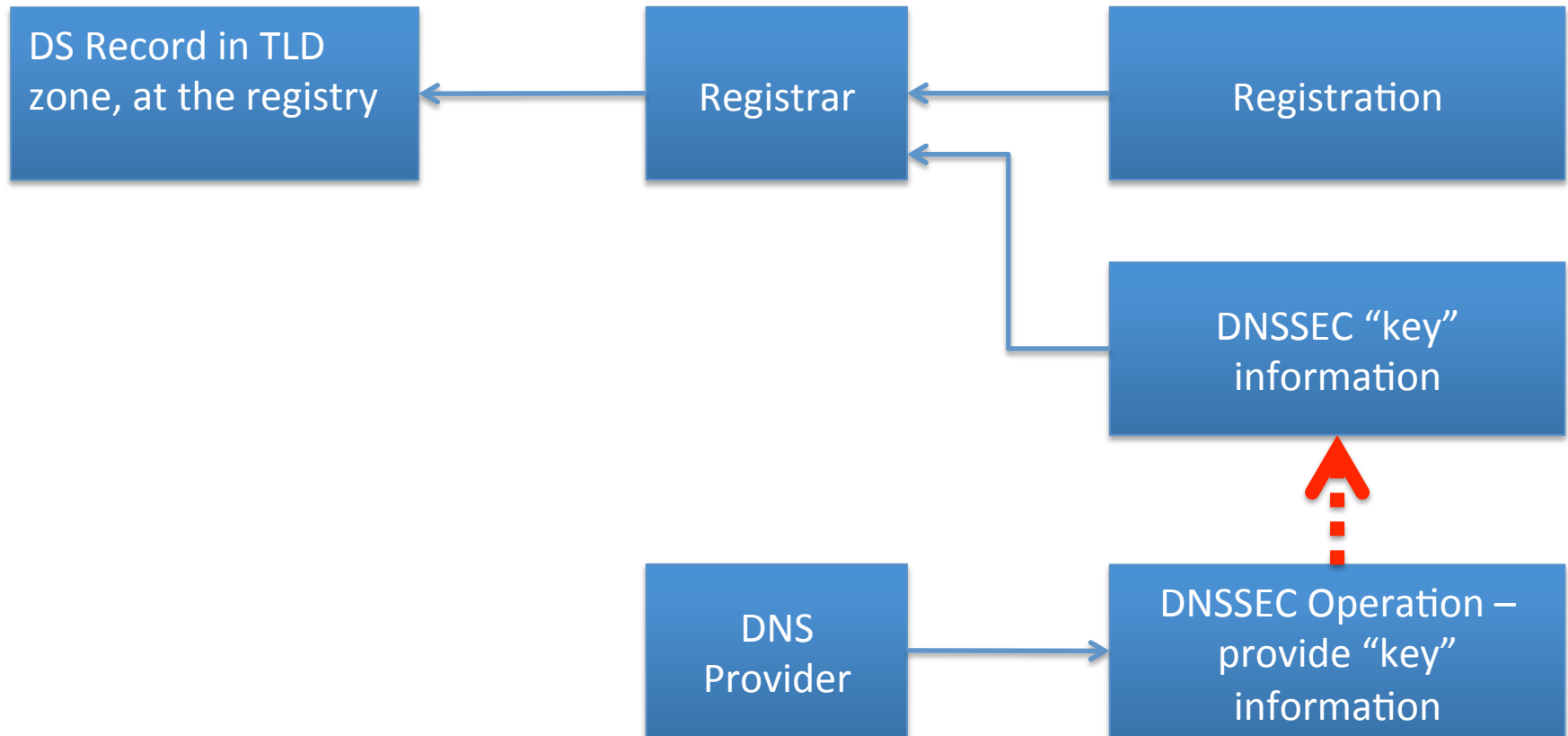
1) The domain owner requests the transfer at the new registrar.

2) The new registrar requests the transfer via the registry on behalf of the domain owner.

3) The old registrar receives the transfer request.

4) **The old registrar may act on the transfer request.**

5) If the old registrar does not acknowledge the transfer request to the new registrar within 5 days then the registry will automatically approve the transfer request at the end of the 5-day period.

- During Step 4, the Registrar of Record may:
  - Remove the domain name from the DNS
  - Does not respond to the transfer request
- Domain name will fail to resolve for 2-4 days waiting for transfer request success
  - Relatively benign "site not found" becomes a scary "do not go there"
  - Results in a security incident

Solution Requirements

- Old DNS provider (Registrar of Record) must support import of new key information from new DNS provider for pre-publication

- Old DNS provider (Registrar of Record) must maintain DNS services for at least twice the length of the longest TTL of any record currently in the domain

Policy Reference

- ICANN Policy on Transfer of Registrations between Registrars
  - https://www.icann.org/resources/pages/policy-2012-03-07-en
- Does not have any DNS requirements specified

Thank You!

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https://afilias.info/dnssec