

Registry System Testing

EPP Test Area Specification

Version B

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1. Introduction

This document describes the EPP Level Tests within the Registry System Testing framework.

1.1 Scope

The Registry System Testing Provider will execute an *Extensible Provisioning Protocol* (EPP) test case suite using registrar credentials supplied by the Registry Operator. The tests include:

- IPv6 transport support (if supported by the registry)
- IPv6 DNS glue record handling
- DNSSEC support

1.2 Context

The first test (EPPConnTest) is to be performed over IPv4 and IPv6 (if supported by the registry) from at least five nodes on the Internet. At least one node should be located in every ICANN region. The rest of the tests will only be performed from one location.

1.3 References

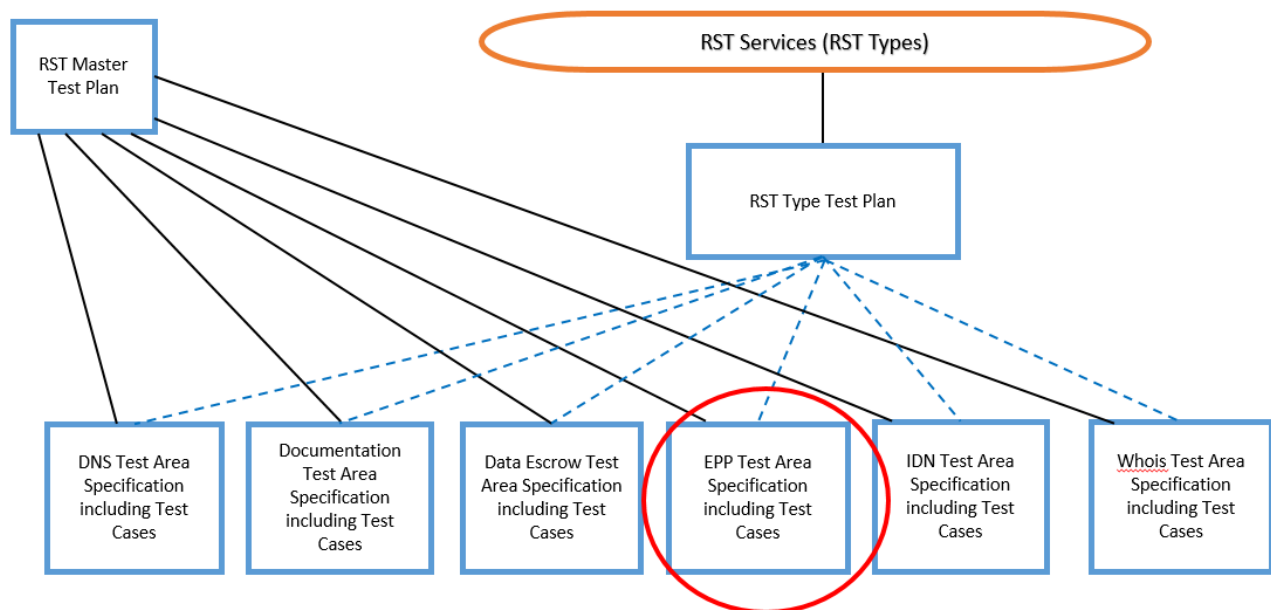
1.3.1 External

- IEEE 829-2008
- ICANN gTLD Applicant Guidebook, Version 2012-06-04

1.3.2 Internal

- Registry System Testing, Master Test Plan
- Registry System Testing, Documentation Test Area Specification
- Design and principles for SRS Gateway Testing

1.3.3 Document Hierarchy



This document is one of many Test Area Specifications for RST (circled in red in the above graphic). It defines the Test Cases for its Test Area.

1.4 Earlier documents

This document replaces, in contents, the following documents that were part of PDT (Pre-Delegation Testing):

- Pre-Delegation Testing: EPP Test Plan (version E)
- Pre-Delegation Testing: EPP Test Cases (version I)

1.5 Level in the overall sequence

The test cases in this document can be run in parallel with test cases in the other Test Area Specifications.

1.6 Test classes and overall test conditions

The EPP service of the gTLD will be tested over IPv4. If the service is IPv6-enabled, then the tests will also be performed using this protocol. All responses will be tested with positive test case.

1.6.1 Special considerations for SRS Gateway test cases

The SRS Gateway test cases have been prefixed with “TLDSRS” or “SRS+GW” to indicate that they are not identical to the basic EPP test cases, although they are in some cases rather similar. The main differences are:

- No DNS or Whois pre-condition tests are included.
- The EPPExtensions test case is not included.
- Only the Connectivity test cases are performed over IPv6; all other SRS GW test cases are only performed over IPv4.

Further, the SRS Gateway test cases only utilize two test nodes:

- <TestNodeA>, a test node somewhere in the world, not in the same country as the SRS Gateway itself, for EPP connections to the TLD SRS EPP server.

- <TestNodeB>, a test node in the same country as the SRS Gateway EPP server, for EPP connections to that EPP server.

1.6.2 Gateway testing

The Gateway EPP test cases (prefix “SRS+GW”) have a particular structure. With the exception of test case *SRS+GW Address verification* and *SRS+GW Conn Test*, they follow this pattern:

- 1) Verify pre-condition
 - a) Run EPP INFO command against TLD SRS EPP server
 - b) Run EPP INFO command against SRS Gateway EPP server
 - c) Compare the output of the previous two commands. If not equal issue a FAIL.
- 2) Run the EPP transformation command against SRS Gateway EPP server. In case of deviations from expectation in the Test Case, issue a FAIL.
- 3) Verify post-condition
 - a) Run EPP INFO command against TLD SRS EPP server
 - b) Run EPP INFO command against SRS Gateway EPP server
 - c) Compare the output of the previous two commands. If not equal issue a FAIL.

2. Test Requirements

2.1 Test items and their identifiers

2.1.1 Applicant Guidebook

Section 5.2 of the AGB states the following requirements:

EPP Support -- As part of a shared registration service, [Registry Operator] must provision EPP services for the anticipated load. ICANN will verify conformance to appropriate RFCs (including EPP extensions for DNSSEC). ICANN will also review self-certification documentation regarding EPP transaction capacity.

Documentation shall provide a maximum Transaction per Second rate for the EPP interface with 10 data points corresponding to registry database sizes from 0 (empty) to the expected size after one year of operation, as determined by [Registry Operator].

Documentation shall also describe measures taken to handle load during initial registry operations, such as a land-rush period.

IPv6 support -- The ability of the registry to support registrars adding, changing, and removing IPv6 DNS records supplied by registrants will be tested by ICANN. If the registry supports EPP access via IPv6, this will be tested by ICANN remotely from various points on the Internet.

DNSSEC support -- ICANN will review the ability of the registry to support registrars adding, changing, and removing DNSSEC-related resource records as well as the registry's overall key management procedures. In particular, the [Registry Operator] must demonstrate its ability to support the full life cycle of key changes for child domains. Inter-operation of the [Registry Operator's] secure communication channels with the IANA for trust anchor material exchange will be verified.

The practice and policy document (also known as the DNSSEC Policy Statement or DPS), describing key material storage, access and usage for its own keys is also reviewed as part of this step.

The following requirements have been identified from the text above. Note that the requirements on Self-certification documents are handled within the Documentation Test Area.

- [AGB1] EPPServer MUST be accessible over IPv4
- [AGB2] EPPServer SHOULD be accessible over IPv6
- [AGB3] EPPServer MUST handle IPv6 DNS record (glue records)
- [AGB4] EPPServer MUST handle DNSSEC records

2.1.2 Specification 6

Specification 6 of the registry agreement will not be fully cited here, but a number of requirements have been identified. Optional requirements and document verification requirements have been removed.

- [REG1]** EPPServer MUST be conformant with RFC 5910, RFC 5730, RFC 5731, RFC5732 (if using host objects), RFC5733 and RFC5734
- [REG2]** EPPServer MUST be accessible from different parts of Internet.

2.1.3 SRS Gateway testing

The Design & Principles document adds three requirements for SRS Gateway EPP testing.

- [SRSGW1]** Verify that the TLD Registry System conforms to the requirement for EPP systems.
- [SRSGW2]** Verify that the SRS Gateway conforms to the requirements for EPP systems.
- [SRSGW3]** Verify that updates to the SRS Gateway are replicated to the TLS Registry System.

2.2 Features to be tested

The following features will be tested:

- EPP connectivity from different places on the Internet.
- EPP connectivity over IPv4 and if specified over IPv6.
- EPP commands to create a domain.
- EPP commands to create hosts. This test will only be done if the Registry Operator supports Host Objects. If the Registry Operator does not support Host Objects, the test will be done by doing a domain update and adding subordinate hosts via HostAttributes.
- EPP commands to update domain.
- Zone distribution of glue records.
- Zone distribution of DNSSEC records.
- EPP commands to renew a domain.
- EPP commands to transfer a domain.
- EPP commands to delete a domain.
- EPP commands to create a contact.
- EPP commands to delete a contact
- EPP commands to delete a host. This test will only be done if the Registry Operator supports HostObjects.
- EPP commands to update a host This test will only be done if the Registry Operator supports HostObjects.
- EPP commands to update a contact

2.3 Features not to be tested

- External communication for domain transfer, if an external handling is required.
- The IPv6 connectivity is not tested if the Registry Operator does not support it.
- Host Create, update and delete if the Registry Operator does not support Host Objects.

2.4 Approach

The EPP server will first be tested from five different Internet locations with just the login and logout commands. If the registry supports IPv6 then this will be tested; if not, only IPv4 will be tested. The other test cases will only be tested from one location since connectivity already has been tested in first test case.

There is no possibility to validate or check individual field's conformance to local policies. The Registry Operator must thus submit valid field data that can be used in the tests. If the Registry Operator has supplied invalid data, the test will fail.

There are two ways of supplying information to the tests:

- Supply complete EPP XML strings with all information
- Supply only field values

To test the RFC compliance in the best way, it was determined to only require the field values from the Registry Operator. The tests can then build RFC compliant EPP XML commands, thus being able to verify that the RO's EPP server accepts correctly formatted RFC compliant XML.

To be able to test a transfer there are two test cases that can be defined:

- First test is to request a transfer. If the domain transfer does not require an external handling, then the result code must be 1000, and in other cases it must be 1001.
- Second test will be to accept a transfer if the Registry Operator supports this.

Any test of transfers beyond this requires external handling and will be impossible to do in the RST testing system.

As the EPP tests are creating data in the registry database, the test is not repeatable without the Registry Operator either cleaning out the newly created data, or supplying new test data.

2.5 Item pass/fail criteria

The EPP server must reply with correct XML messages for the different commands as described in the relevant RFCs.

2.6 Suspension criteria and resumption requirements

The only suspension criteria for the test would be if there are external network problems outside the control of the Registry Operator or the RST tester.

2.7 Test deliverables

The EPP test level will produce:

- Level Test Logs (LTL)
- Anomaly Report (AR) in case of error
- Level Test Report (LTR)

3. Test Traceability Matrix

This table describes the different test cases and their mapping to the requirements.

Test ID	Description
EppConnTest	Connect and login from 5 probes over IPv4 and IPv6.
EPPDomCreate01, EPPDomCreate01A	Create a domain with predefined contact and name servers. Verify that the domain is visible in zone within 24 hours. (Not included in 'EPPDomCreate01A'.) Verify that whois is updated within 24 hours. (Not included in 'EPPDomCreate01A'.)
EPPDomCreate02, EPPDomCreate02A	Use an existing domain. If the Registry Operator is using HostObjects: <ul style="list-style-type: none"> Create 2 subordinate name servers, via HostCreate command, and update domain with this. If the Registry Operator does not support HostObjects: <ul style="list-style-type: none"> Do a Domain Update to add 2 Subordinate name servers, with Host Attributes. Verify that the correct glue records are visible in zone within 24 hours. (Not included in 'A'.)
EPPDomCreate03, EPPDomCreate03A	Create a domain with predefined contacts and name servers. Update domain with DS records. Verify that the correct DNSSEC records are visible in zone within 24 hours. (Not included in 'A'.)
EPPDomRenew01	Renew a domain.
EPPDomTransfer01	Request transfer of an existing domain.
EPPDomTransfer02	Accept transfer of a domain (From EPP DomTransfer 01).
EPPDomDelete01	Delete a domain.
EPPConCreate 01	Create a contact.
EPPConDelete01	Delete a contact.
EPPhostDelete01	Delete a host. This test will only be done if the registry supports HostObjects.
EPPhostUpdate01	Update a host. This test will only be done if the registry supports HostObjects.
EPPContactUpdate01	Update a contact.
EPPDomUpdate01, EPPDomUpdate01A	Update one domain and add DS records. Verify that update is visible in zone and whois within 60 minutes. (Not included in 'A'.)
EPPExtensions	Verify that the mandatory extensions according to the Registry Agreement are used by the EPP server.
TLDSRSEPPConnTest	Verify connectivity from different nodes to the EPP provisioning system.
TLDSRSEPPDomCreate01	Create a domain with predefined contact and name servers.
TLDSRSEPPDomCreate02	Update an existing domain with two subordinate hosts.
TLDSRSEPPDomCreate03	Create a domain with DNSSEC records.
TLDSRSEPPDomRenew01	Renew an existing domain.

Test ID	Description
TLDSRSEPPDomTransfer01	Request transfer of an existing domain.
TLDSRSEPPDomTransfer02	Approve a previously requested transfer of a domain.
TLDSRSEPPDomDelete01	Delete a domain.
TLDSRSEPPConCreate01	Create a contact.
TLDSRSEPPConDelete01	Delete a contact.
TLDSRSEPPHostDelete01	Delete a host object.
TLDSRSEPPHostUpdate01	Update a host object with a new IP address.
TLDSRSEPPConUpdate01	Update a contact.
TLDSRSEPPDomUpdate01	Update an existing domain with DNSSEC records.
SRSGWAddrVer	Verify that the SRS GW IP address or addresses seem to be routed to the country the gateway is supposed to reside in.
SRSGWConnTest	Verify connectivity to the SRS GW EPP provisioning system over IPv4 and, optionally, IPv6.
SRSGWDomCreate01	Verify that a domain name created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWDomCreate02	Verify that subordinate Host Objects created for a domain through the SRS GW EPP system are correctly synchronized with the TLD SRS EPP system.
SRSGWDomCreate03	Verify that a domain object with DNSSEC records created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWDomRenew01	Verify that a domain object renewed through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWDomTransfer01	Verify that a transfer of a domain object requested through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWDomTransfer02	Verify that a transfer of a domain object approved through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWDomDelete01	Verify that a domain object deleted through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWConCreate01	Verify that a contact object created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWConDelete01	Verify that a contact object deleted through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWHostDelete01	Verify that deleting a Host Object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWHostUpdate01	Verify that updating a Host Object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.
SRSGWConUpdate01	Verify that updating a contact object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

Test ID	Description
	system.
SRSGWDomUpdate01	Verify that updating a domain object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

4. Test management

The goal of these documents is to describe the test cases and how the new gTLDs are tested. This is just a part of a larger project and defining test management is not part of this subproject. However, some information can be found in the Master Test Plan.

5. Test Case EPPConnTest: Verify connectivity

5.1 Test case identifier

EPPConnTest

5.2 Objective

This test verifies the connectivity from different nodes to the EPP provisioning system by doing a login and then a logout. For information about nodes, see section 1.2.

The test will be performed over IPv4, and also IPv6 if the registry supports it.

5.3 Inputs

The following information is needed as input for this test case:

Id	Description	Type
EppLoginId	Login ID for EPP test user	String
EppLoginPwd	Login password for EPP test user	String
EppNsDomainUri	Object URI for Domain Object	String
EppNsDomainSl	Schema location for Domain Object	String
EppNsContactUri	Object URI for Contact Object	String
EppNsContactSl	Schema location for Contact Object	String
EppNsHostUri	Object URI for Host Object. If the Registry Operator is not supporting Host Objects, this field is not mandatory.	String
EppNsHostSl	Schema location for Host Object. If the Registry Operator is not supporting Host Objects, this field is not mandatory.	String
EppExtSecDnsUri	Object URI for Sec Dns Object Extension	String
EppExtSecDnsSl	Schema location for Sec Dns Object Extension	String
EppExtUri-[1..n]	Object URI for extension 1..n	String
EppExtSl-[1..n]	Schema location for extensions 1..n	String
EppServerIPv4	IPv4 address to EPP server	String
EppServerIPv6	IPv6 address to EPP server if registry supports IPv6	String
EppServerPort	Port number to EPP server	Number
EppClientCertificate	Yes if Registry Operator requires client certificate	Boolean
EppClientKeyPairPem	PEM file with valid client certificate for test user (Public and private)	PEM file
EppClientKeyPairPwd	Password for client certificate for test user	String
EppServerCertificatePem	PEM file with server certificate (Public)	PEM file

5.4 Outcome(s)

The login command from each probe MUST complete with result code 1000

The logout command from each probe MUST complete with result code 1500.

5.5 Environmental needs

- EPP test script

- IPv4 connectivity
- IPv6 connectivity

5.6 Special procedural requirements

Abort the test if any operation takes longer than 30 seconds.

5.7 Intercase dependencies

This test has no intercase dependencies.

5.8 Ordered description of steps to be taken to execute the test case

This test will be performed from all of the nodes.

1. Connect to EppServerIPv4.
Create a login command with *EppLoginId* and password *EppLoginPwd*.
Use the *EppNsDomainUri*, *EppNsDomainSl*, *EppNsContactUri*, *EppNsContactSl*, *EppNsHostUri* and *EppNsHostSl* to build the login message.
Add the secDNS extension with *EppExtSecDnsUri* and *EppExtSecDnsSl*.
Add zero or more extra extensions with *EppExtUri* and *EppExtSl*.
If the server requires client certificate, connect with client certificate *EppClientKeyPairPem*.
The login command MUST complete with result code 1000.
2. Create a logout command.
The logout command MUST complete with result code 1500.

If registry supports IPv6:

1. Connect to EppServerIPv6.
Create a login command with *EppLoginId* and password *EppLoginPwd*.
Use the *EppNsDomainUri*, *EppNsDomainSl*, *EppNsContactUri*, *EppNsContactSl*, *EppNsHostUri* and *EppNsHostSl* to build the login message.
Add the secDNS extension with *EppExtSecDnsUri* and *EppExtSecDnsSl*.
Add zero or more extra extensions with *EppExtUri* and *EppExtSl*.
If the server requires client certificate, connect with client certificate *EppClientKeyPairPem*.
The login command MUST complete with result code 1000.
2. Create a logout command.
The logout command MUST complete with result code 1500.

6. Test Case EPPDomCreate01: Create a domain

6.1 Test case identifier

EPPDomCreate01

6.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a domain object, logging out, and verifying that the domain is visible in the zone within 24 hours. It also verifies that information is visible in Whois within 24 hours.

When executing this test case as EPPDomCreate01A, the DNS and Whois verifications are not included. Requirements and test steps marked with an asterisk (*) should be disregarded for an 'A' test case.

6.3 Inputs

The following information is needed as input for this test case:

The IP address for the authoritative name server for the TLD zone is required as the test verifies DNS visibility. It is fetched from the XML data file submitted for the DNS tests.

The IP address of the Whois server is extracted from the DNS zone by the Whois test and is also used for this TC.

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
DnsGlueRecord1	IPv4 or IPv6 address of 1 st authoritative name server	String
WhoisIPv4Port43	The IPv4 address of the Whois service on port 43	String
EppDomCreate01Name	Domain name to create	String
EppDomCreate01Period	Domain period type	Y/M
EppDomCreate01PeriodValue	Domain period value	Number
EppDomCreate01RegistrantId	Domain registrant id	String
EppDomCreate01AdminId	Domain Admin id if required	String
EppDomCreate01TechId	Domain Tech id if required	String
EppDomCreate01BillingId	Domain Billing id if required	String
EppDomCreate01AuthPw	AuthPw if required	String
EppDomCreate01Ns01	Host Object or Host Attribute name for ns01	String
EppDomCreate01Ns02	Host Object or Host Attribute name for ns02	String
EppDomCreate01Ext01Uri	Extension 01 object URI	String
EppDomCreate01Ext01Sl	Extension 01 schema location	String
EppDomCreate01Ext01ExtName	Extension 01 name	String
EppDomCreate01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomCreate01Ext01Field01	Extension 01 field name 01	String
EppDomCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

6.4 Outcome(s)

Initial DNS lookup MUST return NXDOMAIN for *EppDomCreate01Name*. *

Initial Whois lookup MUST NOT return any information about *EppDomCreate01Name*. *

Login step MUST complete with result code 1000.

Create step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

EppDomCreate01Name MUST be visible in zone within 24 hours. *

EppDomCreate01Name MUST be visible in Whois within 24 hours. *

*Requirements marked with * are not considered in test case EPPDomCreate01A.*

6.5 Environmental needs

- DNS test script
- Whois client software
- EPP test script
- IPv4 connectivity
- *EppDomCreate01Name* MUST NOT exist in the DNS zone.
- *EppDomCreate01RegistrantId* MUST exist in contact database
- *EppDomCreate01Ns01* MUST exist in host database, and be configured to serve domain *EppDomCreate01Name*.
- *EppDomCreate01Ns02* MUST exist in host database, and be configured to serve domain *EppDomCreate01Name*.

6.6 Special procedural requirements

Abort the test if any Whois query takes longer than 10 seconds.

Abort the test if any EPP operation takes longer than 30 seconds.

6.7 Intercase dependencies

This test has no intercase dependencies.

6.8 Ordered description of steps to be taken to execute the test case

1. Verify that the domain is not present in Whois: *
 - a. Start a terminal.
 - b. Query the Whois service using the client software:
`whois -h WhoisIPv4Port43 EppDomCreate01Name`
 - c. The domain name MUST NOT be present in the response.
2. Perform a DNS lookup for the domain name *EppDomCreate01Name*. *
The result MUST be NXDOMAIN.
3. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
4. Create a domain create command with *EppDomCreate01Name*.
 - a. Use period name from *EppDomCreate01Period* and period value from *EppDomCreate01PeriodValue*.
 - b. Use name server 1 from *EppDomCreate01Ns01* and name server 2 from *EppDomCreate01Ns02*.

- c. If domain create requires extra extensions and values, create an extension part from *EppDomCreate01Ext01Uri* and fill in field name from *EppDomCreateExt01Field01* and values from *EppDomCreateExt01Value01*.

The domain create command MUST complete with result code 1000 or 1001.

5. Create a logout command.

The logout command MUST complete with result code 1500.

6. Verify that the *EPPDomCreate01Name* domain is visible in the zone within 24 hours. *
7. Verify that the *EPPDomCreate01Name* is visible in Whois within 24 hours. *

*Steps marked with * are not included in test case EppDomCreate01A.*

7. Test Case EPPDomCreate01A: Create a domain

7.1 Test Case Identifier

EPPDomCreate01A

7.2 Objective

This is a subset of test case EPPDomCreate01. See section 6, “Test Case EPPDomCreate01: Create a domain”, for details.

8. Test Case EPPDomCreate02: Add hosts to existing domain

8.1 Test case identifier

EPPDomCreate02

This test is changed from creating a domain to adding subordinate hosts to an existing domain. As a consequence, all fields required for creating the domain are now optional, and will be ignored if they are present in the input data. They will be removed in a future release.

8.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating subordinate Host Objects for a domain, updating the domain, logging out, and verifying the correct handling of glue records.

If the Registry Operator does not support Host Objects, the test uses Host Attributes to insert the subordinate name servers for the domain.

When executing this test case as EPPDomCreate02A, DNS verification is not included. Requirements and test steps marked with an asterisk (*) should be disregarded for an 'A' test case.

8.3 Inputs

The following information is needed as input for this test case:

The IP address for the authoritative name server for the TLD zone is required as the test verifies DNS visibility. It is fetched from the XML data file submitted for the DNS tests.

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
DnsGlueRecord1	IPv4 or IPv6 address of 1 st authoritative name server	String
EppDomCreate02Name	Domain name to update	String
EppDomCreate02Ns01	Subordinate Host Object or Host Attribute name for name server 01	String
EppDomCreate02Ns01Ipv4	Subordinate name server 01 IPv4 address	String
EppDomCreate02Ns01Ipv6	Subordinate name server 01 IPv6 address	String
EppDomCreate02Ns02	Subordinate Host Object or Host Attribute name for name server 02	String
EppDomCreate02Ns02Ipv4	Subordinate name server 02 IPv4 address	String
EppDomCreate02Ns02Ipv6	Subordinate name server 02 IPv6 address	String
EppDomCreate02UpdExt01Uri	Extension 01 object URI	String
EppDomCreate02UpdExt01Sl	Extension 01 schema location	String
EppDomCreate02UpdExt01ExtName	Extension 01 name	String
EppDomCreate02UpdExt01ExtValue	Extension 01 value for direct text node	String
EppDomCreate02UpdExt01Field01	Extension 01 field name 01	String

Id	Description	Type
EppDomCreate02UpdExt01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for Update	
...	Repeat for max x extensions for Update	
EppDomCreate02Ns01Ext01Uri	Extension 01 object URI	String
EppDomCreate02Ns01Ext01Sl	Extension 01 schema location	String
EppDomCreate02Ns01Ext01ExtName	Extension 01 name	String
EppDomCreate02Ns01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomCreate02Ns01Ext01Field01	Extension 01 field name 01	String
EppDomCreate02Ns01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 01	
...	Repeat for max x extensions for name server 01	
EppDomCreate02Ns02Ext01Uri	Extension 01 object URI	String
EppDomCreate02Ns02Ext01Sl	Extension 01 schema location	String
EppDomCreate02Ns02Ext01ExtName	Extension 01 name	String
EppDomCreate02Ns02Ext01ExtValue	Extension 01 value for direct text node	String
EppDomCreate02Ns02Ext01Field01	Extension 01 field name 01	String
EppDomCreate02Ns02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 02	
...	Repeat for max x extensions for name server 02	

8.4 Outcome(s)

Initial DNS lookup MUST NOT show neither *EppDomCreate02Ns01* nor *EppDomCreate02Ns02* as nameservers for *EppDomCreate02Name*. *

The login command MUST complete with result code 1000.

If the Registry Operator is using Host Objects, the host create command MUST complete with result code 1000 or 1001.

The domain update command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

EppDomCreate02Name MUST be visible in zone with correct glue records within 24 hours.

*Requirements marked with * are not considered in test case EPPDomCreate02A.*

8.5 Environmental needs

- DNS test script
- EPP test script
- IPv4 connectivity
- *EppDomCreate02Name* MUST exist in EPP database.
- *EppDomCreate02RegistrantId* MUST exist in contact database
- *EppDomCreate02Ns01* MUST be configured to serve domain *EppDomCreate02Name*.
- *EppDomCreate02Ns02* MUST be configured to serve domain *EppDomCreate02Name*.

8.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

8.7 Intercase dependencies

This test has no intercase dependencies.

8.8 Ordered description of steps to be taken to execute the test case

1. Perform a DNS lookup for *EppDomCreate02Name* domain name.
The result MUST NOT show neither *EppDomCreate02Ns01* nor *EppDomCreate02Ns02* as Nameservers for *EppDomCreate02Name*. *
2. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
3. If the registry does not support Host Objects, skip to step 6.
4. Create a host create command for subordinate host *EppDomCreate02Ns01* with IPv4 address *EppDomCreate02Ns01Ipv4* and/or IPv6 address *EppDomCreate02Ns01Ipv6*.
The host create command MUST complete with result code 1000 or 1001.
5. Create a host create command for subordinate host *EppDomCreate02Ns02* with IPv4 address *EppDomCreate02Ns02Ipv4* and/or IPv6 address *EppDomCreate02Ns02Ipv6*.
The host create command MUST complete with result code 1000 or 1001.
6. Create a domain update command with *EppDomCreate02Name* and hosts *EppDomCreate02Ns01* and *EppDomCreate02Ns02*.
 - If the registry supports Host Objects, use Host Objects.
 - If the registry does not support Host Objects, use Host Attributes.The domain update command MUST complete with result code 1000 or 1001.
7. Create a logout command.
The logout command MUST complete with result code 1500.
8. Verify that the *EppDomCreate02Name* domain and the correct glue records are visible in the zone within 24 hours. *

*Steps marked with * are not included in test case EppDomCreate02A.*

9. Test Case EPPDomCreate02A: Add hosts to existing domain

9.1 Test Case Identifier

EPPDomCreate02A

9.2 Objective

This is a subset of test case EPPDomCreate02. See section 8, “Test Case EPPDomCreate02: Add hosts to existing domain”, for details.

10. Test Case EPPDomCreate03: Create a signed domain

10.1 Test case identifier

EPPDomCreate03

10.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a domain object with DNSSEC records and logging out.

When executing this test case as EPPDomCreate03A, DNS verification is not included. Requirements and test steps marked with an asterisk (*) should be disregarded for an 'A' test case.

10.3 Inputs

The following information is needed as input for this test case:

The IP address for the authoritative name server for the TLD zone is required as the test verifies DNS visibility. It is fetched from the XML data file submitted for the DNS tests.

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
DnsGlueRecord1	IPv4 or IPv6 address of 1 st authoritative name server	String
EppDomCreate03Name	Domain name to create	String
EppDomCreate03Period	Domain period type	Y/M
EppDomCreate03PeriodValue	Domain period value	Number
EppDomCreate03RegistrantId	Domain registrant id	String
EppDomCreate03AdminId	Domain admin id if required	String
EppDomCreate03TechId	Domain tech id if required	String
EppDomCreate03BillingId	Domain billing id if required	String
EppDomCreate03AuthPw	Authentication password if required	String
EppDomCreate03Ns01	Host Object name for ns01	String
EppDomCreate03Ns02	Host Object name for ns02	String
EppDomCreate03Ext01Uri	Extension 01 object URI	String
EppDomCreate03Ext01Sl	Extension 01 schema location	String
EppDomCreate03Ext01ExtName	Extension 01 name	String
EppDomCreate03Ext01ExtValue	Extension 01 value for direct text node	String
EppDomCreate03Ext01Field01	Extension 01 field name 01	String
EppDomCreate03Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
EppDomCreate03KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
EppDomCreate03DsKeyTag01	Value for dsData 01 keytag	String
EppDomCreate03DsAlg01	Value for dsData 01 alg	Number
EppDomCreate03DsDigestType01	Value for dsData 01 digest type	Number

Id	Description	Type
EppDomCreate03DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	
EppDomCreate03KdFlags01	Value for keyData 01 flags	Number
EppDomCreate03KdProtocol01	Value for keyData 01 protocol	Number
EppDomCreate03KdAlg01	Value for keyData 01 alg	Number
EppDomCreate03KdPubKey01	Value for keyData 01 pubKey	String
...	Repeat for max x keyData records	

10.4 Outcome(s)

Initial DNS lookup MUST return NXDOMAIN for *EppDomCreate03Name*. *

The domain create command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

EppDomCreate03Name MUST be visible in the zone with correct DNS records within 24 hours.

*Requirements marked with * are not considered in test case EPPDomCreate02A.*

10.5 Environmental needs

- DNS test script
- EPP test script
- IPv4 connectivity
- *EppDomCreate03Name* MUST NOT exist in the DNS zone.
- *EppDomCreate03RegistrantId* MUST exist in contact database
- *EppDomCreate03Ns01* MUST exist in host database, and be configured to serve domain *EppDomCreate03Name* with correct DNSSEC records.
- *EppDomCreate03Ns02* MUST exist in host database, and be configured to serve domain *EppDomCreate03Name* with correct DNSSEC records.

10.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

10.7 Intercase dependencies

This test has no intercase dependencies.

10.8 Ordered description of steps to be taken to execute the test case

1. Perform a DNS lookup for *EppDomCreate03Name* domain name.
The result MUST be NXDOMAIN. *
2. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
3. Create a domain create command with *EppDomCreate03Name*.
 - a. Use period name from *EppDomCreate03Period* and period value from *EppDomCreate03PeriodValue*.
 - b. Use name server 1 from *EppDomCreate03Ns01* and name server 2 from *EppDomCreate03Ns02*.
 - c. Add one or more secDNS records with dsData or keyData or both, depending on the value of *EppDomUpdate01KeyType*. Use appropriate values from *EppDomUpdate01DsKeyTag01*, *EppDomUpdate01DsAlg01*, *EppDomUpdate01DsDigestType01*,

EppDomUpdate01DsDigest01, EppDomUpdate01KdFlags01, EppDomUpdate01KdProtocol01, EppDomUpdate01KdAlg01, EppDomUpdate01KdPubKey01.

- d. If domain create requires extra extension and values, create an extension part from *EppDomCreate03Ext01Uri* and fill in field name from *EppDomCreate03Ext01Field01* and values from *EppDomCreate03Ext01Value01*.

The domain create command MUST complete with result code 1000 or 1001.

- 4. Create a logout command.

The logout command MUST complete with result code 1500.

- 5. Verify that the *EppDomCreate03Name* domain is visible, with the correct DNSSEC records, in the zone within 24 hours. *

*Steps marked with * are not included in test case EppDomCreate03A.*

11. Test Case EPPDomCreate03A: Create a signed domain

11.1 Test Case Identifier

EPPDomCreate03A

11.2 Objective

This is a subset of test case EPPDomCreate03. See section 10, “Test Case EPPDomCreate03: Create a signed domain”, for details.

12. Test Case EPPDomRenew01: Renew a domain

12.1 Test case identifier

EPPDomRenew01

12.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, renewing a domain object and logging out.

12.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppDomRenew01Name	Domain name to renew	String
EppDomRenew01Period	Domain period type	Y/M
EppDomRenew01PeriodValue	Domain period value	Number
EppDomRenew01ExpDate	Domain current expiry date	String
EppDomRenew01Ext01Uri	Object URI for extension 01	String
EppDomRenew01Ext01SI	Extension 01 schema location	String
EppDomRenew01Ext01ExtName	Extension 01 name	String
EppDomRenew01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomRenew01Ext01Field01	Extension 01 field name 01	String
EppDomRenew01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

12.4 Outcome(s)

The login command MUST complete with result code 1000.

The renew command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

12.5 Environmental needs

- EPP test script
- IPv4Connectivity
- *EppDomRenew01Name* domain MUST exist in the domain database, and be ready for renewal

12.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

12.7 Intercase dependencies

This test has no intercase dependencies.

12.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a domain renew command with *EppDomRenew01Name*.
 - a. Use period name from *EppDomRenew01Period* and period value from *EppDomRenew01PeriodValue*.
 - b. If domain renew requires extra extension and values, create an extension part from *EppDomRenew01Ext01Uri* and fill in field name from *EppDomRenew01Ext01Field01* and values from *EppDomRenew01Ext01Value01*.The domain renew command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

13. Test Case EPPDomTransfer01: Transfer an existing domain

13.1 Test case identifier

EPPDomTransfer01

13.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, requesting a transfer of a domain object and logging out.

13.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppDomTransfer01Name	Domain name to transfer	String
EppDomTransfer01AddPeriod	Yes if the Registry Operator supports adding a period to transfer	Boolean
EppDomTransfer01Period	Domain period type	Y/M
EppDomTransfer01PeriodValue	Domain period value	Number
EppDomTransfer01AuthInfo	Authorization info for domain, registrant or associated contacts	String
EppDomTransfer01AuthRoid	Roid for registrant or contact if EppDomTransfer01AuthInfo is associated with registrant or contact object	String
EppDomTransfer01Ext01Uri	Extension 01 object URI	String
EppDomTransfer01Ext01Sl	Extension 01 schema location	String
EppDomTransfer01Ext01ExtName	Extension 01 name	String
EppDomTransfer01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomTransfer01Ext01Field01	Extension 01 field name 01	String
EppDomTransfer01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

13.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain transfer command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

13.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppDomTransfer01Name* domain MUST exist in the domain database, and be available for transfer.

13.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

13.7 Intercase dependencies

This test has no intercase dependencies.

13.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a domain transfer command with *EppDomTransfer01Name*.
 - a. Add an Op attribute in transfer command with the value “request”.
 - b. If *EppDomTransfer01AddPeriod* is true, add period part with Period name from *EppDomTransfer01Period* and period value from *EppDomTransfer01PeriodValue*.
 - c. Add authinfo part with *EppDomTransfer01AuthInfo*.
 - d. If *EppDomTransfer01AuthRoid* is defined, add a roid attribute to pw part with the value *EppDomTransfer01AuthRoid*.
 - e. If domain renew requires extra extension and values, create an extension part from *EppDomTransfer01Ext01Uri* and *EppDomTransfer01Ext01Sl* and fill in field name from *EppDomTransfer01Ext01Field01* and values from *EppDomTransfer01Ext01Value01*.The domain transfer command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

14. Test Case EPPDomTransfer02: Approve a domain transfer

14.1 Test case identifier

EPPDomTransfer02

14.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, approving a transfer of a domain object if the registry supports this operation via EPP, and logging out.

This test will only be run if the *EppDomTransfer02Approve* is set to yes.

14.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppDomTransfer02Approve	Yes if the Registry Operator supports the Approve operation	Boolean
EppDomTransfer02Name	Domain name to transfer	String
EppDomTransfer02AddPeriod	Yes if the Registry Operator supports adding a period to transfer	Boolean
EppDomTransfer02Period	Domain period type	Y/M
EppDomTransfer02PeriodValue	Domain period value	Number
EppDomTransfer02AuthInfo	Authorization info for domain, registrant or associated contacts if required	String
EppDomTransfer02AuthRoid	Roid for registrant or contact if EppDomTransfer01AuthInfo is associated with registrant or contact object	String
EppDomTransfer02Ext01Uri	Extension 01 object URI	String
EppDomTransfer02Ext01Sl	Extension 01 schema location	String
EppDomTransfer02Ext01ExtName	Extension 01 name	String
EppDomTransfer02Ext01ExtValue	Extension 01 value for direct text node	String
EppDomTransfer02Ext01Field01	Extension 01 field name 01	String
EppDomTransfer02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

14.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain transfer command MUST complete with result code 1000 or 1001.

The logout MUST complete with result code 1500.

14.5 Environmental needs

- EPP test script
- IPv4 connectivity

- *EppDomTransfer02Name* domain MUST exist in the domain database, and be available for transfer approve.

14.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

14.7 Intercase dependencies

This test has no intercase dependencies.

14.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a domain transfer command with *EppDomTransfer02Name*.
 - a. Add an Op attribute in transfer command with the value “approve”.
 - b. If *EppDomTransfer02AddPeriod* is true, add period part with period name from *EppDomTransfer02Period* and period value from *EppDomTransfer02PeriodValue*.
 - c. Add authinfo part with *EppDomTransfer01AuthInfo*.
 - d. If *EppDomTransfer02AuthRoid* is defined add a roid attribute to pw part with the value *EppDomTransfer02AuthRoid*.
 - e. If domain transfer requires extra extension and values, create an extension part from *EppDomTransfer02Ext01Uri* and *EppDomTransfer02Ext01Sl* and fill in field name from *EppDomTransfer02Ext01Field01* and values from *EppDomTransfer02Ext01Value01*.

The domain transfer command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

15. Test Case EPPDomDelete01: Delete a domain

15.1 Test case identifier

EPPDomDelete01

15.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a domain object and logging out.

15.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppDomDelete01Name	Domain name to delete	String
EppDomDelete01Ext01Uri	Extension 01 object URI	String
EppDomDelete01Ext01Sl	Extension 01 schema location	String
EppDomDelete01Ext01ExtName	Extension 01 name	String
EppDomDelete01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomDelete01Ext01Field01	Extension 01 field name 01	String
EppDomDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

15.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

15.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppDomDelete01Name* domain MUST exist in the domain database, and be available for delete.

15.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

15.7 Intercase dependencies

This test has no intercase dependencies.

15.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.

2. Create a domain delete command with *EppDomDelete01Name*.
 - a. If domain delete requires extra extension and values, create an extension part from *EppDomDelete01Ext01Uri* and *EppDomDelete01Ext01Sl* and fill in field name from *EppDomDelete01Ext01Field01* and values from *EppDomDelete01Ext01Value01*.
The domain delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

16. Test Case EPPConCreate01: Create a contact

16.1 Test case identifier

EppConCreate01

16.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a contact object and logging out.

16.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppConCreate01Id	Contact ID to create	String
EppConCreate01PIntMand	Yes if PostalInfo type INT is mandatory	Boolean
EppConCreate01PIntName	Contact PostalInfo Int Name	String
EppConCreate01PIntOrg	Contact PostalInfo Int Org	String
EppConCreate01PIntStreet1	Contact PostalInfo Int Street1	String
EppConCreate01PIntStreet2	Contact PostalInfo Int Street2, if mandatory	String
EppConCreate01PIntStreet3	Contact PostalInfo Int Street3, if mandatory	String
EppConCreate01PIntCity	Contact PostalInfo Int City	String
EppConCreate01PIntSp	Contact PostalInfo Int State or Province, if mandatory	String
EppConCreate01PIntPc	Contact PostalInfo Int Postcode, if mandatory	String
EppConCreate01PIntCc	Contact PostalInfo Int Country Code	String
EppConCreate01PLocMand	Yes if PostalInfo type LOC is mandatory	Boolean
EppConCreate01PLocName	Contact PostalInfo Loc Name	String
EppConCreate01PLocOrg	Contact PostalInfo Loc Org	String
EppConCreate01PLocStreet1	Contact PostalInfo Loc Street1	String
EppConCreate01PLocStreet2	Contact PostalInfo Loc Street2, if mandatory	String
EppConCreate01PLocStreet3	Contact PostalInfo Loc Street3, if mandatory	String
EppConCreate01PLocCity	Contact PostalInfo Loc City	String
EppConCreate01PLocSp	Contact PostalInfo Loc State or Province, if mandatory	String
EppConCreate01PLocPc	Contact PostalInfo Loc Postcode, if mandatory	String
EppConCreate01PLocCc	Contact PostalInfo Loc Country Code	String
EppConCreate01Voice	Contact Voice telephone number, if mandatory	String
EppConCreate01Fax	Contact Fax telephone number, if mandatory	String
EppConCreate01Email	Contact Email address	String
EppConCreate01Auth	Contact Auth Info, if mandatory	String
EppConCreate01Ext01Uri	Extension 01 object URI	String
EppConCreate01Ext01Sl	Extension 01 schema location	String
EppConCreate01Ext01ExtName	Extension 01 name	String
EppConCreate01Ext01ExtValue	Extension 01 value for direct text node	String

Id	Description	Type
EppConCreate01Ext01Field01	Extension 01 field name 01	String
EppConCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

16.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact create command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

16.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppConCreate01Id* domain MUST NOT exist in the domain database.

16.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

16.7 Intercase dependencies

This test has no intercase dependencies.

16.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a contact create command with *EppConCreate01Id*.
 - a. If *EppConCreate01PIntMand* is yes, create a Postal Info type Int with appropriate fields from *EppConCreate01PIntName*, *EppConCreate01PIntOrg*, *EppConCreate01PIntStreet1*, *EppConCreate01PIntStreet2*, *EppConCreate01PIntStreet3*, *EppConCreate01PIntCity*, *EppConCreate01PIntSp*, *EppConCreate01PIntPc* and *EppConCreate01PIntCc*.
 - b. If *EppConCreate01PLocMand* is yes, create a Postal Info type Loc with appropriate fields from *EppConCreate01PLocName*, *EppConCreate01PLocOrg*, *EppConCreate01PLocStreet1*, *EppConCreate01PLocStreet2*, *EppConCreate01PLocStreet3*, *EppConCreate01PLocCity*, *EppConCreate01PLocSp*, *EppConCreate01PLocPc* and *EppConCreate01PLocCc*.
 - c. Add *EppConCreate01Voice*, *EppConCreate01Fax*, *EppConCreate01Email* and *EppConCreate01Auth* fields.
 - d. If contact create requires extra extension and values, create an extension part from *EppConCreate01Ext01Uri* and *EppConCreate01Ext01Sl* and fill in field name from *EppConCreate01Ext01Field01* and values from *EppConCreate01Ext01Value01*.

The contact create command MUST complete with result code 1000 or 1001.

3. Create a logout command.

The logout command MUST complete with result code 1500.

17. Test Case EPPConDelete01: Delete a contact

17.1 Test case identifier

EPPConDelete01

17.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a contact object and logging out.

17.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppConDelete01Id	ContactID to delete	String
EppConDelete01Ext01Uri	Extension 01 object URI	String
EppConDelete01Ext01SI	Extension 01 schema location	String
EppConDelete01Ext01ExtName	Extension 01 name	String
EppConDelete01Ext01ExtValue	Extension 01 value for direct text node	String
EppConDelete01Ext01Field01	Extension 01 field name 01	String
EppConDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

17.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

17.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppConDelete01Id* domain MUST exist in the domain database, and be available for delete.

17.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

17.7 Intercase dependencies

This test has no intercase dependencies.

17.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.

2. Create a contact delete command with *EppConDelete01Id*.
 - a. If contact delete requires extra extension and values, create an extension part from *EppConDelete01Ext01Uri* and *EppConDelete01Ext01Sl* and fill in field name from *EppConDelete01Ext01Field01* and values from *EppConDelete01Ext01Value01*.
The contact delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

18. Test Case EPPHostDelete01: Delete a host

18.1 Test case identifier

EPPHostDelete01

18.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a Host Object and logging out.

If the Registry Operator does not support Host Objects, this test will not be performed.

18.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppHostDelete01Name	Host name to delete	String
EppHostDelete01Ext01Uri	Extension 01 object URI	String
EppHostDelete01Ext01Sl	Extension 01 schema location	String
EppHostDelete01Ext01ExtName	Extension 01 name	String
EppHostDelete01Ext01ExtValue	Extension 01 value for direct text node	String
EppHostDelete01Ext01Field01	Extension 01 field name 01	String
EppHostDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

18.4 Outcome(s)

The login command MUST complete with result code 1000.

The host delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

18.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppHostDelete01Name* host MUST exist in the domain database, and be available for delete.

18.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

18.7 Intercase dependencies

This test has no intercase dependencies.

18.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a contact delete command with *EppHostDelete01Id*.
 - a. If contact delete requires extra extension and values, create an extension part from *EppHostDelete01Ext01Uri* and *EppHostDelete01Ext01Sl* and fill in field name from *EppHostDelete01Ext01Field01* and values from *EppHostDelete01Ext01Value01*.
The contact delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

19. Test Case EPPHostUpdate01: Update a host

19.1 Test case identifier

EPPHostUpdate01

19.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, updating a Host Object and logging out.

If the Registry Operator does not support Host Objects, this test will not be performed.

19.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppHostUpdate01Name	Host name to update	String
EppHostUpdate01Ipv4	IPv4 address to add	String
EppHostUpdate01Ext01Uri	Extension 01 object URI	String
EppHostUpdate01Ext01Sl	Extension 01 schema location	String
EppHostUpdate01Ext01ExtName	Extension 01 name	String
EppHostUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
EppHostUpdate01Ext01Field01	Extension 01 field name 01	String
EppHostUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

19.4 Outcome(s)

The login command MUST complete with result code 1000.

The host update command MUST complete with result code 1000.

The logout command MUST complete with result code 1500.

19.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppHostUpdate01Name* host MUST exist in the domain database, and be available for update.

19.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

19.7 Intercase dependencies

This test has no intercase dependencies.

19.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a host update command with *EppHostUpdate01Name* and add IPv4 address *EppHostUpdate01Ipv4*
 - a. If host update requires extra extension and values, create an extension part from *EppHostUpdate01Ext01Uri* and *EppHostUpdate01Ext01Sl* and fill in field name from *EppHostUpdate01Ext01Field01* and values from *EppHostUpdate01Ext01Value01*.
The host update command MUST complete with result code 1000.
3. Create a logout command.
The logout command MUST complete with result code 1500.

20. Test Case EPPContactUpdate01: Update a contact

20.1 Test case identifier

EPPContactUpdate01

20.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, updating a contact object and logging out.

20.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
EppContactUpdate01Id	Contact ID to update	String
EppContactUpdate01Email	Email address to set	String
EppContactUpdate01Ext01Uri	Extension 01 object URI	String
EppContactUpdate01Ext01Sl	Extension 01 schema location	String
EppContactUpdate01Ext01ExtName	Extension 01 name	String
EppContactUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
EppContactUpdate01Ext01Field01	Extension 01 field name 01	String
EppContactUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

20.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact update command MUST complete with result code 1000.

The logout command MUST complete with result code 1500.

20.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppContactUpdate01Id* contact MUST exist in the domain database, and be available for update.

20.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

20.7 Intercase dependencies

This test has no intercase dependencies.

20.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
2. Create a contact update command with *EppContactUpdate01Id* and set *EppContactUpdate01Email*
 - a. If contact update requires extra extension and values, create an extension part from *EppContactUpdate01Ext01Uri* and *EppContactUpdate01Ext01Sl* and fill in field name from *EppContactUpdate01Ext01Field01* and values from *EppContactUpdate01Ext01Value01*.
The contact update command MUST complete with result code 1000.
3. Create a logout command.
The logout command MUST complete with result code 1500.

21. Test Case EPPDomUpdate01: Add DNSSEC to a domain

21.1 Test case identifier

EPPDomUpdate01

21.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, update a domain object with DNSSEC records and logging out. The test then verifies that the changes are visible in the zone within 60 minutes, both for DNS and Whois.

When executing this test case as EPPDomUpdate01A, DNS and Whois verifications are not included. Requirements and test steps marked with an asterisk (*) should be disregarded for an 'A' test case.

21.3 Inputs

The following information is needed as input for this test case:

The IP address for the authoritative name server for the TLD zone is required as the test verifies DNS visibility. It is fetched from the XML data file submitted for the DNS tests.

As the test verifies Whois visibility, the IP address of a Whois server that responds on port 43 is needed. The IP address of the Whois server is extracted from the DNS zone by the Whois test and is also used for this TC.

The full information from the input table in 5.3 is also used for login.

Id	Description	Type
DnsGlueRecord1	IPv4 or IPv6 address of 1 st authoritative name server	String
WhoisIPv4Port43	The IPv4 address of the Whois service on port 43	String
EppDomUpdate01Name	Domain name to update	String
EppDomUpdate01Ext01Uri	Extension 01 object URI	String
EppDomUpdate01Ext01Sl	Extension 01 schema location	String
EppDomUpdate01Ext01ExtName	Extension 01 name	String
EppDomUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
EppDomUpdate01Ext01Field01	Extension 01 field name 01	String
EppDomUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
EppDomUpdate01KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
EppDomUpdate01DsKeyTag01	Value for dsData 01 keytag	String
EppDomUpdate01DsAlg01	Value for dsData 01 alg	Number
EppDomUpdate01DsDigestType01	Value for dsData 01 digest type	Number
EppDomUpdate01DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	

Id	Description	Type
EppDomUpdate01KdFlags01	Value for keyData 01 flags	Number
EppDomUpdate01KdProtocol01	Value for keyData 01 protocol	Number
EppDomUpdate01KdAlg01	Value for keyData 01 alg	Number
EppDomUpdate01KdPubKey01	Value for keyData 01 pubKey	String
...	Repeat for max x keyData records	

21.4 Outcome(s)

The initial DNS lookup MUST NOT return NXDOMAIN for *EppDomUpdate01Name*. *

The initial Whois lookup MUST NOT return any DNSSEC Signed information about *EppDomUpdate01Name*. *

The domain update command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

EppDomUpdate01Name MUST be visible in the zone with correct DNS records within 60 minutes. *

EppDomUpdate01Name MUST be visible as a DNSSEC signed domain in Whois within 60 minutes. *

*Requirements marked with * are not considered in test case EPPDomUpdate01A.*

21.5 Environmental needs

- DNS test script
- EPP test script
- IPv4 connectivity
- *EppDomUpdate01Name* MUST exist in the DNS zone without DNSSEC records.
- *EppDomUpdate01RegistrantId* MUST exist in contact database
- *EppDomUpdate01Ns01* MUST exist in host database, and be configured to serve domain *EppDomUpdate01Name* with correct DNSSEC records.
- *EppDomUpdate01Ns02* MUST exist in host database, and be configured to serve domain *EppDomUpdate01Name* with correct DNSSEC records.

21.6 Special procedural requirements

Abort the test if any Whois query takes longer than 10 seconds.

Abort the test if any EPP operation takes longer than 30 seconds.

21.7 Intercase dependencies

This test has no intercase dependencies.

21.8 Ordered description of steps to be taken to execute the test case

1. Perform a DNS lookup for *EppDomUpdate01Name* domain name.
The result MUST NOT be NXDOMAIN. *
2. Perform the same login as the login step in 5.8.
The login command MUST complete with result code 1000.
3. Create a domain update command with *EppDomUpdate01Name*.
 - a. Add one or more secDNS records with dsData or keyData or both, depending on the value of *EppDomUpdate01KeyType*. Use appropriate values from *EppDomUpdate01DsKeyTag01*, *EppDomUpdate01DsAlg01*, *EppDomUpdate01DsDigestType01*, *EppDomUpdate01DsDigest01*, *EppDomUpdate01KdFlags01*, *EppDomUpdate01KdProtocol01*, *EppDomUpdate01KdAlg01*, *EppDomUpdate01KdPubKey01*.

- b. If domain update requires extra extension and values, create an extension part from *EppDomUpdate01Ext01Uri* and fill in field name from *EppDomUpdate01Ext01Field01* and values from *EppDomUpdate01Ext01Value01*.

The domain update command MUST complete with result code 1000 or 1001.

4. Create a logout command.

The logout command MUST complete with result code 1500.

5. Verify that the *EppDomUpdate01Name* domain is updated, with the correct DNSSEC records in the zone within 60 minutes. *
6. Verify that the *EPPDomUpdate01Name* is visible in Whois as a DNSSEC signed domain within 60 minutes. *

*Steps marked with * are not included in test case EppDomUpdate01A.*

22. Test Case EPPDomUpdate01A: Add DNSSEC to a domain

22.1 Test Case Identifier

EPPDomUpdate01A

22.2 Objective

This is a subset of test case EPPDomUpdate01. See section 21, “Test Case EPPDomUpdate01: Add DNSSEC to a domain”, for details.

23. Test Case EPPExtensions: Verify required EPP extensions

23.1 Test case identifier

EPPExtensions

23.2 Objective

This test verifies compliance of the EPP server with extensions required by registry agreement.

23.3 Inputs

The following information is needed as input for this test case:

- The extensions required by the Registry Agreement.
- Logfiles from login in any of the previous tests.

23.4 Outcome(s)

Each extension in the Registry Agreement stated to be mandatory must be listed in the EPP greeting.

23.5 Environmental needs

N/A

23.6 Special procedural requirements

None.

23.7 Intercase dependencies

A result log from any of the previous tests **MUST** be available.

23.8 Ordered description of steps to be taken to execute the test case

1. Verify that each extension in the Registry Agreement that is stated to be mandatory is listed in the EPP greeting.

24. Test Case TLDSRS EPP Connectivity: Verify connectivity

24.1 Test case identifier

TLDSRSEPPConnTest

24.2 Objective

This test verifies the connectivity from different nodes to the EPP provisioning system by doing a login and then a logout. For information about nodes, see section 1.6.1.

The test will be performed over IPv4, and also IPv6 if the Registry Operator supports it.

24.3 Inputs

The following information is needed as input for this test case:

Id	Description	Type
TLDSRSEppLoginId	Login ID for EPP test user	String
TLDSRSEppLoginPwd	Login password for EPP test user	String
TLDSRSEppNsDomainUri	Object URI for Domain Object	String
TLDSRSEppNsDomainSl	Schema location for Domain Object	String
TLDSRSEppNsContactUri	Object URI for Contact Object	String
TLDSRSEppNsContactSl	Schema location for Contact Object	String
TLDSRSEppNsHostUri	Object URI for Host Object. If the registry does not support Host Objects, this field is not mandatory.	String
TLDSRSEppNsHostSl	Schema location for Host Object. If the registry does not support Host Objects, this field is not mandatory.	String
TLDSRSEppExtSecDnsUri	Object URI for Sec Dns Object Extension	String
TLDSRSEppExtSecDnsSl	Schema location for Sec Dns Object Extension	String
TLDSRSEppExtUri-[1..n]	Object URI for extension 1..n	String
TLDSRSEppExtSl-[1..n]	Schema location for extensions 1..n	String
TLDSRSEppServerIPv4	IPv4 address to EPP server	String
TLDSRSEppServerIPv6	IPv6 address to EPP server if Registry Operator supports IPv6	String
TLDSRSEppServerPort	Port number to EPP server	Number
TLDSRSEppClientCertificate	Yes if the registry requires client certificate	Boolean
TLDSRSEppClientKeyPairPem	PEM file with valid client certificate for test user (Public and private)	PEM file
TLDSRSEppClientKeyPairPwd	Password for client certificate for test user	String
TLDSRSEppServerCertificatePem	PEM file with server certificate (Public)	PEM file

24.4 Outcome(s)

The login command from each probe MUST complete with result code 1000

The logout command from each probe MUST complete with result code 1500.

24.5 Environmental needs

- EPP test script
- IPv4 connectivity
- IPv6 connectivity

24.6 Special procedural requirements

Abort the test if any operation takes longer than 30 seconds.

24.7 Intercase dependencies

This test has no intercase dependencies.

24.8 Ordered description of steps to be taken to execute the test case

This test will be performed from all of the nodes.

1. Connect to *TLDSREppServerIPv4*.
Create a login command with *TLDSREppLoginId* and password *TLDSREppLoginPwd*.
Use the *TLDSREppNsDomainUri*, *TLDSREppNsDomainSl*, *TLDSREppNsContactUri*, *TLDSREppNsContactSl*, *TLDSREppNsHostUri* and *TLDSREppNsHostSl* to build the login message.
Add the secDNS extension with *TLDSREppExtSecDnsUri* and *TLDSREppExtSecDnsSl*.
Add zero or more extra extensions with *TLDSREppExtUri* and *TLDSREppExtSl*.
If the server requires client certificate, connect with client certificate *TLDSREppClientKeyPairPem*.
The login command MUST complete with result code 1000.
2. Create a logout command.
The logout command MUST complete with result code 1500.

If the registry supports IPv6:

3. Connect to *TLDSREppServerIPv6*.
Create a login command with *TLDSREppLoginId* and password *TLDSREppLoginPwd*.
Use the *TLDSREppNsDomainUri*, *TLDSREppNsDomainSl*, *TLDSREppNsContactUri*, *TLDSREppNsContactSl*, *TLDSREppNsHostUri* and *TLDSREppNsHostSl* to build the login message.
Add the secDNS extension with *TLDSREppExtSecDnsUri* and *TLDSREppExtSecDnsSl*.
Add zero or more extra extensions with *TLDSREppExtUri* and *TLDSREppExtSl*.
If the server requires client certificate, connect with client certificate *TLDSREppClientKeyPairPem*.
The login command MUST complete with result code 1000.
4. Create a logout command.
The logout command MUST complete with result code 1500.

25. Test Case TLDSRS EPP Domain Create 01: Create a domain

25.1 Test case identifier

TLDSRSEPPDomCreate01

25.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a domain object, logging out, and verifying that the information is visible in Whois within 24 hours.

25.3 Inputs

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSWhoisIPv4Port43	The IPv4 address of the Whois service on port 43	String
TLDSRSEppDomCreate01Name	Domain name to create	String
TLDSRSEppDomCreate01Period	Domain period type	Y/M
TLDSRSEppDomCreate01PeriodValue	Domain period value	Number
TLDSRSEppDomCreate01RegistrantId	Domain registrant id	String
TLDSRSEppDomCreate01AdminId	Domain Admin id if required	String
TLDSRSEppDomCreate01TechId	Domain Tech id if required	String
TLDSRSEppDomCreate01BillingId	Domain Billing id if required	String
TLDSRSEppDomCreate01AuthPw	AuthPw if required	String
TLDSRSEppDomCreate01Ns01	Host Object or Host Attribute name for ns01	String
TLDSRSEppDomCreate01Ns02	Host Object or Host Attribute name for ns02	String
TLDSRSEppDomCreate01Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomCreate01Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomCreate01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomCreate01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomCreate01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

25.4 Outcome(s)

Initial Whois lookup MUST NOT return any information about *TLDSRSEppDomCreate01Name*.

Login step MUST complete with result code 1000.

Create step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

TLDSRSEppDomCreate01Name MUST be visible in Whois within 24 hours.

25.5 Environmental needs

- Whois client software
- EPP test script
- IPv4 connectivity
- *TLDSREppDomCreate01RegistrantId* MUST exist in contact database
- *TLDSREppDomCreate01Ns01* MUST exist in host database, and be configured to serve domain *TLDSREppDomCreate01Name*.
- *TLDSREppDomCreate01Ns02* MUST exist in host database, and be configured to serve domain *TLDSREppDomCreate01Name*.

25.6 Special procedural requirements

Abort the test if any Whois query takes longer than 10 seconds.

Abort the test if any EPP operation takes longer than 30 seconds.

25.7 Intercase dependencies

This test has no intercase dependencies.

25.8 Ordered description of steps to be taken to execute the test case

1. Verify that the domain is not present in Whois:
 - a. Start a terminal.
 - b. Query the Whois service using the client software:
`whois -h WhoisIPv4Port43 TLDSREppDomCreate01Name`
 - c. The domain name MUST NOT be present in the response.
2. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
3. Create a domain create command with *TLDSREppDomCreate01Name*.
 - a. Use period name from *TLDSREppDomCreate01Period* and period value from *TLDSREppDomCreate01PeriodValue*.
 - b. Use name server 1 from *TLDSREppDomCreate01Ns01* and name server 2 from *TLDSREppDomCreate01Ns02*.
 - c. If domain create requires extra extensions and values, create an extension part from *TLDSREppDomCreate01Ext01Uri* and fill in field name from *TLDSREppDomCreateExt01Field01* and values from *TLDSREppDomCreateExt01Value01*.
The domain create command MUST complete with result code 1000 or 1001.
4. Create a logout command.
The logout command MUST complete with result code 1500.
5. Verify that the *EPPDomCreate01Name* is visible in Whois within 24 hours.

26. Test Case TLDSRS EPP Domain Create 02: Update a domain

26.1 Test case identifier

TLDSRSEPPDomCreate02

This test is changed from creating a domain to adding subordinate hosts to an existing domain. As a consequence, all fields required for creating the domain are now optional, and will be ignored if they are present in the input data. They will be removed in a future release.

26.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating subordinate Host Objects for a domain, updating the domain, logging out, and verifying the correct handling of glue records.

If the registry does not support Host Objects, the test uses Host Attributes to insert the subordinate name servers for the domain.

26.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppDomCreate02Name	Domain name to update	String
TLDSRSEppDomCreate02Ns01	Subordinate Host Object or Host Attribute name for name server 01	String
TLDSRSEppDomCreate02Ns01Ipv4	Subordinate name server 01 IPv4 address	String
TLDSRSEppDomCreate02Ns01Ipv6	Subordinate name server 01 IPv6 address	String
TLDSRSEppDomCreate02Ns02	Subordinate Host Object or Host Attribute name for name server 02	String
TLDSRSEppDomCreate02Ns02Ipv4	Subordinate name server 02 IPv4 address	String
TLDSRSEppDomCreate02Ns02Ipv6	Subordinate name server 02 IPv6 address	String
TLDSRSEppDomCreate02UpdExt01Uri	Extension 01 object URI	String
TLDSRSEppDomCreate02UpdExt01Sl	Extension 01 schema location	String
TLDSRSEppDomCreate02UpdExt01ExtName	Extension 01 name	String
TLDSRSEppDomCreate02UpdExt01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomCreate02UpdExt01Field01	Extension 01 field name 01	String
TLDSRSEppDomCreate02UpdExt01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for Update	
...	Repeat for max x extensions for Update	
TLDSRSEppDomCreate02Ns01Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomCreate02Ns01Ext01Sl	Extension 01 schema location	String

Id	Description	Type
TLDSRSEppDomCreate02Ns01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomCreate02Ns01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomCreate02Ns01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomCreate02Ns01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 01	
...	Repeat for max x extensions for name server 01	
TLDSRSEppDomCreate02Ns02Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomCreate02Ns02Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomCreate02Ns02Ext01ExtName	Extension 01 name	String
TLDSRSEppDomCreate02Ns02Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomCreate02Ns02Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomCreate02Ns02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 02	
...	Repeat for max x extensions for name server 02	

26.4 Outcome(s)

The login command MUST complete with result code 1000.

If the registry is using Host Objects, the host create command MUST complete with result code 1000 or 1001.

The domain update command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

26.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppDomCreate02Name* MUST exist in domain database.
- *TLDSRSEppDomCreate02RegistrantId* MUST exist in contact database
- *TLDSRSEppDomCreate02Ns01* MUST be configured to serve domain *TLDSRSEppDomCreate02Name*.
- *TLDSRSEppDomCreate02Ns02* MUST be configured to serve domain *TLDSRSEppDomCreate02Name*.

26.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

26.7 Intercase dependencies

This test has no intercase dependencies.

26.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. If the Registry Operator does not support Host Objects, skip to step 6.

3. Create a host create command for subordinate host *TLDSRSEppDomCreate02Ns01* with IPv4 address *TLDSRSEppDomCreate02Ns01Ipv4* and/or IPv6 address *TLDSRSEppDomCreate02Ns01Ipv6*.
The host create command MUST complete with result code 1000 or 1001.
4. Create a host create command for subordinate host *TLDSRSEppDomCreate02Ns02* with IPv4 address *TLDSRSEppDomCreate02Ns02Ipv4* and/or IPv6 address *TLDSRSEppDomCreate02Ns02Ipv6*.
The host create command MUST complete with result code 1000 or 1001.
5. Create a domain update command with *TLDSRSEppDomCreate02Name* and hosts *TLDSRSEppDomCreate02Ns01* and *TLDSRSEppDomCreate02Ns02*.
 - If the Registry Operator supports Host Objects, use Host Objects.
 - If the Registry Operator does not support Host Objects, use Host Attributes.The domain update command MUST complete with result code 1000 or 1001.
6. Create a logout command.
The logout command MUST complete with result code 1500.

27. Test Case TLDSRS EPP Domain Create 03: Create a domain with DNSSEC

27.1 Test case identifier

TLDSRSEPPDomCreate03

27.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a domain object with DNSSEC records and logging out.

27.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppDomCreate03Name	Domain name to create	String
TLDSRSEppDomCreate03Period	Domain period type	Y/M
TLDSRSEppDomCreate03PeriodValue	Domain period value	Number
TLDSRSEppDomCreate03RegistrantId	Domain registrant id	String
TLDSRSEppDomCreate03AdminId	Domain admin id if required	String
TLDSRSEppDomCreate03TechId	Domain tech id if required	String
TLDSRSEppDomCreate03BillingId	Domain billing id if required	String
TLDSRSEppDomCreate03AuthPw	Authentication password if required	String
TLDSRSEppDomCreate03Ns01	Host Object name for ns01	String
TLDSRSEppDomCreate03Ns02	Host Object name for ns02	String
TLDSRSEppDomCreate03Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomCreate03Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomCreate03Ext01ExtName	Extension 01 name	String
TLDSRSEppDomCreate03Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomCreate03Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomCreate03Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
TLDSRSEppDomCreate03KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
TLDSRSEppDomCreate03DsKeyTag01	Value for dsData 01 keytag	String
TLDSRSEppDomCreate03DsAlg01	Value for dsData 01 alg	Number
TLDSRSEppDomCreate03DsDigestType01	Value for dsData 01 digest type	Number
TLDSRSEppDomCreate03DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	
TLDSRSEppDomCreate03KdFlags01	Value for keyData 01 flags	Number
TLDSRSEppDomCreate03KdProtocol01	Value for keyData 01 protocol	Number
TLDSRSEppDomCreate03KdAlg01	Value for keyData 01 alg	Number
TLDSRSEppDomCreate03KdPubKey01	Value for keyData 01 pubKey	String

Id	Description	Type
...	Repeat for max x keyData records	

27.4 Outcome(s)

The domain create command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

27.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSREppDomCreate03RegistrantId* MUST exist in contact database
- *TLDSREppDomCreate03Ns01* MUST exist in host database, and be configured to serve domain *TLDSREppDomCreate03Name* with correct DNSSEC records.
- *TLDSREppDomCreate03Ns02* MUST exist in host database, and be configured to serve domain *TLDSREppDomCreate03Name* with correct DNSSEC records.

27.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

27.7 Intercase dependencies

This test has no intercase dependencies.

27.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a domain create command with *TLDSREppDomCreate03Name*.
 - a. Use period name from *TLDSREppDomCreate03Period* and period value from *TLDSREppDomCreate03PeriodValue*.
 - b. Use name server 1 from *TLDSREppDomCreate03Ns01* and name server 2 from *TLDSREppDomCreate03Ns02*.
 - c. Add one or more secDNS records with dsData or keyData or both, depending on the value of *TLDSREppDomUpdate01KeyType*. Use appropriate values from *TLDSREppDomUpdate01DsKeyTag01*, *TLDSREppDomUpdate01DsAlg01*, *TLDSREppDomUpdate01DsDigestType01*, *TLDSREppDomUpdate01DsDigest01*, *TLDSREppDomUpdate01KdFlags01*, *TLDSREppDomUpdate01KdProtocol01*, *TLDSREppDomUpdate01KdAlg01*, *TLDSREppDomUpdate01kdPubKey01*.
 - d. If domain create requires extra extension and values, create an extension part from *TLDSREppDomCreate03Ext01Uri* and fill in field name from *TLDSREppDomCreate03Ext01Field01* and values from *TLDSREppDomCreate03Ext01Value01*.

The domain create command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

28. Test Case TLDSRS EPP Domain Renew 01: Renew a domain

28.1 Test case identifier

TLDSRSEPPDomRenew01

28.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, renewing a domain object and logging out.

28.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is also used for login.

Id	Description	Type
TLDSRSEppDomRenew01Name	Domain name to renew	String
TLDSRSEppDomRenew01Period	Domain period type	Y/M
TLDSRSEppDomRenew01PeriodValue	Domain period value	Number
TLDSRSEppDomRenew01ExpDate	Domain current expiry date	String
TLDSRSEppDomRenew01Ext01Uri	Object URI for extension 01	String
TLDSRSEppDomRenew01Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomRenew01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomRenew01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomRenew01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomRenew01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

28.4 Outcome(s)

The login command MUST complete with result code 1000.

The renew command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

28.5 Environmental needs

- EPP test script
- IPv4Connectivity
- *TLDSRSEppDomRenew01Name* domain MUST exist in the domain database, and be ready for renewal

28.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

28.7 Intercase dependencies

This test has no intercase dependencies.

28.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a domain renew command with *TLDSRSEppDomRenew01Name*.
 - a. Use period name from *TLDSRSEppDomRenew01Period* and period value from *TLDSRSEppDomRenew01PeriodValue*.
 - b. If domain renew requires extra extension and values, create an extension part from *TLDSRSEppDomRenew01Ext01Uri* and fill in field name from *TLDSRSEppDomRenew01Ext01Field01* and values from *TLDSRSEppDomRenew01Ext01Value01*.The domain renew command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

29. Test Case TLDSRS EPP Domain Transfer 01: Request transfer of a domain

29.1 Test case identifier

TLDSRSEPPDomTransfer01

29.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, requesting a transfer of a domain object and logging out.

29.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppDomTransfer01Name	Domain name to transfer	String
TLDSRSEppDomTransfer01AddPeriod	Yes, if the registry supports adding a period to transfer	Boolean
TLDSRSEppDomTransfer01Period	Domain period type	Y/M
TLDSRSEppDomTransfer01PeriodValue	Domain period value	Number
TLDSRSEppDomTransfer01AuthInfo	Authorization info for domain, registrant or associated contacts	String
TLDSRSEppDomTransfer01AuthRoid	Roid for registrant or contact if TLDSRSEppDomTransfer01AuthInfo is associated with registrant or contact object	String
TLDSRSEppDomTransfer01Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomTransfer01Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomTransfer01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomTransfer01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomTransfer01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomTransfer01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

29.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain transfer command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

29.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppDomTransfer01Name* domain MUST exist in the domain database, and be available for transfer.

29.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

29.7 Intercase dependencies

This test has no intercase dependencies.

29.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a domain transfer command with *TLDSREppDomTransfer01Name*.
 - a. Add an Op attribute in transfer command with the value “request”.
 - b. If *TLDSREppDomTransfer01AddPeriod* is true, add period part with Period name from *TLDSREppDomTransfer01Period* and period value from *TLDSREppDomTransfer01PeriodValue*.
 - c. Add authinfo part with *TLDSREppDomTransfer01AuthInfo*.
 - d. If *TLDSREppDomTransfer01AuthRoid* is defined, add a roid attribute to pw part with the value *TLDSREppDomTransfer01AuthRoid*.
 - e. If domain renew requires extra extension and values, create an extension part from *TLDSREppDomTransfer01Ext01Uri* and *TLDSREppDomTransfer01Ext01Sl* and fill in field name from *TLDSREppDomTransfer01Ext01Field01* and values from *TLDSREppDomTransfer01Ext01Value01*.The domain transfer command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

30. Test Case TLDSRS EPP Domain Transfer 02: Approve a transfer

30.1 Test case identifier

TLDSRSEPPDomTransfer02

30.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, approving a transfer of a domain object if the Registry Operator supports this operation via EPP, and logging out.

This test will only be run if the *TLDSRSEppDomTransfer02Approve* is set to yes.

30.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppDomTransfer02Approve	Yes, if the registry supports the approve operation	Boolean
TLDSRSEppDomTransfer02Name	Domain name to transfer	String
TLDSRSEppDomTransfer02AddPeriod	Yes, if the registry supports adding a period to a transfer	Boolean
TLDSRSEppDomTransfer02Period	Domain period type	Y/M
TLDSRSEppDomTransfer02PeriodValue	Domain period value	Number
TLDSRSEppDomTransfer02AuthInfo	Authorization info for domain, registrant or associated contacts if required	String
TLDSRSEppDomTransfer02AuthRoid	Roid for registrant or contact if TLDSRSEppDomTransfer02AuthInfo is associated with registrant or contact object	String
TLDSRSEppDomTransfer02Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomTransfer02Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomTransfer02Ext01ExtName	Extension 01 name	String
TLDSRSEppDomTransfer02Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomTransfer02Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomTransfer02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

30.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain transfer command MUST complete with result code 1000 or 1001.

The logout MUST complete with result code 1500.

30.5 Environmental needs

- EPP test script
- IPv4 connectivity

- *TLDSREppDomTransfer02Name* domain MUST exist in the domain database, and be available for transfer approve.

30.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

30.7 Intercase dependencies

This test has no intercase dependencies.

30.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a domain transfer command with *TLDSREppDomTransfer02Name*.
 - a. Add an Op attribute in transfer command with the value “approve”.
 - b. If *TLDSREppDomTransfer02AddPeriod* is true, add period part with period name from *TLDSREppDomTransfer02Period* and period value from *TLDSREppDomTransfer02PeriodValue*.
 - c. Add authinfo part with *TLDSREppDomTransfer01AuthInfo*.
 - d. If *TLDSREppDomTransfer02AuthRoid* is defined add a roid attribute to pw part with the value *TLDSREppDomTransfer02AuthRoid*.
 - e. If domain transfer requires extra extension and values, create an extension part from *TLDSREppDomTransfer02Ext01Uri* and *TLDSREppDomTransfer02Ext01Sl* and fill in field name from *TLDSREppDomTransfer02Ext01Field01* and values from *TLDSREppDomTransfer02Ext01Value01*.

The domain transfer command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

31. Test Case TLDSRS EPP Domain Delete 01: Delete a domain

31.1 Test case identifier

TLDSRSEPPDomDelete01

31.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a domain object and logging out.

31.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is also used for login.

Id	Description	Type
TLDSRSEppDomDelete01Name	Domain name to delete	String
TLDSRSEppDomDelete01Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomDelete01Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomDelete01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomDelete01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomDelete01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

31.4 Outcome(s)

The login command MUST complete with result code 1000.

The domain delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

31.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppDomDelete01Name* domain MUST exist in the domain database, and be available for delete.

31.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

31.7 Intercase dependencies

This test has no intercase dependencies.

31.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a domain delete command with *TLDSREppDomDelete01Name*.
 - a. If domain delete requires extra extension and values, create an extension part from *TLDSREppDomDelete01Ext01Uri* and *TLDSREppDomDelete01Ext01Sl* and fill in field name from *TLDSREppDomDelete01Ext01Field01* and values from *TLDSREppDomDelete01Ext01Value01*.
 - b. The domain delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

32. Test Case TLDSRS EPP Contact Create 01: Create a contact

32.1 Test case identifier

TLDSRSEppConCreate01

32.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, creating a contact object and logging out.

32.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is also used for login.

Id	Description	Type
TLDSRSEppConCreate01Id	Contact ID to create	String
TLDSRSEppConCreate01PIntMand	Yes, if PostalInfo type INT is mandatory	Boolean
TLDSRSEppConCreate01PIntName	Contact PostalInfo Int Name	String
TLDSRSEppConCreate01PIntOrg	Contact PostalInfo Int Org	String
TLDSRSEppConCreate01PIntStreet1	Contact PostalInfo Int Street1	String
TLDSRSEppConCreate01PIntStreet2	Contact PostalInfo Int Street2, if mandatory	String
TLDSRSEppConCreate01PIntStreet3	Contact PostalInfo Int Street3, if mandatory	String
TLDSRSEppConCreate01PIntCity	Contact PostalInfo Int City	String
TLDSRSEppConCreate01PIntSp	Contact PostalInfo Int State or Province, if mandatory	String
TLDSRSEppConCreate01PIntPc	Contact PostalInfo Int Postcode, if mandatory	String
TLDSRSEppConCreate01PIntCc	Contact PostalInfo Int Country Code	String
TLDSRSEppConCreate01PLocMand	Yes if PostalInfo type LOC is mandatory	Boolean
TLDSRSEppConCreate01PLocName	Contact PostalInfo Loc Name	String
TLDSRSEppConCreate01PLocOrg	Contact PostalInfo Loc Org	String
TLDSRSEppConCreate01PLocStreet1	Contact PostalInfo Loc Street1	String
TLDSRSEppConCreate01PLocStreet2	Contact PostalInfo Loc Street2, if mandatory	String
TLDSRSEppConCreate01PLocStreet3	Contact PostalInfo Loc Street3, if mandatory	String
TLDSRSEppConCreate01PLocCity	Contact PostalInfo Loc City	String
TLDSRSEppConCreate01PLocSp	Contact PostalInfo Loc State or Province, if mandatory	String
TLDSRSEppConCreate01PLocPc	Contact PostalInfo Loc Postcode, if mandatory	String
TLDSRSEppConCreate01PLocCc	Contact PostalInfo Loc Country Code	String
TLDSRSEppConCreate01Voice	Contact Voice telephone number, if mandatory	String
TLDSRSEppConCreate01Fax	Contact Fax telephone number, if	String

Id	Description	Type
	mandatory	
TLDSRSEppConCreate01Email	Contact Email address	String
TLDSRSEppConCreate01Auth	Contact Auth Info, if mandatory	String
TLDSRSEppConCreate01Ext01Uri	Extension 01 object URI	String
TLDSRSEppConCreate01Ext01Sl	Extension 01 schema location	String
TLDSRSEppConCreate01Ext01ExtName	Extension 01 name	String
TLDSRSEppConCreate01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppConCreate01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppConCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

32.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact create command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

32.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppConCreate01Id* domain MUST NOT exist in the domain database.

32.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

32.7 Intercase dependencies

This test has no intercase dependencies.

32.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a contact create command with *TLDSRSEppConCreate01Id*.
 - a. If *TLDSRSEppConCreate01PIntMand* is yes, create a Postal Info type Int with appropriate fields from *TLDSRSEppConCreate01PIntName*, *TLDSRSEppConCreate01PIntOrg*, *TLDSRSEppConCreate01PIntStreet1*, *TLDSRSEppConCreate01PIntStreet2*, *TLDSRSEppConCreate01PIntStreet3*, *TLDSRSEppConCreate01PIntCity*, *TLDSRSEppConCreate01PIntSp*, *TLDSRSEppConCreate01PIntPc* and *TLDSRSEppConCreate01PIntCc*.
 - b. If *TLDSRSEppConCreate01PLocMand* is yes, create a Postal Info type Loc with appropriate fields from *TLDSRSEppConCreate01PLocName*, *TLDSRSEppConCreate01PLocOrg*, *TLDSRSEppConCreate01PLocStreet1*, *TLDSRSEppConCreate01PLocStreet2*, *TLDSRSEppConCreate01PLocStreet3*, *TLDSRSEppConCreate01PLocCity*, *TLDSRSEppConCreate01PLocSp*, *TLDSRSEppConCreate01PLocPc* and *TLDSRSEppConCreate01PLocCc*.
 - c. Add *TLDSRSEppConCreate01Voice*, *TLDSRSEppConCreate01Fax*, *TLDSRSEppConCreate01Email* and *TLDSRSEppConCreate01Auth* fields.

- d. If contact create requires extra extension and values, create an extension part from *TLDSREppConCreate01Ext01Uri* and *TLDSREppConCreate01Ext01Sl* and fill in field name from *TLDSREppConCreate01Ext01Field01* and values from *TLDSREppConCreate01Ext01Value01*.
 - e. The contact create command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

33. Test Case TLDSRS EPP Contact Delete 01: Delete a contact

33.1 Test case identifier

TLDSRSEPPConDelete01

33.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a contact object and logging out.

33.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppConDelete01Id	ContactID to delete	String
TLDSRSEppConDelete01Ext01Uri	Extension 01 object URI	String
TLDSRSEppConDelete01Ext01SI	Extension 01 schema location	String
TLDSRSEppConDelete01Ext01ExtName	Extension 01 name	String
TLDSRSEppConDelete01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppConDelete01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppConDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

33.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

33.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppConDelete01Id* domain MUST exist in the Registry Operator domain database, and be available for delete.

33.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

33.7 Intercase dependencies

This test has no intercase dependencies.

33.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a contact delete command with *TLDSRSEppConDelete01Id*.
 - a. If contact delete requires extra extension and values, create an extension part from *TLDSRSEppConDelete01Ext01Uri* and *TLDSRSEppConDelete01Ext01Sl* and fill in field name from *TLDSRSEppConDelete01Ext01Field01* and values from *TLDSRSEppConDelete01Ext01Value01*.
 - b. The contact delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

34. Test Case TLDSRS EPP Host Delete 01: Delete a host

34.1 Test case identifier

TLDSRSEPPHostDelete01

34.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, deleting a Host Object and logging out.

If the Registry Operator does not support Host Objects, this test will not be performed.

34.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppHostDelete01Name	Host name to delete	String
TLDSRSEppHostDelete01Ext01Uri	Extension 01 object URI	String
TLDSRSEppHostDelete01Ext01Sl	Extension 01 schema location	String
TLDSRSEppHostDelete01Ext01ExtName	Extension 01 name	String
TLDSRSEppHostDelete01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppHostDelete01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppHostDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

34.4 Outcome(s)

The login command MUST complete with result code 1000.

The host delete command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

34.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppHostDelete01Name* host MUST exist in the Registry Operator domain database, and be available for delete.

34.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

34.7 Intercase dependencies

This test has no intercase dependencies.

34.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a contact delete command with *TLDSRSEppHostDelete01Id*.
 - a. If contact delete requires extra extension and values, create an extension part from *TLDSRSEppHostDelete01Ext01Uri* and *TLDSRSEppHostDelete01Ext01Sl* and fill in field name from *TLDSRSEppHostDelete01Ext01Field01* and values from *TLDSRSEppHostDelete01Ext01Value01*.
 - b. The contact delete command MUST complete with result code 1000 or 1001.
3. Create a logout command.
The logout command MUST complete with result code 1500.

35. Test Case TLDSRS EPP Host Update 01: Update a host

35.1 Test case identifier

TLDSRSEPPHostUpdate01

35.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, updating a Host Object and logging out.

If the Registry Operator does not support Host Objects, this test will not be performed.

35.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is used for login.

Id	Description	Type
TLDSRSEppHostUpdate01Name	Host name to update	String
TLDSRSEppHostUpdate01Ipv4	IPv4 address to add	String
TLDSRSEppHostUpdate01Ext01Uri	Extension 01 object URI	String
TLDSRSEppHostUpdate01Ext01Sl	Extension 01 schema location	String
TLDSRSEppHostUpdate01Ext01ExtName	Extension 01 name	String
TLDSRSEppHostUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppHostUpdate01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppHostUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

35.4 Outcome(s)

The login command MUST complete with result code 1000.

The host update command MUST complete with result code 1000.

The logout command MUST complete with result code 1500.

35.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppHostUpdate01Name* host MUST exist in the Registry Operator domain database, and be available for update.

35.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

35.7 Intercase dependencies

This test has no intercase dependencies.

35.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a host update command with *TLDSRSEppHostUpdate01Name* and add IPv4 address *TLDSRSEppHostUpdate01Ipv4*
 - a. If host update requires extra extension and values, create an extension part from *TLDSRSEppHostUpdate01Ext01Uri* and *TLDSRSEppHostUpdate01Ext01Sl* and fill in field name from *TLDSRSEppHostUpdate01Ext01Field01* and values from *TLDSRSEppHostUpdate01Ext01Value01*.
 - b. The host update command MUST complete with result code 1000.
3. Create a logout command.
The logout command MUST complete with result code 1500.

36. Test Case TLDSRS EPP Contact Update 01: Update a contact

36.1 Test case identifier

TLDSRSEPPConUpdate01

36.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, updating a contact object and logging out.

36.3 Inputs

The following information is needed as input for this test case:

The full information from the input table in 24.3 is also used for login.

Id	Description	Type
TLDSRSEppContactUpdate01Id	Contact ID to update	String
TLDSRSEppContactUpdate01Email	Email address to set	String
TLDSRSEppContactUpdate01Ext01Uri	Extension 01 object URI	String
TLDSRSEppContactUpdate01Ext01Sl	Extension 01 schema location	String
TLDSRSEppContactUpdate01Ext01ExtName	Extension 01 name	String
TLDSRSEppContactUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppContactUpdate01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppContactUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

36.4 Outcome(s)

The login command MUST complete with result code 1000.

The contact update command MUST complete with result code 1000.

The logout command MUST complete with result code 1500.

36.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppContactUpdate01Id* contact MUST exist in the Registry Operator domain database, and be available for update.

36.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

36.7 Intercase dependencies

This test has no intercase dependencies.

36.8 Ordered description of steps to be taken to execute the test case

1. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
2. Create a contact update command with *TLDSRSEppContactUpdate01Id* and set *TLDSRSEppContactUpdate01Email*
 - a. If contact update requires extra extension and values, create an extension part from *TLDSRSEppContactUpdate01Ext01Uri* and *TLDSRSEppContactUpdate01Ext01Sl* and fill in field name from *TLDSRSEppContactUpdate01Ext01Field01* and values from *TLDSRSEppContactUpdate01Ext01Value01*.
 - b. The contact update command MUST complete with result code 1000.
3. Create a logout command.
The logout command MUST complete with result code 1500.

37. Test Case TLDSRS EPP Domain Update 01: Update a domain

37.1 Test case identifier

TLDSRSEPPDomUpdate01

37.2 Objective

This test verifies compliance of the EPP server with RFC's for logging in, update a domain object with DNSSEC records and logging out. The test then verifies that the changes are visible in Whois within 60 minutes.

37.3 Inputs

The following information is needed as input for this test case:

As the test verifies Whois visibility, the IP address of a Whois server that responds on port 43 is needed.

The full information from the input table in 24.3 is also used for login.

Id	Description	Type
TLDSRSWhoisIPv4Port43	The IPv4 address of the Whois service on port 43	String
TLDSRSEppDomUpdate01Name	Domain name to update	String
TLDSRSEppDomUpdate01Ext01Uri	Extension 01 object URI	String
TLDSRSEppDomUpdate01Ext01Sl	Extension 01 schema location	String
TLDSRSEppDomUpdate01Ext01ExtName	Extension 01 name	String
TLDSRSEppDomUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
TLDSRSEppDomUpdate01Ext01Field01	Extension 01 field name 01	String
TLDSRSEppDomUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
TLDSRSEppDomUpdate01KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
TLDSRSEppDomUpdate01DsKeyTag01	Value for dsData 01 keytag	String
TLDSRSEppDomUpdate01DsAlg01	Value for dsData 01 alg	Number
TLDSRSEppDomUpdate01DsDigestType01	Value for dsData 01 digest type	Number
TLDSRSEppDomUpdate01DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	
TLDSRSEppDomUpdate01KdFlags01	Value for keyData 01 flags	Number
TLDSRSEppDomUpdate01KdProtocol01	Value for keyData 01 protocol	Number
TLDSRSEppDomUpdate01KdAlg01	Value for keyData 01 alg	Number
TLDSRSEppDomUpdate01KdPubKey01	Value for keyData 01 pubKey	String
...	Repeat for max x keyData records	

37.4 Outcome(s)

The initial Whois lookup MUST NOT return any DNSSEC Signed information about *TLDSRSEppDomUpdate01Name*.

The domain update command MUST complete with result code 1000 or 1001.

The logout command MUST complete with result code 1500.

TLDSRSEppDomUpdate01Name MUST be visible as a DNSSEC signed domain in Whois within 60 minutes.

37.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *TLDSRSEppDomUpdate01RegistrantId* MUST exist in Registry Operator contact database
- *TLDSRSEppDomUpdate01Ns01* MUST exist in Registry Operator host database, and be configured to serve domain *TLDSRSEppDomUpdate01Name* with correct DNSSEC records.
- *TLDSRSEppDomUpdate01Ns02* MUST exist in Registry Operator host database, and be configured to serve domain *TLDSRSEppDomUpdate01Name* with correct DNSSEC records.

37.6 Special procedural requirements

Abort the test if any Whois query takes longer than 10 seconds.

Abort the test if any EPP operation takes longer than 30 seconds.

37.7 Intercase dependencies

This test has no intercase dependencies.

37.8 Ordered description of steps to be taken to execute the test case

1. Verify that the *EPPDomUpdate01Name* is visible in Whois as a DNSSEC unsigned domain.
2. Perform the same login as the login step in 24.8.
The login command MUST complete with result code 1000.
3. Create a domain update command with *TLDSRSEppDomUpdate01Name*.
 - a. Add one or more secDNS records with dsData or keyData or both, depending on the value of *TLDSRSEppDomUpdate01KeyType*. Use appropriate values from *TLDSRSEppDomUpdate01DsKeyTag01*, *TLDSRSEppDomUpdate01DsAlg01*, *TLDSRSEppDomUpdate01DsDigestType01*, *TLDSRSEppDomUpdate01DsDigest01*, *TLDSRSEppDomUpdate01KdFlags01*, *TLDSRSEppDomUpdate01KdProtocol01*, *TLDSRSEppDomUpdate01KdAlg01*, *TLDSRSEppDomUpdate01kdPubKey01*.
 - b. If domain update requires extra extension and values, create an extension part from *TLDSRSEppDomUpdate01Ext01Uri* and fill in field name from *TLDSRSEppDomUpdate01Ext01Field01* and values from *TLDSRSEppDomUpdate01Ext01Value01*.
 - c. The domain update command MUST complete with result code 1000 or 1001.
4. Create a logout command.
The logout command MUST complete with result code 1500.
5. Verify that the *EPPDomUpdate01Name* is visible in Whois as a DNSSEC signed domain within 60 minutes.

38. EPP LOGIN and LOGOUT to TLD SRS EPP System

38.1 Description

Almost all SRS GW test cases below do an EPP LOGIN to the TLD SRS EPP System, followed by an EPP INFO command and then an EPP LOGOUT. The steps for LOGIN and LOGOUT are described here.

38.2 Inputs

The following data is needed to connect and logon to the TLS SRS EPP System and is found in the pdtepp.xml data file.

Id	Description	Type
TLDSREppLoginId	Login ID for EPP test user	String
TLDSREppLoginPwd	Login password for EPP test user	String
TLDSREppNsDomainUri	Object URI for Domain Object	String
TLDSREppNsDomainSl	Schema location for Domain Object	String
TLDSREppNsContactUri	Object URI for Contact Object	String
TLDSREppNsContactSl	Schema location for Contact Object	String
TLDSREppNsHostUri	Object URI for Host Object. If the TLD is not supporting Host Objects, this field is not mandatory.	String
TLDSREppNsHostSl	Schema location for Host Object. If the TLD is not supporting Host Objects, this field is not mandatory.	String
TLDSREppExtSecDnsUri	Object URI for Sec Dns Object Extension	String
TLDSREppExtSecDnsSl	Schema location for Sec Dns Object Extension	String
TLDSREppExtUri-[1..n]	Object URI for extension 1..n	String
TLDSREppExtSl-[1..n]	Schema location for extensions 1..n	String
TLDSREppServerIPv4	IPv4 address to EPP server	String
TLDSREppServerIPv6	IPv6 address to EPP server if TLD supports IPv6	String
TLDSREppServerPort	Port number to EPP server	Number
TLDSREppClientCertificate	Yes if TLD requires client certificate	Boolean
TLDSREppClientKeyPairPem	PEM file with valid client certificate for test user (Public and private)	PEM file
TLDSREppClientKeyPairPwd	Password for client certificate for test user	String
TLDSREppServerCertificatePem	PEM file with server certificate (Public)	PEM file

38.3 Ordered description of steps to LOGIN over IPv4

1. Connect to *TLDSREppServerIPv4*.
2. Create a login command with *TLDSREppLoginId* and password *TLDSREppLoginPwd*.
 - a. Use the *TLDSREppNsDomainUri*, *TLDSREppNsDomainSl*, *TLDSREppNsContactUri*, *TLDSREppNsContactSl*, *TLDSREppNsHostUri* and *TLDSREppNsHostSl* to build the login message.
 - b. Add the secDNS extension with *TLDSREppExtSecDnsUri* and *TLDSREppExtSecDnsSl*.
 - c. Add zero or more extra extensions with *TLDSREppExtUri* and *TLDSREppExtSl*.

- d. If the server requires client certificate, connect with client certificate *TLDSRSEppClientKeyPairPem*.
3. The login command MUST complete with result code 1000.

To LOGIN over IPv6, replace *TLDSRSEppServerIPv4* with *TLDSRSEppServerIPv6*.

38.4 Ordered description of steps to LOGOUT

1. Create a logout command.
2. The logout command MUST complete with result code 1500.

39. EPP LOGIN and LOGOUT to SRS GW EPP System

39.1 Description

Almost all SRS GW test cases below do an EPP LOGIN to the SRS GW EPP System, followed by an EPP transformation command unique for the test case, and then finally an EPP LOGOUT. The steps for LOGIN and LOGOUT are described here.

39.2 Inputs

The following data is needed to connect and logon to the SRS GW EPP System and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppLoginId	Login ID for EPP test user	String
SRSGwEppLoginPwd	Login password for EPP test user	String
SRSGwEppNsDomainUri	Object URI for Domain Object	String
SRSGwEppNsDomainSl	Schema location for Domain Object	String
SRSGwEppNsContactUri	Object URI for Contact Object	String
SRSGwEppNsContactSl	Schema location for Contact Object	String
SRSGwEppNsHostUri	Object URI for Host Object. If the TLD is not supporting Host Objects, this field is not mandatory.	String
SRSGwEppNsHostSl	Schema location for Host Object. If the TLD is not supporting Host Objects, this field is not mandatory.	String
SRSGwEppExtSecDnsUri	Object URI for Sec Dns Object Extension	String
SRSGwEppExtSecDnsSl	Schema location for Sec Dns Object Extension	String
SRSGwEppExtUri-[1..n]	Object URI for extension 1..n	String
SRSGwEppExtSl-[1..n]	Schema location for extensions 1..n	String
SRSGwEppServerIPv4	IPv4 address to EPP server	String
SRSGwEppServerIPv6	IPv6 address to EPP server if TLD supports IPv6	String
SRSGwEppServerPort	Port number to EPP server	Number
SRSGwEppClientCertificate	Yes if TLD requires client certificate	Boolean
SRSGwEppClientKeyPairPem	PEM file with valid client certificate for test user (Public and private)	PEM file
SRSGwEppClientKeyPairPwd	Password for client certificate for test user	String
SRSGwEppServerCertificatePem	PEM file with server certificate (Public)	PEM file

39.3 Ordered description of steps to LOGIN over IPv4

1. Connect to *SRSGwEppServerIPv4*.
2. Create a login command with *SRSGwEppLoginId* and password *SRSGwEppLoginPwd*.
 - a. Use the *SRSGwEppNsDomainUri*, *SRSGwEppNsDomainSl*, *SRSGwEppNsContactUri*, *SRSGwEppNsContactSl*, *SRSGwEppNsHostUri* and *SRSGwEppNsHostSl* to build the login message.
 - b. Add the secDNS extension with *SRSGwEppExtSecDnsUri* and *SRSGwEppExtSecDnsSl*.
 - c. Add zero or more extra extensions with *SRSGwEppExtUri* and *SRSGwEppExtSl*.
 - d. If the server requires a client certificate, connect with client certificate *SRSGwEppClientKeyPairPem*.

3. The login command MUST complete with result code 1000.

To LOGIN over IPv6, replace *SRSGnEppServerIPv4* with *SRSGnEppServerIPv6*.

39.4 Ordered description of steps to LOGOUT

1. Create a logout command.
2. The logout command MUST complete with result code 1500.

40. Test Case SRS+GW Address Verification: Verify country

40.1 Test case identifier

SRSGWAddrVer

40.2 Objective

This test verifies that the SRS GW IP address or addresses seem to be routed to the country that the gateway is supposed to reside in.

40.3 Inputs

- SRSGwEppServerIPv4 and SRSGwEppServerIPv6 (see 39.2).
- Information from ICANN on which country the SRS GW is supposed to reside in.

40.4 Outcome(s)

PASS if the address or addresses match what was expected.

40.5 Environmental needs

- Tool for Whois lookup to Regional Internet Registries (RIRs)
- IPv4 connectivity

40.6 Special procedural requirements

Abort the test if any operation takes longer than 30 seconds.

40.7 Intercase dependencies

This test has no intercase dependencies.

40.8 Ordered description of steps to be taken to execute the test case

This test will be performed from all of the nodes.

1. Do a lookup of the address or addresses to all five RIRs.
2. Inspect the result and determine where the address or addresses reside.
3. Set PASS or FAIL on the Test Case.

41. Test Case SRS+GW Connectivity Test: Verify connectivity

41.1 Test case identifier

SRSGWConnTest

41.2 Objective

This test verifies the connectivity to the SRS GW EPP provisioning system by doing a login and then a logout. The test will be performed over IPv4, and also IPv6, if the TLD supports IPv6 on the SRS GW EPP service and the local area test node supports IPv6.

This test case does not test connection to the TLD SRS since that is already tested in the equivalent test case in Test Sequence One.

41.3 Inputs

See section 39.2 for the information needed to login.

41.4 Outcome(s)

The login command from each probe MUST complete with result code 1000

The logout command from each probe MUST complete with result code 1500.

41.5 Environmental needs

- EPP test script
- IPv4 connectivity
- IPv6 connectivity (if available)

41.6 Special procedural requirements

Abort the test if any operation takes longer than 30 seconds.

41.7 Intercase dependencies

This test has no intercase dependencies.

41.8 Ordered description of steps to be taken to execute the test case

This test will be performed from all of the nodes. For IPv4, follow the steps in section 39 ("EPP LOGIN and LOGOUT to SRS GW EPP System").

If TLD supports IPv6 and if the local area test node supports IPv6, follow the steps in section 39, but replace SRSGwEppServerIPv4 with SRSGwEppServerIPv6.

42. Test Case SRS+GW Domain Create 01: Verify GW -> TLD synchronization of created domain

42.1 Test case identifier

SRSGWDomCreate01

42.2 Objective

This test verifies that a domain name created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

42.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomCreate01Name	Domain name to create	String
SRSGwEppDomCreate01Period	Domain period type	Y/M
SRSGwEppDomCreate01PeriodValue	Domain period value	Number
SRSGwEppDomCreate01RegistrantId	Domain registrant id	String
SRSGwEppDomCreate01AdminId	Domain Admin id if required	String
SRSGwEppDomCreate01TechId	Domain Tech id if required	String
SRSGwEppDomCreate01BillingId	Domain Billing id if required	String
SRSGwEppDomCreate01AuthPw	AuthPw if required	String
SRSGwEppDomCreate01Ns01	Host Object or Host Attribute name for ns01	String
SRSGwEppDomCreate01Ns02	Host Object or Host Attribute name for ns02	String
SRSGwEppDomCreate01Ext01Uri	Extension 01 object URI	String
SRSGwEppDomCreate01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomCreate01Ext01ExtName	Extension 01 name	String
SRSGwEppDomCreate01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomCreate01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

42.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.

- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO step to TLD SRS EPP system MUST complete with result code 2303.
- Initial EPP INFO step to SRS GW EPP system MUST complete with result code 2303.
- The EPP create step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

42.5 Environmental needs

- EPP test scripts
- IPv4 connectivity
- *SRSGwEppDomCreate01Name* MUST NOT exist in the TLD domain database.
- *SRSGwEppDomCreate01RegistrantId* MUST exist in TLD contact database
- *SRSGwEppDomCreate01Ns01* MUST exist in TLD host database.
- *SRSGwEppDomCreate01Ns02* MUST exist in TLD host database.
- *SRSGwEppDomCreate01Ns01* and *SRSGwEppDomCreate01Ns02* MUST be configured to serve domain *SRSGwEppDomCreate01Name* (if the NS is verified to be authoritative for the domain name as part of the registration process).

42.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

42.7 Intercase dependencies

This test has no intercase dependencies.

42.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate01Name*. The command MUST complete with result code 2303 ("Object does not exist").
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate01Name*. The command MUST complete with result code 2303 ("Object does not exist").
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain create command with *SRSGwEppDomCreate01Name*.
 - i. Use period name from *SRSGwEppDomCreate01Period* and period value from *SRSGwEppDomCreate01PeriodValue*.
 - ii. Use name server 1 from *SRSGwEppDomCreate01Ns01* and name server 2 from *SRSGwEppDomCreate01Ns02*.

- iii. If domain create requires extra extensions and values, create an extension part from *SRSGwEppDomCreate01Ext01Uri* and fill in field name from *SRSGwEppDomCreateExt01Field01* and values from *SRSGwEppDomCreateExt01Value01*.
 - iv. The domain create command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
- 4. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate01Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
- 5. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate01Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
- 6. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

43. Test Case SRS+GW Domain Create 02: Verify GW -> TLD synchronization of updated domain

43.1 Test case identifier

SRSGWDomCreate02

The name of this test case is misleading, but has set to name similar to the equivalent RST EPP Test Case. This is actually a domain update test case.

43.2 Objective

This test verifies that subordinate Host Objects created for a domain through the SRS GW EPP system are correctly synchronized with the TLD SRS EPP system.

If the TLD does not support Host Objects, the test uses Host Attributes to insert the subordinate name servers for the domain.

43.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomCreate02Name	Domain name to update	String
SRSGwEppDomCreate02Ns01	Subordinate Host Object or Host Attribute name for name server 01	String
SRSGwEppDomCreate02Ns01Ipv4	Subordinate name server 01 IPv4 address	String
SRSGwEppDomCreate02Ns01Ipv6	Subordinate name server 01 IPv6 address	String
SRSGwEppDomCreate02Ns02	Subordinate Host Object or Host Attribute name for name server 02	String
SRSGwEppDomCreate02Ns02Ipv4	Subordinate name server 02 IPv4 address	String
SRSGwEppDomCreate02Ns02Ipv6	Subordinate name server 02 IPv6 address	String
SRSGwEppDomCreate02UpdExt01Uri	Extension 01 object URI	String
SRSGwEppDomCreate02UpdExt01Sl	Extension 01 schema location	String
SRSGwEppDomCreate02UpdExt01ExtName	Extension 01 name	String
SRSGwEppDomCreate02UpdExt01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomCreate02UpdExt01Field01	Extension 01 field name 01	String
SRSGwEppDomCreate02UpdExt01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for Update	
...	Repeat for max x extensions for Update	

Id	Description	Type
SRSGwEppDomCreate02Ns01Ext01Uri	Extension 01 object URI	String
SRSGwEppDomCreate02Ns01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomCreate02Ns01Ext01ExtName	Extension 01 name	String
SRSGwEppDomCreate02Ns01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomCreate02Ns01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomCreate02Ns01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 01	
...	Repeat for max x extensions for name server 01	
SRSGwEppDomCreate02Ns02Ext01Uri	Extension 01 object URI	String
SRSGwEppDomCreate02Ns02Ext01Sl	Extension 01 schema location	String
SRSGwEppDomCreate02Ns02Ext01ExtName	Extension 01 name	String
SRSGwEppDomCreate02Ns02Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomCreate02Ns02Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomCreate02Ns02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields for name server 02	
...	Repeat for max x extensions for name server 02	

43.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO step to TLD SRS EPP system MUST complete with result code 1000. The result MUST NOT list neither *SRSGwEppDomCreate02Ns01* nor *SRSGwEppDomCreate02Ns02* as name servers for *SRSGwEppDomCreate02Name*.
- Initial EPP INFO step to SRS GW EPP system MUST complete with result code 1000. The result MUST NOT list neither *SRSGwEppDomCreate02Ns01* nor *SRSGwEppDomCreate02Ns02* as name servers for *SRSGwEppDomCreate02Name*.
- The two INFO commands MUST give equal results.
- The EPP update steps MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data
- The two INFO commands MUST give equal results.

43.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSGwEppDomCreate02Name* MUST exist in TLD database.
- *SRSGwEppDomCreate02RegistrantId* MUST exist in TLD contact database
- *SRSGwEppDomCreate02Ns01* MUST be configured to serve domain *SRSGwEppDomCreate02Name*.
- *SRSGwEppDomCreate02Ns02* MUST be configured to serve domain *SRSGwEppDomCreate02Name*.

43.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

43.7 Intercase dependencies

This test has no intercase dependencies.

43.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate02Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate02Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
 - c. The result MUST NOT list neither *SRSGwEppDomCreate02Ns01* nor *SRSGwEppDomCreate02Ns02* as name servers for *SRSGwEppDomCreate02Name*.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. If the EPP system supports Host Objects, perform the following two host create commands, else skip them.
 - i. Create a host create command for subordinate host *SRSGwEppDomCreate02Ns01* with IPv4 address *SRSGwEppDomCreate02Ns01Ipv4* and/or IPv6 address *SRSGwEppDomCreate02Ns01Ipv6*. The host create command MUST complete with result code 1000 or 1001.
 - ii. Create a host create command for subordinate host *SRSGwEppDomCreate02Ns02* with IPv4 address *SRSGwEppDomCreate02Ns02Ipv4* and/or IPv6 address *SRSGwEppDomCreate02Ns02Ipv6*. The host create command MUST complete with result code 1000 or 1001.
 - c. Create a domain update command with *SRSGwEppDomCreate02Name* and hosts *SRSGwEppDomCreate02Ns01* and *SRSGwEppDomCreate02Ns02*.
 - i. If the EPP system supports Host Objects, use Host Objects.
 - ii. If the EPP system does not support Host Objects, use Host Attributes.
 - iii. The domain update command MUST complete with result code 1000 or 1001.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.

- b. Create an info command for domain object *SRSgwEppDomCreate02Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
- 6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomCreate02Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
- 7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

44. Test Case SRS+GW Domain Create 03: Verify GW -> TLD synchronization of DNSSEC records

44.1 Test case identifier

SRSGWDomCreate03

44.2 Objective

This test verifies that a domain object with DNSSEC records created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

44.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomCreate03Name	Domain name to create	String
SRSGwEppDomCreate03Period	Domain period type	Y/M
SRSGwEppDomCreate03PeriodValue	Domain period value	Number
SRSGwEppDomCreate03RegistrantId	Domain registrant id	String
SRSGwEppDomCreate03AdminId	Domain admin id if required	String
SRSGwEppDomCreate03TechId	Domain tech id if required	String
SRSGwEppDomCreate03BillingId	Domain billing id if required	String
SRSGwEppDomCreate03AuthPw	Authentication password if required	String
SRSGwEppDomCreate03Ns01	Host Object name for ns01	String
SRSGwEppDomCreate03Ns02	Host Object name for ns02	String
SRSGwEppDomCreate03Ext01Uri	Extension 01 object URI	String
SRSGwEppDomCreate03Ext01Sl	Extension 01 schema location	String
SRSGwEppDomCreate03Ext01ExtName	Extension 01 name	String
SRSGwEppDomCreate03Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomCreate03Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomCreate03Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
SRSGwEppDomCreate03KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
SRSGwEppDomCreate03DsKeyTag01	Value for dsData 01 keytag	String
SRSGwEppDomCreate03DsAlg01	Value for dsData 01 alg	Number
SRSGwEppDomCreate03DsDigestType01	Value for dsData 01 digest type	Number
SRSGwEppDomCreate03DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	
SRSGwEppDomCreate03KdFlags01	Value for keyData 01 flags	Number

Id	Description	Type
SRSgwEppDomCreate03KdProtocol01	Value for keyData 01 protocol	Number
SRSgwEppDomCreate03KdAlg01	Value for keyData 01 alg	Number
SRSgwEppDomCreate03KdPubKey01	Value for keyData 01 pubKey	String
...	Repeat for max x keyData records	

44.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO step to TLD SRS EPP system MUST complete with result code 2303.
- Initial EPP INFO step to SRS GW EPP system MUST complete with result code 2303.
- The EPP create step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

44.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSgwEppDomCreate03Name* MUST NOT exist in the EPP database.
- *SRSgwEppDomCreate03RegistrantId* MUST exist in the EPP contact database
- *SRSgwEppDomCreate03Ns01* MUST exist in the EPP host database, and be configured to serve domain *SRSgwEppDomCreate03Name* with correct DNSSEC records.
- *SRSgwEppDomCreate03Ns02* MUST exist in the EPP host database, and be configured to serve domain *SRSgwEppDomCreate03Name* with correct DNSSEC records.

44.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

44.7 Intercase dependencies

This test has no intercase dependencies.

44.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomCreate03Name*. The command MUST complete with result code 2303 ("Object does not exist").
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomCreate03Name*. The command MUST complete with result code 2303 ("Object does not exist").
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. EPP transformation

- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain create command with *SRSGwEppDomCreate03Name*.
 - i. Use period name from *SRSGwEppDomCreate03Period* and period value from *SRSGwEppDomCreate03PeriodValue*.
 - ii. Use name server 1 from *SRSGwEppDomCreate03Ns01* and name server 2 from *SRSGwEppDomCreate03Ns02*.
 - iii. Add one or more secDNS records with dsData or keyData or both, depending on the value of *SRSGwEppDomCreate03KeyType*. Use appropriate values from *SRSGwEppDomCreate03DsKeyTag01*, *SRSGwEppDomCreate03DsAlg01*, *SRSGwEppDomCreate03DsDigestType01*, *SRSGwEppDomCreate03DsDigest01*, *SRSGwEppDomCreate03KdFlags01*, *SRSGwEppDomCreate03KdProtocol01*, *SRSGwEppDomCreate03KdAlg01*, *SRSGwEppDomCreate03KdPubKey01*.
 - iv. If domain create requires extra extension and values, create an extension part from *SRSGwEppDomCreate03Ext01Uri* and fill in field name from *SRSGwEppDomCreate03Ext01Field01* and values from *SRSGwEppDomCreate03Ext01Value01*.
 - v. The domain create command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
4. Final EPP INFO to TLD SRS
- a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate03Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to SRS GW
- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomCreate03Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
6. Compare the result of the two previous INFO commands
- a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

45. Test Case SRS+GW Domain Renew 01: Verify GW -> TLD synchronization of renewal

45.1 Test case identifier

SRSGWDomRenew01

45.2 Objective

This test verifies that a domain object renewed through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

45.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomRenew01Name	Domain name to renew	String
SRSGwEppDomRenew01Period	Domain period type	Y/M
SRSGwEppDomRenew01PeriodValue	Domain period value	Number
SRSGwEppDomRenew01ExpDate	Domain current expiry date	String
SRSGwEppDomRenew01Ext01Uri	Object URI for extension 01	String
SRSGwEppDomRenew01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomRenew01Ext01ExtName	Extension 01 name	String
SRSGwEppDomRenew01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomRenew01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomRenew01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

45.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP renew step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

45.5 Environmental needs

- EPP test script

- IPv4Connectivity
- *SRSgwEppDomRenew01Name* domain MUST exist in the TLD domain database, and be ready for renewal

45.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

45.7 Intercase dependencies

This test has no intercase dependencies.

45.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomRenew01Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomRenew01Name*. The command MUST complete with result code 1000.
 - c. Temporarily save the result of the command.
 - d. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain renew command with *SRSgwEppDomRenew01Name*.
 - i. Use period name from *SRSgwEppDomRenew01Period* and period value from *SRSgwEppDomRenew01PeriodValue*.
 - ii. If domain renew requires extra extension and values, create an extension part from *SRSgwEppDomRenew01Ext01Uri* and fill in field name from *SRSgwEppDomRenew01Ext01Field01* and values from *SRSgwEppDomRenew01Ext01Value01*.
 - iii. The domain renew command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomRenew01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW

- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomRenew01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

46. Test Case SRS+GW Domain Transfer 01: Verify GW -> TLD synchronization of request to transfer domain

46.1 Test case identifier

SRSGWDomTransfer01

46.2 Objective

This test verifies that a transfer of a domain object requested through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

46.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomTransfer01Name	Domain name to transfer	String
SRSGwEppDomTransfer01AddPeriod	Yes if the TLD support adding a period to transfer	Boolean
SRSGwEppDomTransfer01Period	Domain period type	Y/M
SRSGwEppDomTransfer01PeriodValue	Domain period value	Number
SRSGwEppDomTransfer01AuthInfo	Authorization info for domain, registrant or associated contacts	String
SRSGwEppDomTransfer01AuthRoid	Roid for registrant or contact if SRSGwEppDomTransfer01AuthInfo is associated with registrant or contact object	String
SRSGwEppDomTransfer01Ext01Uri	Extension 01 object URI	String
SRSGwEppDomTransfer01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomTransfer01Ext01ExtName	Extension 01 name	String
SRSGwEppDomTransfer01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomTransfer01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomTransfer01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

46.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

- The EPP transfer step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

46.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSgwEppDomTransfer01Name* domain MUST exist in the TLD domain database, and be available for transfer.

46.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

46.7 Intercase dependencies

This test has no intercase dependencies.

46.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain transfer command with *SRSgwEppDomTransfer01Name*.
 - i. Add an Op attribute in transfer command with the value “request”.
 - ii. If *SRSgwEppDomTransfer01AddPeriod* is true, add period part with Period name from *SRSgwEppDomTransfer01Period* and period value from *SRSgwEppDomTransfer01PeriodValue*.
 - iii. Add authinfo part with *SRSgwEppDomTransfer01AuthInfo*.
 - iv. If *SRSgwEppDomTransfer01AuthRoid* is defined, add a roid attribute to pw part with the value *SRSgwEppDomTransfer01AuthRoid*.
 - v. If domain renew requires extra extension and values, create an extension part from *SRSgwEppDomTransfer01Ext01Uri* and *SRSgwEppDomTransfer01Ext01Sl*

- and fill in field name from *SRSGwEppDomTransfer01Ext01Field01* and values from *SRSGwEppDomTransfer01Ext01Value01*.
- vi. The domain transfer command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
- a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomTransfer01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW
- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSGwEppDomTransfer01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
7. Compare the result of the two previous INFO commands
- a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

47. Test Case SRS+GW Domain Transfer 02: Verify GW -> TLD synchronization of approved domain transfer

47.1 Test case identifier

SRSGWDomTransfer02

47.2 Objective

This test verifies that a transfer of a domain object (if the TLD supports this operation via EPP) approved through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

This test will only be run if the *SRSGwEppDomTransfer02Approve* is set to yes.

47.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomTransfer02Approve	Yes if the TLD supports the approve operation	Boolean
SRSGwEppDomTransfer02Name	Domain name to transfer	String
SRSGwEppDomTransfer02AddPeriod	Yes if the TLD support adding a period to transfer	Boolean
SRSGwEppDomTransfer02Period	Domain period type	Y/M
SRSGwEppDomTransfer02PeriodValue	Domain period value	Number
SRSGwEppDomTransfer02AuthInfo	Authorization info for domain, registrant or associated contacts if required	String
SRSGwEppDomTransfer02AuthRoid	Roid for registrant or contact if SRSGwEppDomTransfer01AuthInfo is associated with registrant or contact object	String
SRSGwEppDomTransfer02Ext01Uri	Extension 01 object URI	String
SRSGwEppDomTransfer02Ext01Sl	Extension 01 schema location	String
SRSGwEppDomTransfer02Ext01ExtName	Extension 01 name	String
SRSGwEppDomTransfer02Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomTransfer02Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomTransfer02Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

47.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.

- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP transfer step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

47.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSgwEppDomTransfer02Name* domain MUST exist in the TLD domain database, and be available for transfer approve.

47.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

47.7 Intercase dependencies

This test has no intercase dependencies.

47.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer02Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer02Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain transfer command with *SRSgwEppDomTransfer02Name*.
 - i. Add an Op attribute in transfer command with the value “approve”.
 - ii. If *SRSgwEppDomTransfer02AddPeriod* is true, add period part with period name from *SRSgwEppDomTransfer02Period* and period value from *SRSgwEppDomTransfer02PeriodValue*.
 - iii. Add authinfo part with *SRSgwEppDomTransfer01AuthInfo*.

- iv. If *SRSgwEppDomTransfer02AuthRoid* is defined, add a roid attribute to pw part with the value *SRSgwEppDomTransfer02AuthRoid*.
 - v. If domain transfer requires extra extension and values, create an extension part from *SRSgwEppDomTransfer02Ext01Uri* and *SRSgwEppDomTransfer02Ext01Sl* and fill in field name from *SRSgwEppDomTransfer02Ext01Field01* and values from *SRSgwEppDomTransfer02Ext01Value01*.
 - vi. The domain transfer command MUST complete with result code 1000 or 1001.
- c. Create a logout command. The logout command MUST complete with result code 1500.
- 5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer02Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
- 6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomTransfer02Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
- 7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

48. Test Case SRS+GW Domain Delete 01: Verify GW -> TLD synchronization of deleted domain

48.1 Test case identifier

SRSGWDomDelete01

48.2 Objective

This test verifies that a domain object deleted through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

48.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomDelete01Name	Domain name to delete	String
SRSGwEppDomDelete01Ext01Uri	Extension 01 object URI	String
SRSGwEppDomDelete01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomDelete01Ext01ExtName	Extension 01 name	String
SRSGwEppDomDelete01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomDelete01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

48.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP delete step MUST complete with result code 1000 or 1001.
- If the EPP result code of the EPP transformation was 1001, then the final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must either both complete with result code 2303 or both complete with result code 1000 and return the same data.
- If the EPP result code of the EPP transformation was 1000, then the final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 2303.

48.5 Environmental needs

- EPP test script

- IPv4 connectivity
- *SRSgwEppDomDelete01Name* domain MUST exist in the TLD domain database, and be available for delete.

48.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

48.7 Intercase dependencies

This test has no intercase dependencies.

48.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomDelete01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomDelete01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain delete command with *SRSgwEppDomDelete01Name*.
 - i. If domain delete requires extra extension and values, create an extension part from *SRSgwEppDomDelete01Ext01Uri* and *SRSgwEppDomDelete01Ext01Sl* and fill in field name from *SRSgwEppDomDelete01Ext01Field01* and values from *SRSgwEppDomDelete01Ext01Value01*.
 - ii. The domain delete command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomDelete01Name*.
 - i. If the result code of the EPP transformation was 1000, then the info command MUST complete with result code 2303.
 - ii. If the result code of the EPP transformation was 1001, then the info command MUST either complete with result code 2303 or 1000.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW

- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
- b. Create an info command for domain object *SRSGwEppDomDelete01Name*. The command MUST complete with the same result code the TLD SRS did.
- c. Create a logout command. The logout command MUST complete with result code 1500.

49. Test Case SRS+GW Contact Create 01: Verify GW -> TLD synchronization of created contact

49.1 Test case identifier

SRSGWConCreate01

49.2 Objective

This test verifies that a contact object created through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

49.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppConCreate01Id	Contact ID to create	String
SRSGwEppConCreate01PIntMand	Yes if PostalInfo type INT is mandatory	Boolean
SRSGwEppConCreate01PIntName	Contact PostalInfo Int Name	String
SRSGwEppConCreate01PIntOrg	Contact PostalInfo Int Org	String
SRSGwEppConCreate01PIntStreet1	Contact PostalInfo Int Street1	String
SRSGwEppConCreate01PIntStreet2	Contact PostalInfo Int Street2, if mandatory	String
SRSGwEppConCreate01PIntStreet3	Contact PostalInfo Int Street3, if mandatory	String
SRSGwEppConCreate01PIntCity	Contact PostalInfo Int City	String
SRSGwEppConCreate01PIntSp	Contact PostalInfo Int State or Province, if mandatory	String
SRSGwEppConCreate01PIntPc	Contact PostalInfo Int Postcode, if mandatory	String
SRSGwEppConCreate01PIntCc	Contact PostalInfo Int Country Code	String
SRSGwEppConCreate01PLocMand	Yes if PostalInfo type LOC is mandatory	Boolean
SRSGwEppConCreate01PLocName	Contact PostalInfo Loc Name	String
SRSGwEppConCreate01PLocOrg	Contact PostalInfo Loc Org	String
SRSGwEppConCreate01PLocStreet1	Contact PostalInfo Loc Street1	String
SRSGwEppConCreate01PLocStreet2	Contact PostalInfo Loc Street2, if mandatory	String
SRSGwEppConCreate01PLocStreet3	Contact PostalInfo Loc Street3, if mandatory	String
SRSGwEppConCreate01PLocCity	Contact PostalInfo Loc City	String
SRSGwEppConCreate01PLocSp	Contact PostalInfo Loc State or Province, if mandatory	String
SRSGwEppConCreate01PLocPc	Contact PostalInfo Loc Postcode, if	String

Id	Description	Type
	mandatory	
SRSGwEppConCreate01PLocCc	Contact PostalInfo Loc Country Code	String
SRSGwEppConCreate01Voice	Contact Voice telephone number, if mandatory	String
SRSGwEppConCreate01Fax	Contact Fax telephone number, if mandatory	String
SRSGwEppConCreate01Email	Contact Email address	String
SRSGwEppConCreate01Auth	Contact Auth Info, if mandatory	String
SRSGwEppConCreate01Ext01Uri	Extension 01 object URI	String
SRSGwEppConCreate01Ext01Sl	Extension 01 schema location	String
SRSGwEppConCreate01Ext01ExtName	Extension 01 name	String
SRSGwEppConCreate01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppConCreate01Ext01Field01	Extension 01 field name 01	String
SRSGwEppConCreate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

49.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 2303.
- The EPP create step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

49.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSGwEppConCreate01Id* contact MUST NOT exist in the TLD contact database.

49.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

49.7 Intercase dependencies

This test has no intercase dependencies.

49.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSGwEppConCreate01Id*. The command MUST complete with result code 2303.

- c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConCreate01Id*. The command MUST complete with result code 2303.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a contact create command with *SRSgwEppConCreate01Id*.
 - i. If *SRSgwEppConCreate01PIntMand* is yes, create a Postal Info type Int with appropriate fields from *SRSgwEppConCreate01PIntName*, *SRSgwEppConCreate01PIntOrg*, *SRSgwEppConCreate01PIntStreet1*, *SRSgwEppConCreate01PIntStreet2*, *SRSgwEppConCreate01PIntStreet3*, *SRSgwEppConCreate01PIntCity*, *SRSgwEppConCreate01PIntSp*, *SRSgwEppConCreate01PIntPc* and *SRSgwEppConCreate01PIntCc*.
 - ii. If *SRSgwEppConCreate01PLocMand* is yes, create a Postal Info type Loc with appropriate fields from *SRSgwEppConCreate01PLocName*, *SRSgwEppConCreate01PLocOrg*, *SRSgwEppConCreate01PLocStreet1*, *SRSgwEppConCreate01PLocStreet2*, *SRSgwEppConCreate01PLocStreet3*, *SRSgwEppConCreate01PLocCity*, *SRSgwEppConCreate01PLocSp*, *SRSgwEppConCreate01PLocPc* and *SRSgwEppConCreate01PLocCc*.
 - iii. Add *SRSgwEppConCreate01Voice*, *SRSgwEppConCreate01Fax*, *SRSgwEppConCreate01Email* and *SRSgwEppConCreate01Auth* fields.
 - iv. If contact create requires extra extension and values, create an extension part from *SRSgwEppConCreate01Ext01Uri* and *SRSgwEppConCreate01Ext01Sl* and fill in field name from *SRSgwEppConCreate01Ext01Field01* and values from *SRSgwEppConCreate01Ext01Value01*.
 - v. The contact create command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
4. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConCreate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConCreate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

50. Test Case SRS+GW Contact Delete 01: Verify GW -> TLD synchronization of deleted contact

50.1 Test case identifier

SRSGWConDelete01

50.2 Objective

This test verifies that a contact object deleted through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

50.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppConDelete01Id	ContactID to delete	String
SRSGwEppConDelete01Ext01Uri	Extension 01 object URI	String
SRSGwEppConDelete01Ext01Sl	Extension 01 schema location	String
SRSGwEppConDelete01Ext01ExtName	Extension 01 name	String
SRSGwEppConDelete01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppConDelete01Ext01Field01	Extension 01 field name 01	String
SRSGwEppConDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

50.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP delete step MUST complete with result code 1000 or 1001.
- If the EPP result code of the EPP transformation was 1001, then the final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must either both complete with result code 2303 or both complete with result code 1000 and return the same data.
- If the EPP result code of the EPP transformation was 1000, then the final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 2303.

50.5 Environmental needs

- EPP test script

- IPv4 connectivity
- *SRSgwEppConDelete01Id* domain MUST exist in the TLD domain database, and be available for delete.

50.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

50.7 Intercase dependencies

This test has no intercase dependencies.

50.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConDelete01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConDelete01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a contact delete command with *SRSgwEppConDelete01Id*.
 - i. If contact delete requires extra extension and values, create an extension part from *SRSgwEppConDelete01Ext01Uri* and *SRSgwEppConDelete01Ext01Sl* and fill in field name from *SRSgwEppConDelete01Ext01Field01* and values from *SRSgwEppConDelete01Ext01Value01*.
 - ii. The contact delete command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSgwEppConDelete01Id*.
 - i. If the result code of the EPP transformation was 1000, then the info command MUST complete with result code 2303.
 - ii. If the result code of the EPP transformation was 1001, then the info command MUST either complete with result code 2303 or 1000.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW

- a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
- b. Create an info command for contact object *SRSGwEppConDelete01Id*. The command MUST complete with the same result code the TLD SRS did.
- c. Create a logout command. The logout command MUST complete with result code 1500.

51. Test Case SRS+GW Host Delete 01: Verify GW -> TLD synchronization of deleted host

51.1 Test case identifier

SRSGWHostDelete01

51.2 Objective

This test verifies that deleting a Host Object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

If the TLD does not support Host Objects, this test will not be performed.

51.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppHostDelete01Name	Host name to delete	String
SRSGwEppHostDelete01Ext01Uri	Extension 01 object URI	String
SRSGwEppHostDelete01Ext01Sl	Extension 01 schema location	String
SRSGwEppHostDelete01Ext01ExtName	Extension 01 name	String
SRSGwEppHostDelete01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppHostDelete01Ext01Field01	Extension 01 field name 01	String
SRSGwEppHostDelete01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

51.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP delete step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 2303.

51.5 Environmental needs

- EPP test script
- IPv4 connectivity

- *SRSGwEppHostDelete01Name* host MUST exist in the TLD domain database, and be available for delete.

51.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

51.7 Intercase dependencies

This test has no intercase dependencies.

51.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostDelete01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostDelete01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a contact delete command with *SRSGwEppHostDelete01Id*.
 - i. If contact delete requires extra extension and values, create an extension part from *SRSGwEppHostDelete01Ext01Uri* and *SRSGwEppHostDelete01Ext01Sl* and fill in field name from *SRSGwEppHostDelete01Ext01Field01* and values from *SRSGwEppHostDelete01Ext01Value01*.
 - ii. The contact delete command MUST complete with result code 1000 or 1001.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSGwEppHostDelete01Name*.
 - i. If the result code of the EPP transformation was 1000, then the info command MUST complete with result code 2303.
 - ii. If the result code of the EPP transformation was 1001, then the info command MUST either complete with result code 2303 or 1000.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.

- b. Create an info command for contact object *SRSgwEppHostDelete01Name*. The command MUST complete with the same result code the TLD SRS did.
- c. Create a logout command. The logout command MUST complete with result code 1500.

52. Test Case SRS+GW Host Update 01: Verify GW -> TLD synchronization of updated host

52.1 Test case identifier

SRSGWHostUpdate01

52.2 Objective

This test verifies that updating a Host Object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

If the TLD does not support Host Objects, this test will not be performed.

52.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppHostUpdate01Name	Host name to update	String
SRSGwEppHostUpdate01Ipv4	IPv4 address to add	String
SRSGwEppHostUpdate01Ext01Uri	Extension 01 object URI	String
SRSGwEppHostUpdate01Ext01Sl	Extension 01 schema location	String
SRSGwEppHostUpdate01Ext01ExtName	Extension 01 name	String
SRSGwEppHostUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppHostUpdate01Ext01Field01	Extension 01 field name 01	String
SRSGwEppHostUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

52.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP update step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

52.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSGwEppHostUpdate01Name* host MUST exist in the TLD domain database, and be available for update.

52.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

52.7 Intercase dependencies

This test has no intercase dependencies.

52.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a host update command with *SRSGwEppHostUpdate01Name* and add IPv4 address *SRSGwEppHostUpdate01Ipv4*
 - i. If host update requires extra extension and values, create an extension part from *SRSGwEppHostUpdate01Ext01Uri* and *SRSGwEppHostUpdate01Ext01Sl* and fill in field name from *SRSGwEppHostUpdate01Ext01Field01* and values from *SRSGwEppHostUpdate01Ext01Value01*.
 - ii. The host update command MUST complete with result code 1000.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.

6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for host object *SRSGwEppHostUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

53. Test Case SRS+GW Contact Update 01: Verify GW -> TLD synchronization of updated contact

53.1 Test case identifier

SRSGWConUpdate01

53.2 Objective

This test verifies that updating a contact object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

53.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppContactUpdate01Id	Contact ID to update	String
SRSGwEppContactUpdate01Email	Email address to set	String
SRSGwEppContactUpdate01Ext01Uri	Extension 01 object URI	String
SRSGwEppContactUpdate01Ext01Sl	Extension 01 schema location	String
SRSGwEppContactUpdate01Ext01ExtName	Extension 01 name	String
SRSGwEppContactUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppContactUpdate01Ext01Field01	Extension 01 field name 01	String
SRSGwEppContactUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	

53.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.
- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP update step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

53.5 Environmental needs

- EPP test script
- IPv4 connectivity

- *SRSGwEppContactUpdate01Id* contact MUST exist in the TLD domain database, and be available for update.

53.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

53.7 Intercase dependencies

This test has no intercase dependencies.

53.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSGwEppContactUpdate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSGwEppContactUpdate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a contact update command with *SRSGwEppContactUpdate01Id* and set *SRSGwEppContactUpdate01Email*
 - i. If contact update requires extra extension and values, create an extension part from *SRSGwEppContactUpdate01Ext01Uri* and *SRSGwEppContactUpdate01Ext01Sl* and fill in field name from *SRSGwEppContactUpdate01Ext01Field01* and values from *SRSGwEppContactUpdate01Ext01Value01*.
 - ii. The contact update command MUST complete with result code 1000.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for contact object *SRSGwEppContactUpdate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.

- b. Create an info command for contact object *SRSgwEppContactUpdate01Id*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
- 7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

54. Test Case SRS+GW Domain Update 01: Verify GW -> TLD synchronization of updated domain

54.1 Test case identifier

SRSGWDomUpdate01

54.2 Objective

This test verifies that updating a domain object through the SRS GW EPP system is correctly synchronized with the TLD SRS EPP system.

54.3 Inputs

- The data needed for EPP LOGIN and EPP INFO to the TLD SRS EPP system is found in section 38.2.
- The data needed for EPP LOGIN and EPP INFO to the SRS GW EPP system is found in section 39.2.
- The data needed for the EPP transformation in this test case is listed in the table below and is found in the srsgwepp.xml data file.

Id	Description	Type
SRSGwEppDomUpdate01Name	Domain name to update	String
SRSGwEppDomUpdate01Ext01Uri	Extension 01 object URI	String
SRSGwEppDomUpdate01Ext01Sl	Extension 01 schema location	String
SRSGwEppDomUpdate01Ext01ExtName	Extension 01 name	String
SRSGwEppDomUpdate01Ext01ExtValue	Extension 01 value for direct text node	String
SRSGwEppDomUpdate01Ext01Field01	Extension 01 field name 01	String
SRSGwEppDomUpdate01Ext01Value01	Extension 01 field value 01	String
...	Repeat for max y fields	
...	Repeat for max x extensions	
SRSGwEppDomUpdate01KeyType	D for dsData specification K for keyData specification DK for dsData and keyData specification	String
SRSGwEppDomUpdate01DsKeyTag01	Value for dsData 01 keytag	String
SRSGwEppDomUpdate01DsAlg01	Value for dsData 01 alg	Number
SRSGwEppDomUpdate01DsDigestType01	Value for dsData 01 digest type	Number
SRSGwEppDomUpdate01DsDigest01	Value for dsData 01 digest	String
...	Repeat for max x dsData records	
SRSGwEppDomUpdate01KdFlags01	Value for keyData 01 flags	Number
SRSGwEppDomUpdate01KdProtocol01	Value for keyData 01 protocol	Number
SRSGwEppDomUpdate01KdAlg01	Value for keyData 01 alg	Number
SRSGwEppDomUpdate01KdPubKey01	Value for keyData 01 pubKey	String
...	Repeat for max x keyData records	

54.4 Outcome(s)

- The login step preceding both the EPP INFO commands and the EPP transformation MUST complete with result code 1000.

- The logout step following both the EPP INFO commands and the EPP transformation MUST complete with result code 1500.
- Initial EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.
- The EPP update step MUST complete with result code 1000 or 1001.
- Final EPP INFO steps to TLD SRS EPP system and SRS GW EPP system must both complete with result code 1000 and return the same data.

54.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *SRSgwEppDomUpdate01RegistrantId* MUST exist in TLD contact database
- *SRSgwEppDomUpdate01Ns01* MUST exist in TLD host database, and be configured to serve domain *SRSgwEppDomUpdate01Name* with correct DNSSEC records.
- *SRSgwEppDomUpdate01Ns02* MUST exist in TLD host database, and be configured to serve domain *SRSgwEppDomUpdate01Name* with correct DNSSEC records.

54.6 Special procedural requirements

Abort the test if any EPP operation takes longer than 30 seconds.

54.7 Intercase dependencies

This test has no intercase dependencies.

54.8 Ordered description of steps to be taken to execute the test case

1. Initial EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
2. Initial EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
3. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.
4. EPP transformation
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create a domain update command with *SRSgwEppDomUpdate01Name*.
 - i. Add one or more secDNS records with dsData or keyData or both, depending on the value of *SRSgwEppDomUpdate01KeyType*. Use appropriate values from

- SRSgwEppDomUpdate01DsKeyTag01*, *SRSgwEppDomUpdate01DsAlg01*,
SRSgwEppDomUpdate01DsDigestType01, *SRSgwEppDomUpdate01DsDigest01*,
SRSgwEppDomUpdate01KdFlags01, *SRSgwEppDomUpdate01KdProtocol01*,
SRSgwEppDomUpdate01KdAlg01, *SRSgwEppDomUpdate01kdPubKey01*.
- ii. If domain update requires extra extension and values, create an extension part from *SRSgwEppDomUpdate01Ext01Uri* and fill in field name from *SRSgwEppDomUpdate01Ext01Field01* and values from *SRSgwEppDomUpdate01Ext01Value01*.
 - iii. The domain update command MUST complete with result code 1000 or 1001.
5. Final EPP INFO to TLD SRS
 - a. Perform the EPP LOGIN by following the steps in section 38. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
 6. Final EPP INFO to SRS GW
 - a. Perform the EPP LOGIN by following the steps in section 39. The login command MUST complete with result code 1000.
 - b. Create an info command for domain object *SRSgwEppDomUpdate01Name*. The command MUST complete with result code 1000.
 - i. Temporarily save the result of the command.
 - c. Create a logout command. The logout command MUST complete with result code 1500.
 7. Compare the result of the two previous INFO commands
 - a. The result from the two previous INFO commands MUST be equal.
 - b. Transaction IDs MAY be different.

55. General

55.1 Glossary

The glossary is available in the RST Master Test Plan.

55.2 Document change procedures

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