

# Pre-Delegation Testing

## EPP Test Cases

Version C

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## Document control

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## 1. Introduction

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### 1.1 Scope

The Pre-Delegation Testing Provider will execute an *Extensible Provisioning Protocol* (EPP) test case suite using registrar credentials supplied by the applicant. The tests include:

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

All tests are to be performed over IPv4 and IPv6 from various points on the Internet.

### 1.2 References

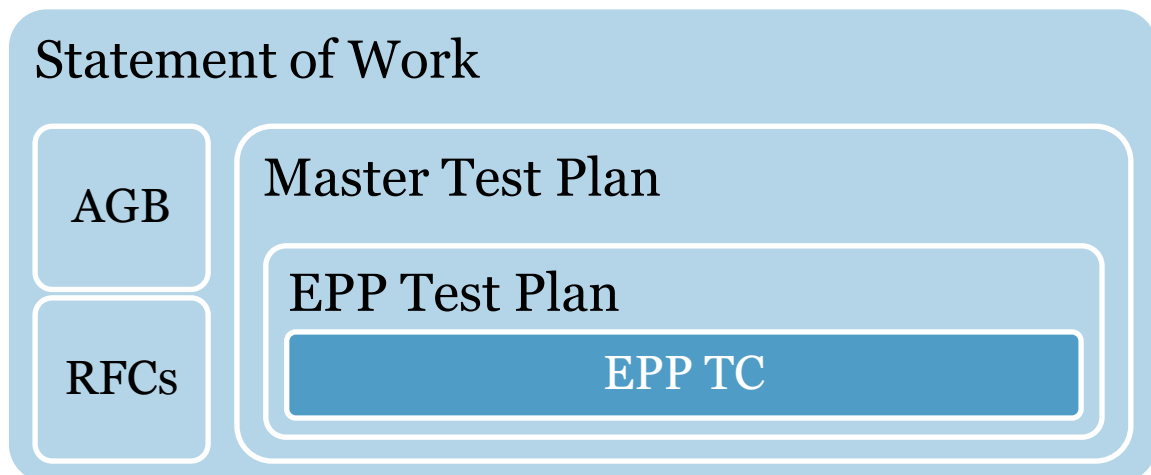
#### 1.2.1 External

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

#### 1.2.2 Internal

- Pre-Delegation Testing, Statement of Work
- Pre-Delegation Testing, Master Test Plan
- Pre-Delegation Testing, EPP Test Plan
- Pre-Delegation Testing, DNS Delegation Test Case
- Pre-Delegation Testing, Whois CLI Test Cases

#### 1.2.3 Document Hierarchy



### 1.3 Context

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

## 1.4 Notation for description

Each test case for the EPP service is described in their own chapter. The test procedures are described directly in the test case.

## 2. EPP Conn Test

---

### 2.1 Test case identifier

EPPConnTest

### 2.2 Objective

This automated test will verify the connectivity to the EPP provisioning system from 5 different points on the internet, by doing a login and then a logout.

The test will be performed over both IPv4 and IPv6 if applicant supports that.

### 2.3 Inputs

The following information will be 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  | String   |
| EppNsHostSl             | Schema location for Host object   | 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 applicant supports IPv6                     | String   |
| EppServerPort           | Port number to EPP server   | Number   |
| EppClientCertificate    | Yes if applicant 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 |

### 2.4 Outcome(s)

Login step from each probe MUST complete with result code 1000

Logout step from each probe MUST complete with result code 1500.

### 2.5 Environmental needs

- EPP test script
- IPv4 connectivity
- IPv6 connectivity

## 2.6 Special procedural requirements

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

## 2.7 Intercase dependencies

This test has no intercase dependencies.

## 2.8 Ordered description of steps to be taken to execute the test case

This test will be performed from all of the nodes.

1. Login 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 up to n extra extensions with *EppExtUri* and *EppExtSl*.  
If the server requires Client Certificate, connect with client certificate *EppClientKeyPairPem*  
Connect to *EppServerIPv4*.  
The reply from login **MUST** be result code 1000.
2. Create logout command.  
The reply from logout command **MUST** be result code 1500.

If applicant supports IPv6:

1. Login 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 up to n extra extensions with *EppExtUri* and *EppExtSl*.  
If the server requires Client Certificate, connect with client certificate *EppClientKeyPairPem*  
Connect to *EppServerIPv6*.  
The reply from login **MUST** be result code 1000.
2. Create logout command.  
The reply from logout command **MUST** be result code 1500.

### 3. EPP Domain Create 01

---

#### 3.1 Test case identifier

EPPDomCreate01

#### 3.2 Objective

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

#### 3.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is required.

As the test will verify DNS visibility within 24 hours, one of the name server FQDN and glue records are also needed. This is the same information as provided by the applicant in 2.3 of the DNS Delegation Test Cases.

The Whois visibility within 24 hours will also be tested. The IP address of the Whois server on port 43 is needed. This is the same information as provided by the applicant in 2.3 of the Whois Test Cases.

| Id                          | Description                                       | Type   |
|-----------------------------|---|--------|
| DnsNameServer1              | FQDN of 1 <sup>st</sup> authoritative name server | String |
| DnsGlueRecord1              | FQDN of 1 <sup>st</sup> 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 name for ns01                         | String |
| EppDomCreate01Ns02          | Host object name for ns02                         | String |
| EppDomCreate01Ext01Uri      | Object URI for extension 01                       | String |
| EppDomCreate01Ext01Sl       | Schema location for extensions 01                 | String |
| EppDomCreate01Ext01ExtName  | Extension name if not normal create               | String |
| EppDomCreate01Ext01ExtValue | Extension01 value for direct text node            | String |
| EppDomCreate01Ext01Field01  | Extra field 01 name for extension 01              | String |
| EppDomCreate01Ext01Value01  | Extra field 01 value for extension 01             | String |
| ...                         | Repeat for max y fields                           |        |
| ...                         | Repeat for max x extensions                       |        |



### 3.4 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 after no more than 24 hours.

*EppDomCreate01Name* **MUST** be visible in Whois after no more than 24 hours.

### 3.5 Environmental needs

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

### 3.6 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.

### 3.7 Intercase dependencies

This test has no intercase dependencies.

### 3.8 Ordered description of steps to be taken to execute the test case

1. First check 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. Do a DNS lookup for *EppDomCreate01Name* domain name. The result **MUST** be NXDOMAIN.
3. Do the same login as the login step in 2.8. The reply from login **MUST** be 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*.
  - d. The reply from create domain command **MUST** be result code 1000 or 1001.



5. Create logout command. The reply from logout command **MUST** be result code 1500.
6. Test that the *EPPDomCreate01Name* domain is visible in the zone within 24 hours.
7. Test that the *EPPDomCreate01Name* is visible in Whois within 24 hours.

## 4. EPP Domain Create 02

### 4.1 Test case identifier

EPPDomCreate02

### 4.2 Objective

This test will verify compliance of the EPP server with RFC's for logging in, creating a domain object, creating subordinate host objects and updating domain and logging out, and verify the correct handling of glue records.

### 4.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

As the test will verify DNS visibility within 24 hours, with correct glue records, one of the name server FQDN and glue records are also needed. This is the same information as provided by the applicant in 2.3 of the DNS Delegation Test Cases.

| Id                            | Description                                       | Type   |
|-------------------------------|---|--------|
| DnsNameServer1                | FQDN of 1 <sup>st</sup> authoritative name server | String |
| DnsGlueRecord1                | FQDN of 1 <sup>st</sup> authoritative name server | String |
| EppDomCreate02Name            | Domain name to create                             | String |
| EppDomCreate02Period          | Domain period type                                | Y/M    |
| EppDomCreate02PeriodValue     | Domain period value                               | Number |
| EppDomCreate02RegistrantId    | Domain registrant id                              | String |
| EppDomCreate02AdminId         | Domain Admin id if required                       | String |
| EppDomCreate02TechId          | Domain Tech id if required                        | String |
| EppDomCreate02BillingId       | Domain Billing id if required                     | String |
| EppDomCreate02AuthPw          | AuthPw if required                                | String |
| EppDomCreate02Ns01            | Subordinate host object name for ns01             | String |
| EppDomCreate02Ns01Ipv4        | Subordinate ns01 IPv4 address                     | String |
| EppDomCreate02Ns01Ipv6        | Subordinate ns01 IPv6 address                     | String |
| EppDomCreate02Ns02            | Subordinate host object name for ns02             | String |
| EppDomCreate02Ns02Ipv4        | Subordinate ns02 IPv4 address                     | String |
| EppDomCreate02Ns02Ipv6        | Subordinate ns02 IPv6 address                     | String |
| EppDomCreate02Ext01Uri        | Object URI for extension 01                       | String |
| EppDomCreate02Ext01Sl         | Schema location for extensions 01                 | String |
| EppDomCreate02Ext01ExtName    | Extension name if not normal create               | String |
| EppDomCreate02Ext01ExtValue   | Extension01 value for direct text node            | String |
| EppDomCreate02Ext01Field01    | Extra Field 01 name for extension 01              | String |
| EppDomCreate02Ext01Value01    | Extra Field 01 value for extension 01             | String |
| ...                           | Repeat for max y fields                           |        |
| ...                           | Repeat for max x extensions                       |        |
| EppDomCreate02UpdExt01Uri     | Object URI for extension 01 for Update            | String |
| EppDomCreate02UpdExt01Sl      | Schema location for extensions 01 for Update      | String |
| EppDomCreate02UpdExt01ExtName | Extension name if not normal update for           | String |

| Id                              | Description                                       | Type   |
|---------------------------------|---|--------|
|                                 | Update  |        |
| EppDomCreate02UpdExt01ExtValue  | Extension01 value for direct text node for Update | String |
| EppDomCreate02UpdExt01Field01   | Extra Field 01 name for extension 01 for Update   | String |
| EppDomCreate02UpdExt01Value01   | Extra Field 01 value for extension 01 for Update  | String |
| ...                             | Repeat for max y fields for Update                |        |
| ...                             | Repeat for max x extensions for Update            |        |
| EppDomCreate02Ns01Ext01Uri      | Object URI for extension 01 for Ns01              | String |
| EppDomCreate02Ns01Ext01Sl       | Schema location for extensions 01 for Ns01        | String |
| EppDomCreate02Ns01Ext01ExtName  | Extension name if not normal create               | String |
| EppDomCreate02Ns01Ext01ExtValue | Extension01 value for direct text node for Ns01   | String |
| EppDomCreate02Ns01Ext01Field01  | Extra Field 01 name for extension 01 for Ns01     | String |
| EppDomCreate02Ns01Ext01Value01  | Extra Field 01 value for extension 01 for Ns01    | String |
| ...                             | Repeat for max y fields for Ns01                  |        |
| ...                             | Repeat for max x extensions for Ns01              |        |
| EppDomCreate02Ns02Ext01Uri      | Object URI for extension 01 for Ns02              | String |
| EppDomCreate02Ns02Ext01Sl       | Schema location for extensions 01 for Ns02        | String |
| EppDomCreate02Ns02Ext01ExtName  | Extension name if not normal create               | String |
| EppDomCreate02Ns02Ext01ExtValue | Extension01 value for direct text node for Ns02   | String |
| EppDomCreate02Ns02Ext01Field01  | Extra Field 01 name for extension 01 for Ns02     | String |
| EppDomCreate02Ns02Ext01Value01  | Extra Field 01 value for extension 01 for Ns02    | String |
| ...                             | Repeat for max y fields for Ns02                  |        |
| ...                             | Repeat for max x extensions for Ns02              |        |

#### 4.4 Outcome(s)

Initial DNS lookup MUST return NXDOMAIN for *EppDomCreate02Name*.

Login step MUST complete with result code 1000.

Create domain step MUST complete with result code 1000 or 1001.

Create host step MUST complete with result code 1000 or 1001.

Update domain step MUST complete with result code 1000.

Logout step MUST complete with result code 1500.

*EppDomCreate02Name* MUST be visible in zone with correct glue records after no more than 24 hours.

#### 4.5 Environmental needs

- DNS test script
- EPP test script
- IPv4 connectivity
- *EppDomCreate02Name* MUST NOT exist in the DNS Zone.
- *EppDomCreate02RegistrantId* has to exist in applicant contact database
- *EppDomCreate02Ns01* must be configured to serve domain *EppDomCreate02Name*.
- *EppDomCreate02Ns02* must be configured to serve domain *EppDomCreate02Name*.

#### 4.6 Special procedural requirements

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

#### 4.7 Intercase dependencies

This test has no intercase dependencies.

#### 4.8 Ordered description of steps to be taken to execute the test case

1. Do a DNS lookup for *EppDomCreate02Name* domain name. The result **MUST** be NXDOMAIN.
2. Do the same login as the login step in 2.8.  
The reply from login **MUST** be result code 1000.
3. Create a domain with the create command with *EppDomCreate02Name*.
  - a. Use period name from *EppDomCreate02Period* and period value from *EppDomCreate02PeriodValue*.
  - b. If domain create requires extra extension and values, create an extension part from *EppDomCreate02Ext01Uri* and fill in field name from *EppDomCreate02Ext01Field01* and values from *EppDomCreate02Ext01Value01*.
  - c. The reply from create domain command **MUST** be result code 1000 or 1001.
4. Create subordinate host *EppDomCreate02Ns01* with IPv4 address *EppDomCreate02Ns01Ipv4* and/or IPv6 address *EppDomCreate02Ns01Ipv6*  
The reply from create host command **MUST** be result code 1000 or 1001.
5. Create subordinate host *EppDomCreate02Ns02* with IPv4 address *EppDomCreate02Ns02Ipv4* and/or IPv6 address *EppDomCreate02Ns02Ipv6*  
The reply from create host command **MUST** be result code 1000 or 1001.
6. Create domain update *EppDomCreate02Name*.  
Add host *EppDomCreate02Ns01* and *EppDomCreate02Ns02*  
The reply from update domain command **MUST** be result code 1000.
7. Create logout command  
The reply from logout command **MUST** be result code 1500.
8. Test that the *EppDomCreate02Name* domain with the correct glue records are visible in the zone within 24 hours.

## 5. EPP Domain Create 03

### 5.1 Test case identifier

EPPDomCreate03

### 5.2 Objective

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

### 5.3 Inputs

The following information will be needed as input for this test case:

As the test will verify DNS visibility within 24 hours, with correct DNSSEC records, one of the name server FQDN and glue records are also needed. This is the same information as provided by the applicant in 2.3 of the DNS Delegation Test Cases.

The login information from 2.3 is also required.

| Id                           | Description  | Type   |
|------------------------------|--|--------|
| DnsNameServer1               | FQDN of 1 <sup>st</sup> authoritative name server  | String |
| DnsGlueRecord1               | FQDN of 1 <sup>st</sup> 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         | AuthPw if required   | String |
| EppDomCreate03Ns01           | Host object name for ns01  | String |
| EppDomCreate03Ns02           | Host object name for ns02  | String |
| EppDomCreate03Ext01Uri       | Object URI for extension 01  | String |
| EppDomCreate03Ext01Sl        | Schema location for extension 01   | String |
| EppDomCreate03Ext01ExtName   | Extension name if not normal create  | String |
| EppDomCreate03Ext01ExtValue  | Extension01 value for direct text node   | String |
| EppDomCreate03Ext01Field01   | Extra field 01 name for extension 01   | String |
| EppDomCreate03Ext01Value01   | Extra field 01 value for extension 01  | String |
| ...                          | Repeat for max y fields  |        |
| ...                          | Repeat for max x extensions  |        |
| EppDomCreate03KeyType        | D for dsData specification<br>K for keyData specification<br>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 |
| EppDomCreate03DsDigest01     | Value for dsData 01 digest   | String |
| EppDomCreate03KdFlags01      | Value for keyDate 01 flags   | Number |

| Id                           | Description                     | Type   |
|------------------------------|---------------------------------|--------|
| EppDomCreate03KdProtocol01   | Value for keyData 01 protocol   | Number |
| EppDomCreate03KdAlg01        | Value for keyData 01 alg        | Number |
| EppDomCreate03KdPubKey01     | Value for keyData 01 pubKey     | String |
| EppDomCreate03DsKeyTag02     | Value for dsData 02 keytag      | String |
| EppDomCreate03DsAlg02        | Value for dsData 02 alg         | Number |
| EppDomCreate03DsDigestType02 | Value for dsData 02 digest type | Number |
| EppDomCreate03DsDigest02     | Value for dsData 02 digest      | String |
| EppDomCreate03KdFlags02      | Value for keyData 02 flags      | Number |
| EppDomCreate03KdProtocol02   | Value for keyData 02 protocol   | Number |
| EppDomCreate03KdAlg02        | Value for keyData 02 alg        | Number |
| EppDomCreate03KdPubKey02     | Value for keyData 02 pubKey     | String |

## 5.4 Outcome(s)

Initial DNS lookup MUST return NXDOMAIN for *EppDomCreate03Name*.

Create domain step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

*EppDomCreate03Name* MUST be visible in the zone with correct DNS records after no more than 24 hours.

## 5.5 Environmental needs

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

## 5.6 Special procedural requirements

Abort the test if any EPP 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

1. Do a DNS lookup for *EppDomCreate03Name* domain name. The result **MUST** be NXDOMAIN.
2. Do the same login as the login step in 2.8. The reply from login **MUST** be 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 2 secDNS ds records with dsData or keyData or dsdata with keyData depending on *EppDomCreate03KeyType*.
  - d. Use appropriate values from *EppDomCreate03DsKeyTag01*, *EppDomCreate03DsAlg01*, *EppDomCreate03DsDigestType01*, *EppDomCreate03DsDigest01*, *EppDomCreate03KdFlags01*, *EppDomCreate03KdProtocol01*, *EppDomCreate03KdAlg01*, *EppDomCreate03kdPubKey01*, *EppDomCreate03DsKeyTag02*, *EppDomCreate03DsAlg02*, *EppDomCreate03DsDigestType02*, *EppDomCreate03DsDigest02*, *EppDomCreate03KdFlags02*, *EppDomCreate03KdProtocol02*, *EppDomCreate03KdAlg02*, *EppDomCreate03kdPubKey02*.
  - e. 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*.
  - f. The reply from create domain command **MUST** be result code 1000 or 1001.
- 4. Create logout command. The reply from logout command **MUST** be result code 1500.
  - 5. Test that the *EppDomCreate03Name* domain is visible, with the correct DNSSEC records, in the zone within 24 hours.

## 6. EPP Domain Renew 01

---

### 6.1 Test case identifier

EPPDomRenew01

### 6.2 Objective

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

### 6.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| 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 |
| EppDomRenew01Ext01Sl       | Schema location for extension 01       | String |
| EppDomRenew01Ext01ExtName  | Extension name if not normal renew     | String |
| EppDomRenew01Ext01ExtValue | Extension01 value for direct text node | String |
| EppDomRenew01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppDomRenew01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                        | Repeat for max y fields                |        |
| ...                        | Repeat for max x extensions            |        |

### 6.4 Outcome(s)

Login step MUST complete with result code 1000.

Renew domain step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

### 6.5 Environmental needs

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

### 6.6 Special procedural requirements

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. Do the same login as the login step in 2.8. The reply from login **MUST** be result code 1000.
2. Create a domain renewal command with *EppDomRenew01Name*.
  - a. Use Period name from *EppDomRenew01Period* and period value from *EppDomRenew01PeriodValue*.
  - b. If domain renewal requires extra extension and values, create an extension part from *EppDomRenew01Ext01Uri* and fill in field name from *EppDomRenew01Ext01Field01* and values from *EppDomRenew01Ext01Value01*.
  - c. The reply from renew domain command **MUST** be result code 1000 or 1001.
3. Create logout command.

The reply from logout command **MUST** be result code 1500.

## 7. EPP Domain Transfer 01

---

### 7.1 Test case identifier

EPPDomTransfer01

### 7.2 Objective

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

### 7.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                            | Description  | Type    |
|-------------------------------|--|---------|
| EppDomTransfer01Name          | Domain name to transfer  | String  |
| EppDomTransfer01AddPeriod     | Yes if the applicant support 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      | Object URI for extension 01  | String  |
| EppDomTransfer01Ext01Sl       | Schema location for extension 01   | String  |
| EppDomTransfer01Ext01ExtName  | Extension name if not normal tranfer   | String  |
| EppDomTransfer01Ext01ExtValue | Extension01 value for direct text node   | String  |
| EppDomTransfer01Ext01Field01  | Extra field 01 name for extension 01   | String  |
| EppDomTransfer01Ext01Value01  | Extra field 01 value for extension 01  | String  |
| ...                           | Repeat for max y fields  |         |
| ...                           | Repeat for max x extensions  |         |

### 7.4 Outcome(s)

Login step MUST complete with result code 1000.

Transfer domain step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

### 7.5 Environmental needs

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

## 7.6 Special procedural requirements

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

## 7.7 Intercase dependencies

This test has no intercase dependencies.

## 7.8 Ordered description of steps to be taken to execute the test case

1. Do the same login as the login step in 2.8. The reply from login **MUST** be 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.
  - 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*.
  - f. The reply from transfer domain command **MUST** complete with result code 1000 or 1001.
3. Create logout command.

The reply from logout command **MUST** be result code 1500.

## 8. EPP Domain Transfer 02

### 8.1 Test case identifier

EPPDomTransfer02

### 8.2 Objective

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

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

### 8.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                            | Description  | Type    |
|-------------------------------|--|---------|
| EppDomTransfer02Approve       | Yes if the applicant supports the approve operation  | Boolean |
| EppDomTransfer02Name          | Domain name to transfer  | String  |
| EppDomTransfer02AddPeriod     | Yes if the applicant support 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      | Object URI for extension 01  | String  |
| EppDomTransfer02Ext01Sl       | Schema location for extensions 01  | String  |
| EppDomTransfer02Ext01ExtName  | Extension name if not normal transfer  | String  |
| EppDomTransfer02Ext01ExtValue | Extension01 value for direct text node   | String  |
| EppDomTransfer02Ext01Field01  | Extra field 01 name for extension 01   | String  |
| EppDomTransfer02Ext01Value01  | Extra field 01 value for extension 01  | String  |
| ...                           | Repeat for max y fields  |         |
| ...                           | Repeat for max x extensions  |         |

### 8.4 Outcome(s)

Login step MUST complete with result code 1000.

Transfer domain step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

## 8.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppDomTransfer02Name* domain must exist in the applicant domain database, and be available for transfer approve.

## 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. Do the same login as the login step in 2.8. The reply from login **MUST** be 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.
  - 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*.
  - f. The transfer domain command **MUST** complete with result code 1000 or 1001.
3. Create logout command.  
The reply from logout command **MUST** be result code 1500.

## 9. EPP Domain Delete 01

---

### 9.1 Test case identifier

EPPDomDelete01

### 9.2 Objective

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

### 9.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                          | Description                            | Type   |
|-----------------------------|--|--------|
| EppDomDelete01Name          | Domain name to delete                  | String |
| EppDomDelete01Ext01Uri      | Object URI for extension 01            | String |
| EppDomDelete01Ext01Sl       | Schema location for extension 01       | String |
| EppDomDelete01Ext01ExtName  | Extension name if not normal delete    | String |
| EppDomDelete01Ext01ExtValue | Extension01 value for direct text node | String |
| EppDomDelete01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppDomDelete01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                         | Repeat for max y fields                |        |
| ...                         | Repeat for max x extensions            |        |

### 9.4 Outcome(s)

Login step MUST complete with result code 1000.

Delete domain step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

### 9.5 Environmental needs

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

### 9.6 Special procedural requirements

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

### 9.7 Intercase dependencies

This test has no intercase dependencies.

## 9.8 Ordered description of steps to be taken to execute the test case

1. Do the same login as the login step in 2.8. The reply from login **MUST** be 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*.
  - b. The delete domain command **MUST** complete with result code 1000 or 1001.
3. Create logout command  
The reply from logout command **MUST** be result code 1500.

## 10. EPP Contact Create 01

---

### 10.1 Test case identifier

EppConCreate01

### 10.2 Objective

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

### 10.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| 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      | Object URI for extension 01                            | String  |
| EppConCreate01Ext01Sl       | Schema location for extension 01                       | String  |
| EppConCreate01Ext01ExtName  | Extension name if not normal create                    | String  |
| EppConCreate01Ext01ExtValue | Extension01 value for direct text node                 | String  |
| EppConCreate01Ext01Field01  | Extra field 01 name for extension 01                   | String  |

| Id                         | Description                           | Type   |
|----------------------------|---------------------------------------|--------|
| EppConCreate01Ext01Value01 | Extra field 01 value for extension 01 | String |
| ...                        | Repeat for max y fields               |        |
| ...                        | Repeat for max x extensions           |        |

#### 10.4 Outcome(s)

Login step **MUST** complete with result code 1000.

Create contact step **MUST** complete with result code 1000 or 1001.

Logout step **MUST** complete with result code 1500.

#### 10.5 Environmental needs

- EPP test script
- IPv4 connectivity
- *EppConCreate01Id* domain must not exist in the applicant domain database.

#### 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. Do the same login as the login step in 2.8. The reply from login **MUST** be 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*, *EppConCreate01PIntCc*.
  - b. If *EppConCreate01PLocMand* is Yes, Create a Postal Info type Loc with appropriate fields from *EppConCreate01PLocName*, *EppConCreate01PLocOrg*, *EppConCreate01PLocStreet1*, *EppConCreate01PLocStreet2*, *EppConCreate01PLocStreet3*, *EppConCreate01PLocCity*, *EppConCreate01PLocSp*, *EppConCreate01PLocPc*, *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*.
  - e. The create contact command **MUST** complete with result code 1000 or 1001.
3. Create logout command.  
The reply from logout command **MUST** be result code 1500.

## 11. EPP Contact Delete 01

---

### 11.1 Test case identifier

EPPConDelete01

### 11.2 Objective

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

### 11.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                          | Description                            | Type   |
|-----------------------------|--|--------|
| EppConDelete01Id            | ContactID to delete                    | String |
| EppConDelete01Ext01Uri      | Object URI for extension 01            | String |
| EppConDelete01Ext01SI       | Schema location for extension 01       | String |
| EppConDelete01Ext01ExtName  | Extension name if not normal delete    | String |
| EppConDelete01Ext01ExtValue | Extension01 value for direct text node | String |
| EppConDelete01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppConDelete01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                         | Repeat for max y fields                |        |
| ...                         | Repeat for max x extensions            |        |

### 11.4 Outcome(s)

Login step MUST complete with result code 1000.

Delete contact step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

### 11.5 Environmental needs

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

### 11.6 Special procedural requirements

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

### 11.7 Intercase dependencies

This test has no intercase dependencies.

## 11.8 Ordered description of steps to be taken to execute the test case

1. Do the same login as the login step in 2.8. The reply from login **MUST** be 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*.
  - b. The delete contact command **MUST** complete with result code 1000 or 1001.
3. Create logout command.

The reply from logout command **MUST** be result code 1500.

## 12. EPP Host Delete 01

---

### 12.1 Test case identifier

EPPHostDelete01

### 12.2 Objective

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

### 12.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                           | Description                            | Type   |
|------------------------------|--|--------|
| EppHostDelete01Name          | Host name to delete                    | String |
| EppHostDelete01Ext01Uri      | Object URI for extension 01            | String |
| EppHostDelete01Ext01Sl       | Schema location for extension 01       | String |
| EppHostDelete01Ext01ExtName  | Extension name if not normal delete    | String |
| EppHostDelete01Ext01ExtValue | Extension01 value for direct text node | String |
| EppHostDelete01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppHostDelete01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                          | Repeat for max y fields                |        |
| ...                          | Repeat for max x extensions            |        |

### 12.4 Outcome(s)

Login step MUST complete with result code 1000.

Delete host step MUST complete with result code 1000 or 1001.

Logout step MUST complete with result code 1500.

### 12.5 Environmental needs

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

### 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.



## 13. EPP Host Update 01

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### 13.1 Test case identifier

EPPHostUpdate01

### 13.2 Objective

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

### 13.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                           | Description                            | Type   |
|------------------------------|--|--------|
| EppHostUpdate01Name          | Host name to update                    | String |
| EppHostUpdate01Ipv4          | IPv4 address to add                    | String |
| EppHostUpdate01Ext01Uri      | Object URI for extension 01            | String |
| EppHostUpdate01Ext01Sl       | Schema location for extension 01       | String |
| EppHostUpdate01Ext01ExtName  | Extension name if not normal update    | String |
| EppHostUpdate01Ext01ExtValue | Extension01 value for direct text node | String |
| EppHostUpdate01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppHostUpdate01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                          | Repeat for max y fields                |        |
| ...                          | Repeat for max x extensions            |        |

### 13.4 Outcome(s)

Login step MUST complete with result code 1000.

Update host step MUST complete with result code 1000.

Logout step MUST complete with result code 1500.

### 13.5 Environmental needs

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

### 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. Do the same login as the login step in 2.8. The reply from login **MUST** be 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*.
  - b. The update host command **MUST** complete with result code 1000.
3. Create logout command.  
The reply from logout command **MUST** be result code 1500.

## 14. EPP Contact Update 01

---

### 14.1 Test case identifier

EPPContactUpdate01

### 14.2 Objective

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

### 14.3 Inputs

The following information will be needed as input for this test case:

The login information from 2.3 is also required.

| Id                              | Description                            | Type   |
|---------------------------------|--|--------|
| EppContactUpdate01Id            | Contact ID to update                   | String |
| EppContactUpdate01Email         | Email address to set                   | String |
| EppContactUpdate01Ext01Uri      | Object URI for extension 01            | String |
| EppContactUpdate01Ext01Sl       | Schema location for extension 01       | String |
| EppContactUpdate01Ext01ExtName  | Extension name if not normal update    | String |
| EppContactUpdate01Ext01ExtValue | Extension01 value for direct text node | String |
| EppContactUpdate01Ext01Field01  | Extra field 01 name for extension 01   | String |
| EppContactUpdate01Ext01Value01  | Extra field 01 value for extension 01  | String |
| ...                             | Repeat for max y fields                |        |
| ...                             | Repeat for max x extensions            |        |

### 14.4 Outcome(s)

Login step MUST complete with result code 1000.

Update host step MUST complete with result code 1000.

Logout step MUST complete with result code 1500.

### 14.5 Environmental needs

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

### 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

4. Do the same login as the login step in 2.8. The reply from login **MUST** be result code 1000.
5. Create a host 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*.
  - b. The update host command **MUST** complete with result code 1000.
6. Create logout command.  
The reply from logout command **MUST** be result code 1500.

## 15. EPP Domain Update 01

### 15.1 Test case identifier

EPPDomUpdate01

### 15.2 Objective

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

### 15.3 Inputs

The following information will be needed as input for this test case:

As the test will verify DNS changes within 60 minutes, one of the name server FQDN and glue records are needed. This is the same information as provided by the applicant in 2.3 of the DNS Delegation Test Cases.

The Whois visibility within 60 minutes will also be tested. The IP address of a Whois server that responds on port 43 is needed. This is the same information as provided by the applicant in 2.3 of the Whois Test Cases.

The login information from 2.3 is also required.

| Id                           | Description  | Type   |
|------------------------------|--|--------|
| DnsNameServer1               | FQDN of 1 <sup>st</sup> authoritative name server  | String |
| DnsGlueRecord1               | FQDN of 1 <sup>st</sup> authoritative name server  | String |
| EppDomUpdate01Name           | Domain name to create  | String |
| EppDomUpdate01Ext01Uri       | Object URI for extension 01  | String |
| EppDomUpdate01Ext01Sl        | Schema location for extension 01   | String |
| EppDomUpdate01Ext01ExtName   | Extension name if not normal create  | String |
| EppDomUpdate01Ext01ExtValue  | Extension01 value for direct text node   | String |
| EppDomUpdate01Ext01Field01   | Extra field 01 name for extension 01   | String |
| EppDomUpdate01Ext01Value01   | Extra field 01 value for extension 01  | String |
| ...                          | Repeat for max y fields  |        |
| ...                          | Repeat for max x extensions  |        |
| EppDomUpdate01KeyType        | D for dsData specification<br>K for keyData specification<br>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 |
| 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 |

| Id                           | Description                     | Type   |
|------------------------------|---------------------------------|--------|
| EppDomUpdate01DsKeyTag02     | Value for dsData 02 keytag      | String |
| EppDomUpdate01DsAlg02        | Value for dsData 02 alg         | Number |
| EppDomUpdate01DsDigestType02 | Value for dsData 02 digest type | Number |
| EppDomUpdate01DsDigest02     | Value for dsData 02 digest      | String |
| EppDomUpdate01KdFlags02      | Value for keyData 02 flags      | Number |
| EppDomUpdate01KdProtocol02   | Value for keyData 02 protocol   | Number |
| EppDomUpdate01KdAlg02        | Value for keyData 02 alg        | Number |
| EppDomUpdate01KdPubKey02     | Value for keyData 02 pubKey     | String |

#### 15.4 Outcome(s)

Initial DNS lookup **MUST NOT** return NXDOMAIN for *EppDomUpdate01Name*.

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

Create domain step **MUST** complete with result code 1000 or 1001.

Logout step **MUST** complete with result code 1500.

*EppDomCreate01Name* **MUST** be visible in the zone with correct DNS records after no more than 60 minutes.

*EppDomUpdate01Name* **MUST** be visible as a DNSSEC signed domain in Whois after no more than 60 minutes.

#### 15.5 Environmental needs

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

#### 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

6. Perform a DNS lookup for *EppDomUpdate01Name* domain name. The result **MUST NOT** be NXDOMAIN.
7. Do the same login as the login step in 2.8. The reply from login **MUST** be result code 1000.
8. Create a domain update command with *EppDomUpdate01Name*.
  - a. Add 2 secDNS DS records with dsData or keyData or both, depending on the value of *EppDomupdate01KeyType*.

- b. Use appropriate values from *EppDomUpdate01DsKeyTag01*, *EppDomUpdate01DsAlg01*, *EppDomUpdate01DsDigestType01*, *EppDomUpdate01DsDigest01*, *EppDomUpdate01KdFlags01*, *EppDomUpdate01KdProtocol01*, *EppDomUpdate01KdAlg01*, *EppDomUpdate01kdPubKey01*, *EppDomUpdate01DsKeyTag02*, *EppDomUpdate01DsAlg02*, *EppDomUpdate01DsDigestType02*, *EppDomUpdate01DsDigest02*, *EppDomUpdate01KdFlags02*, *EppDomUpdate01KdProtocol02*, *EppDomUpdate01KdAlg02*, *EppDomUpdate01kdPubKey02*.
  - c. If domain create requires extra extension and values, create an extension part from *EppDomUpdate01Ext01Uri* and fill in field name from *EppDomUpdate01Ext01Field01* and values from *EppDomUpdate01Ext01Value01*.
  - d. The reply from create domain command **MUST** be result code 1000 or 1001.
9. Create logout command. The reply from logout command **MUST** be result code 1500.
10. Test that the *EppDomUpdate01Name* domain is updated, with the correct DNSSEC records in the zone within 60 minutes.
11. Test that the *EPPDomUpdate01Name* is visible in Whois as a DNSSEC signed domain within 60 minutes.

## 16. Global

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### 16.1 Glossary

The glossary is available in the Master Test Plan.

### 16.2 Document change procedures

Document change procedures are documented in the Master Test Plan.