

# Registry System Testing

## Standard RSP Change Test Plan

Version A

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# Document control

## Document information and security

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# 1. Introduction

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This Test Plan defines the Standard RSP Change Testing of the new gTLDs.

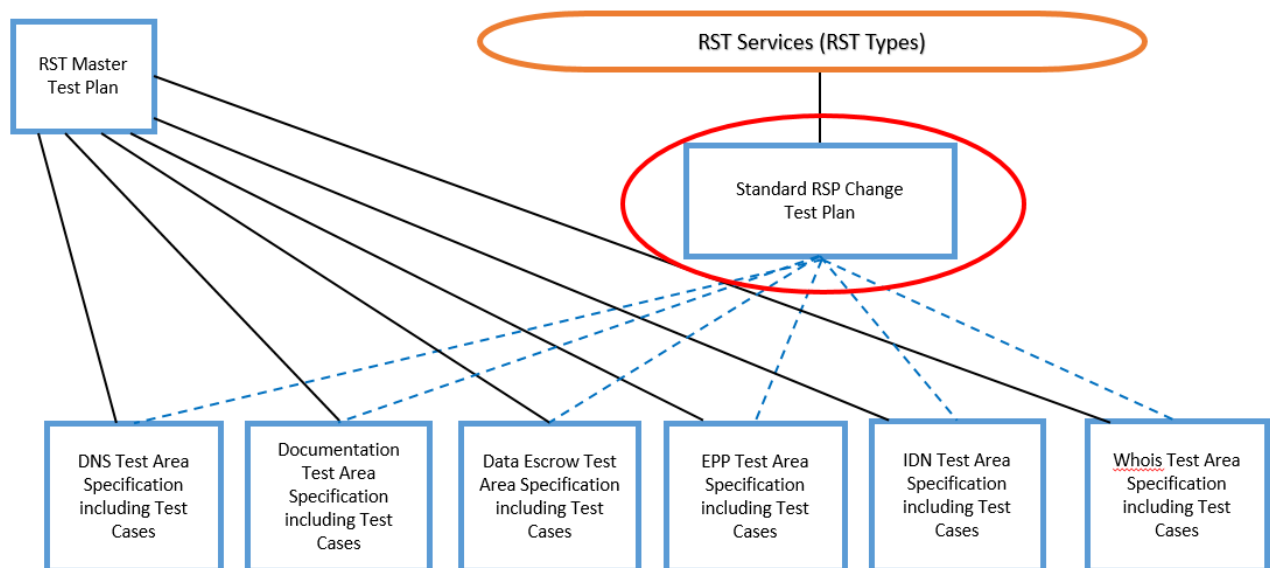
## 1.1 Scope

The RST Service Provider will test the technical infrastructure (DNS, EPP, Whois, Data Escrow and IDN) and also review submitted documents (IDN, Documentation).

## 1.2 References

- Pre-Delegation Testing, Statement of Work
- RSP Change Testing, Statement of Work
- Registry System Testing, DNS Test Area Specification
- Registry System Testing, EPP Test Area Specification
- Pre-Delegation Testing, Whois Test Area Specification
- Pre-Delegation Testing, Data Escrow Test Area Specification
- Pre-Delegation Testing, IDN Test Area Specification
- Pre-Delegation Testing, Documentation Test Area Specification

## 1.3 Document Hierarchy



This document is one of many that specifies the Test Plan for a specific RST Type (circled in red in the above graphic).

## 2. Details for Standard RSP Change test plan

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The Standard RSP Change Test (RSPSTD). The following test levels are included in Standard RSP Change Testing:

- DNS
- EPP
- Whois
- IDN
- Data Escrow
- Documentation

Only the test cases listed in this document will be included in a Standard RSP Change Test. For details about a test case, refer to the relevant Test Area Specification document.

### 2.1 Test Cases included in a Standard RSP Change Test

#### 2.1.1 DNS

Full description of the DNS Test Cases is found in the DNS Test Area Specification.

- |         |   |
|---------|---|
| • DNS01 | Minimum number of name servers                            |
| • DNS02 | Name server reachability                                  |
| • DNS03 | Answer authoritatively                                    |
| • DNS04 | Network diversity   |
| • DNS05 | Consistency between glue and authoritative data           |
| • DNS06 | Consistency between delegation and zone                   |
| • DNS07 | SOA record consistency between authoritative name servers |
| • DNS08 | NS record consistency between authoritative name servers  |
| • DNS09 | No truncation of referrals                                |
| • DNS10 | Prohibited networks                                       |
| • DNS11 | No open recursive name service                            |
| • DNS12 | Same source address                                       |
| • DNS14 | Legal values for the DS hash digest algorithm             |
| • DNS15 | DS must match a DNSKEY in the designated zone             |
| • DNS16 | Signatures in the designated zone must validate           |
| • DNS17 | Zone contains NSEC or NSEC3 records                       |
| • DNS18 | Consistency between glue and authoritative data           |
| • DNS19 | SOA record consistency between authoritative name servers |
| • DNS20 | NS record consistency between authoritative name servers  |
| • DNS21 | No open recursive name service                            |
| • DNS23 | Syntax for SOA RNAME                                      |
| • DNS24 | SOA Minimum   |
| • DNS25 | NSEC3 Iterations  |
| • DNS26 | RRSIG Lifetimes   |
| • DNS27 | DNSKEY Algorithms   |

- DNS28 DS TTL
- DNS29 Wildcards
- DNS30 Dotless domain
- DNS31 nic.<TLD> or whois.nic.<TLD> must be delegated
- DNS32 Name server reachability
- DNS33 Answer authoritatively
- DNS34 Consistency between delegation and zone
- DNS35 Name server must be able to provide referral to known subdomains
- DNS36 RRSIG(SOA) must validate with supplied DS record

### 2.1.2 EPP

Full description of the EPP Test Cases is found in the EPP Test Area Specification.

- EppConnTest Verify connectivity
- EPPDomCreate01 Create a domain
- EPPDomCreate02 Add hosts to existing domain
- EPPDomCreate03 Create a DNSSEC-signed domain
- EPPDomRenew01 Renew a domain
- EPPDomTransfer01 Request transfer of a domain
- EPPDomTransfer02 Approve a requested domain transfer
- EPPDomDelete01 Delete a domain
- EPPConCreate 01 Create a contact
- EPPConDelete01 Delete a contact
- EPPHostDelete01 Delete a host
- EPPHostUpdate01 Update a host
- EPPContactUpdate01 Update a contact
- EPPDomUpdate01 Add DNSSEC records to a domain
- EPPExtensions Verify required EPP extensions

### 2.1.3 Whois

Full description of the Whois Test Cases is found in the Whois Test Area Specification.

- WhoisCLI01 Query for domain name
- WhoisCLI02 Query for registrar
- WhoisCLI03 Query for name server
- WhoisWeb01 Verify IPv4 connectivity
- WhoisWeb02 Verify IPv6 connectivity
- WhoisWeb03 Manual query for domain name
- WhoisWeb04 Manual query for registrar
- WhoisWeb05 Manual query for name server
- WhoisWeb09 Manual query for domain name over IPv6
- WhoisSearch00 Verify if Whois Search is supported
- WhoisSearch01 Verify abuse protection
- WhoisSearch02 Partial Match capabilities
- WhoisSearch03 Exact Match search

- WhoisSearch04 Boolean Search capabilities
- WhoisSearch09 Search over IPv6

#### 2.1.4 IDN

Full description of the IDN Test Cases is found in the IDN Test Area Specification.

- IDNvalid00 IDN documentation validation
- IDNvalid01 IDN Table validation
- IDNvalid02 IDNA Code Point validation
- IDNvalid03 Contextual Rule validation
- IDNvalid04 IDN Script validation
- IDNvalid05 IDN Script Mixing Rule validation
- IDNvalid06 IDN Language validation
- IDNvalid07 Variant Code Point validation
- IDNvalid09 Variant Management Policy
- IDNvalid10 Basic IDN compliance
- IDNvalid11 IDN online registry response validation
- IDNvalid12 Asymmetrical and intransitive variant rule verification
- IDNvalid13 Pre-composed vs. decomposed character equivalence verification

#### 2.1.5 Data Escrow

Full description of the Data Escrow Test Cases is found in the Data Escrow Test Area Specification.

- DataEscrowFileName01 Verify file names, full escrow
- DataEscrowFileName02 Verify file names, differential escrow
- DataEscrowVerify01 Verify signatures, full escrow
- DataEscrowVerify02 Verify signatures, differential escrow
- DataEscrowContent01 Validate content, full escrow
- DataEscrowContent02 Validate content, differential escrow

#### 2.1.6 Documentation

Full description of the Documentation Test Cases is found in the Documentation Test Area Specification.

- DocDNS01 Capacity and DDOS mitigation
- DocDNS02 Load capacity, latency and network reachability
- DocDNS03 Load capacity – tables and graphs
- DocDNS04 Load capacity – 20 data points
- DocDNS05 Query latency
- DocDNS06 TCP reachability
- DocDNS07 Basic DNSSEC support
- DocDNS08 Name server consistency
- DocWhois01 Maximum QPS
- DocWhois02 Data mining
- DocEPP01 EPP capacity
- DocEPP02 EPP TPS

- DocEPP03 EPP landrush
- DocEPP04 EPP extensions
- DocEscr01 Data Escrow Agreement
- DocSL01 DNS SLA
- DocSL02 Whois SLA
- DocSL03 EPP SLA
- DocDPS01 DNSSEC Practice Statement – Structure
- DocDPS02 DNSSEC Practice Statement – Content



### **3. General**

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#### **3.1 Glossary**

The glossary is available in the RST Master Test Plan.

#### **3.2 Document change procedures**

Document change procedures are documented in the RST Master Test Plan.