

EBERO Exercise

Francisco Arias & Simon McCalla | Tech Day, ICANN 55 | 7 March 2016

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What is the EBERO Program?

What is the EBERO Program?

- ⦿ Serves to protect registrants from a registry operator failure
- ⦿ An Emergency Back-End Registry Operator (EBERO) provides the five critical registry functions in the event of a gTLD failure
- ⦿ EBEROs are organizations that have demonstrated years of experience in operating registry services
- ⦿ EBEROs have entered into three to five-year contracts with ICANN

Five Critical Functions Provided by EBEROs

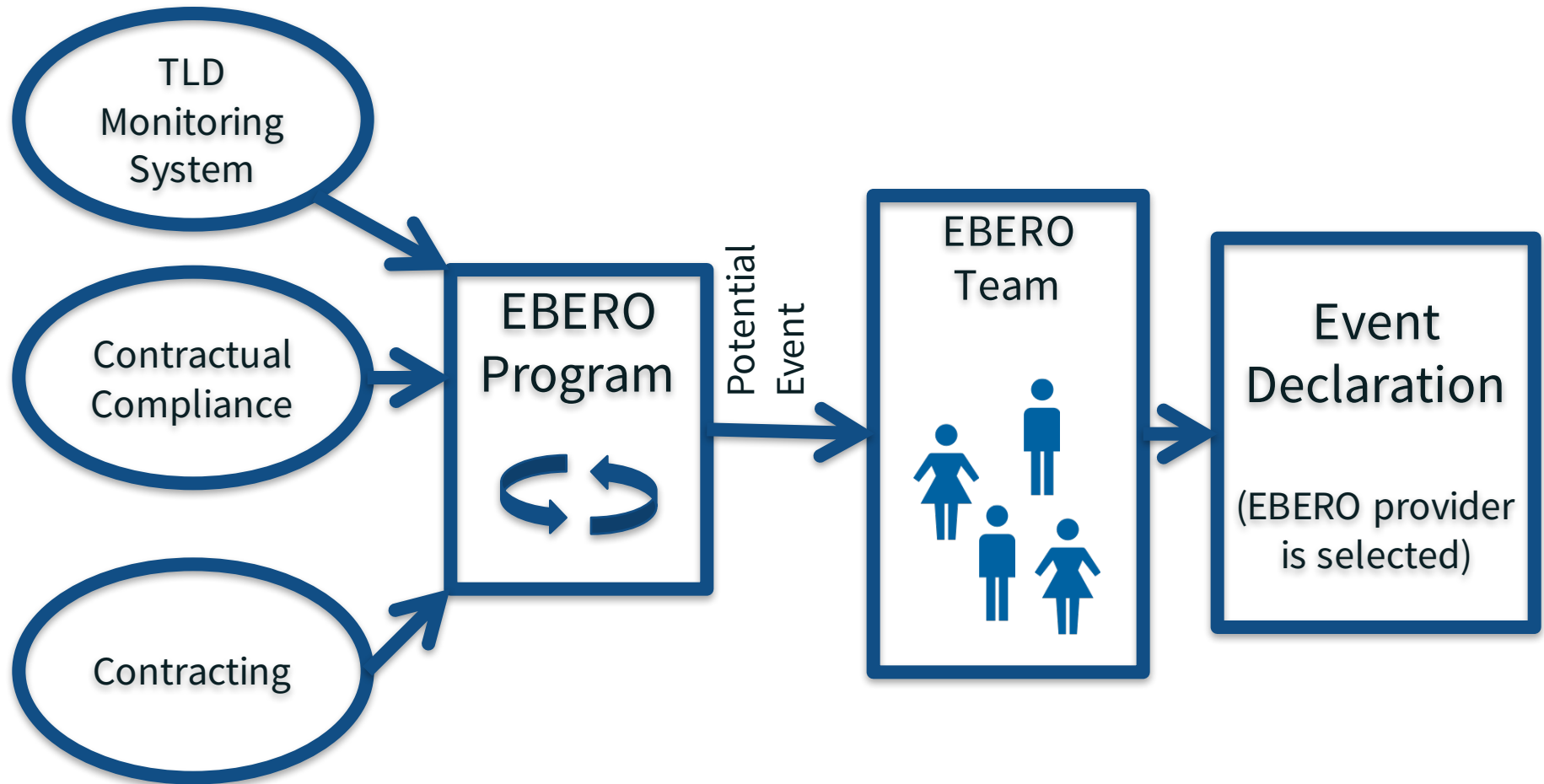
- ⦿ DNS resolution for registered domain names
- ⦿ Maintenance of a properly signed zone in accordance with DNSSEC requirements
- ⦿ Operation of Shared Registration System (i.e., EPP)
- ⦿ Operation of Registration Data Directory Services (e.g., WHOIS and Web Whois)
- ⦿ Registry data escrow deposits

Currently Contracted EBEROs

- ⦿ China Internet Network Information Center (CNNIC)
- ⦿ CORE Association (CORE Internet Council of Registrars)
- ⦿ Nominet

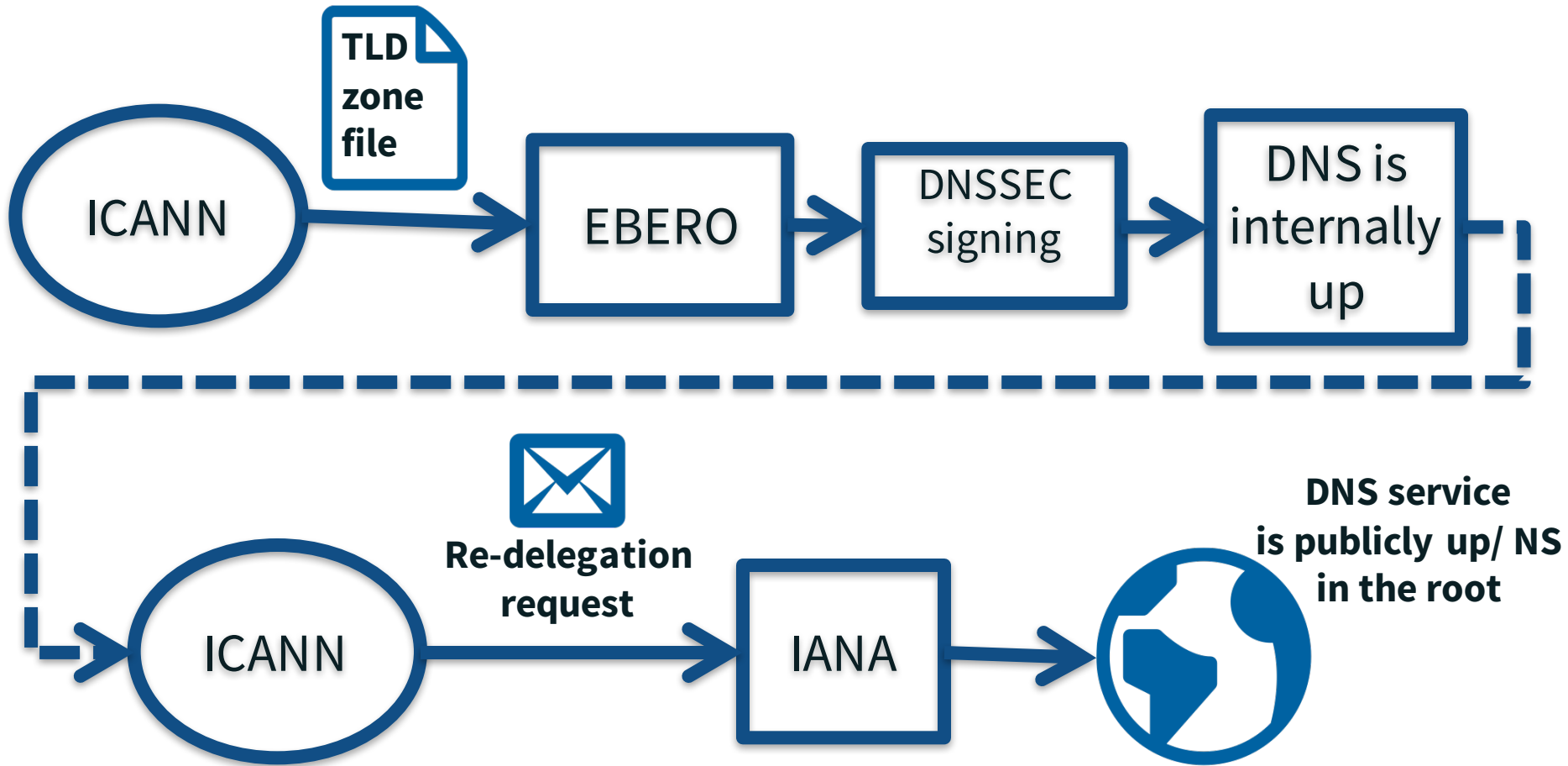
EBERO Event

Declaring an EBERO Event



What Happens During an EBERO Event?

DNS

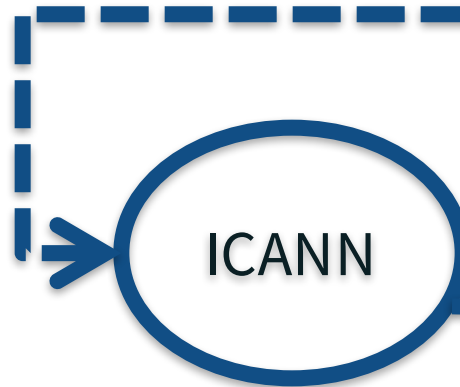


What Happens During an EBERO Event?

SRS & RDDS

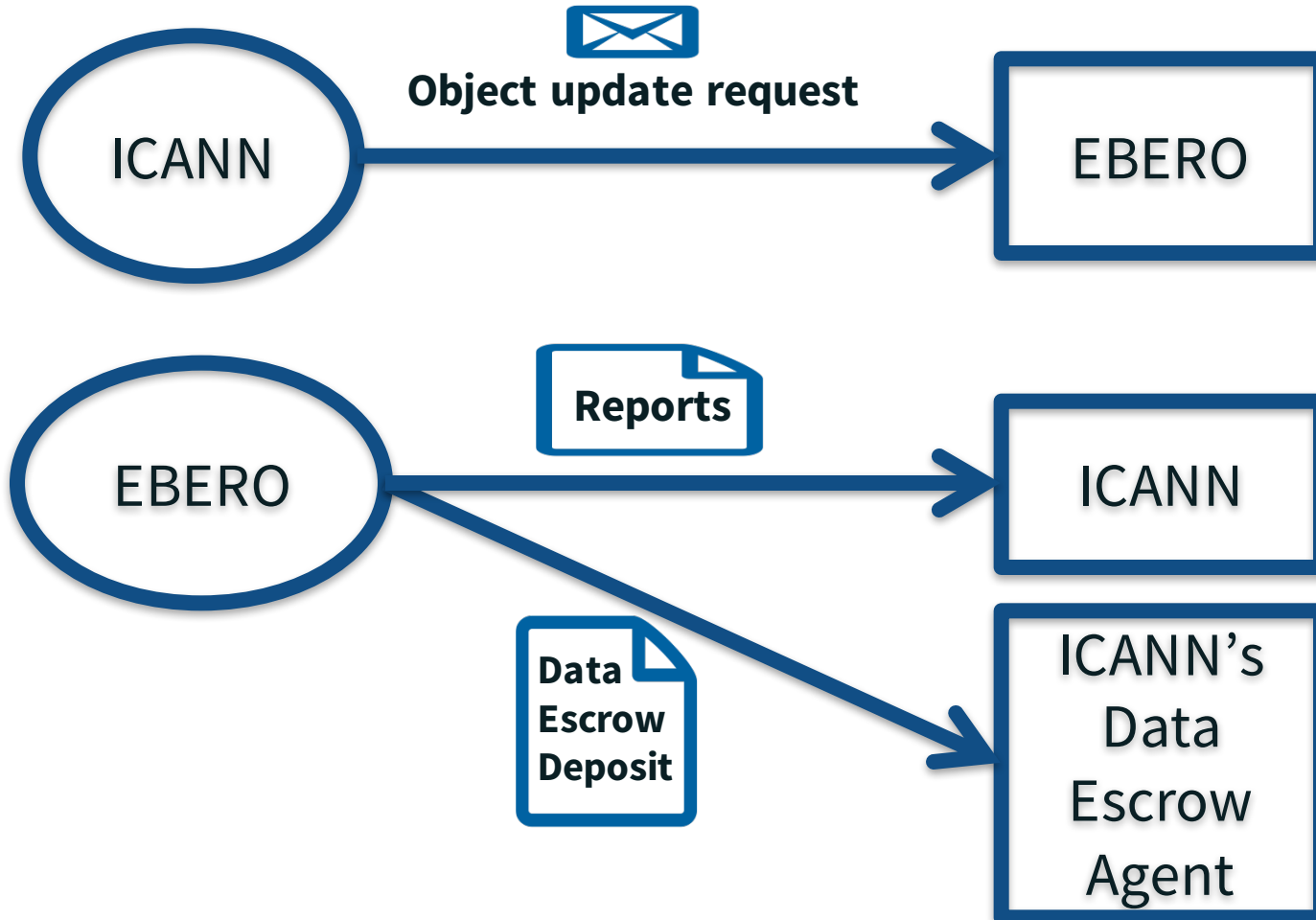


Data Escrow
Release Request



What Happens During an EBERO Event?

Stable EBERO Operation



EBERO Live-TLD Exercise

- ⦿ On 3 Sept 2015, the Registry Operator for .doosan requested the termination of their gTLD Registry Agreement with ICANN by 1 March 2016
- ⦿ TLD had no registrants
- ⦿ The Registry Operator agreed to allow ICANN to perform a live-TLD EBERO exercise
- ⦿ Nominet (as EBERO provider) agreed to perform the EBERO exercise to start on 26 January 2016 at 12:00 UTC

EBERO Live-TLD Exercise – DNS Timeline

- ⦿ Reached 100% of DNS emergency threshold (simulated)
 - 2016-January-26 16:00
- ⦿ Declared EBERO event
 - 2016-January-26 17:42
 - Time elapsed: **1 hour, 42 minutes**
- ⦿ DNS/DNSSEC service restored in EBERO's servers
 - 2016-January-26 19:46
 - Time elapsed: **3 hours, 46 minutes**

EBERO Live-TLD Exercise – DNS Timeline

- ⦿ TLD change request issued to IANA
 - 2016-January-26 20:20
 - Time elapsed: 4 hours, 20 minutes
- ⦿ TLD change applied in root zone
 - 2016-January-27 00:22
 - Time elapsed: 8 hours, 22 minutes
- ⦿ Total DNS downtime (simulated and discounting cache effects): 12 hours, 22 minutes

EBERO Live-TLD Exercise – SRS/RDDS Timeline

- ⦿ Reached 100% of DNS emergency threshold (simulated)
 - 2016-January-26 16:00
- ⦿ Declared EBERO event
 - 2016-January-26 17:42
 - Time elapsed: **1 hour, 42 minutes**
- ⦿ Data Escrow release request issued
 - 2016-January-26 18:38
 - Time elapsed: **2 hours, 38 minutes**

EBERO Live-TLD Exercise – SRS/RDDS Timeline

- ⦿ Data Escrow deposit made available to ICANN
 - 2016-January-27 23:31
 - Time elapsed: 1 day, 7 hours, 31 minutes
- ⦿ Data Escrow deposit made available to EBERO
 - 2016-January-28 00:56
 - Time elapsed: 1 day, 8 hours, 56 minutes
- ⦿ SRS (EPP) service restored
 - 2016-January-28 15:03
 - Time elapsed: 1 day, 23 hours, 3 minutes

EBERO Live-TLD Exercise – SRS/RDDS Timeline

- ⦿ RDDS service restored
 - 2016-January-28 17:05
 - Time elapsed: 2 days, 1 hour, 5 minutes
- ⦿ Total RDDS downtime (simulated plus real, and not accounting for cache effects): 2 days, 5 hours, 5 minutes
- ⦿ Data Escrow function restored (end of exercise)
 - 2016-February-01 13:53
 - Time elapsed: 5 days, 21 hours, 53 minutes

Summary and Next Steps

Summary and Next Steps

- ⦿ Total DNS downtime (simulated and not accounting for cache effects): **12 hours, 22 minutes**
- ⦿ Total RDDS downtime (simulated plus real, and discounting cache effects): **2 days, 5 hours, 5 minutes**
- ⦿ SRS (EPP) service restored **1 day, 23 hours, 3 minutes** after having reached the DNS emergency threshold
- ⦿ Data Escrow function restored (end of exercise) **5 days, 21 hours, 53 minutes** after the threshold
- ⦿ During the live-TLD exercise, 44 issues were discovered in the process and are going to be solved



Thank You and Questions

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