.aero EPP Registrar Acceptance Criteria

For EPP RFC Accredited Registrars

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version 1.4

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Contents

1. Introduction

1.1. Purpose

This document describes the basic operations that a Registrar's client application must perform to be accepted by the Registry. Each of the following sections describes the actions that the client must perform to demonstrate correct implementation of the Extensible Provisioning Protocol (EPP) v1.0 and interactions with the Registry. Registrars should have a detailed knowledge of the following internet RFCs before attempting the test:

Extensible Provisioning Protocol (EPP) RFC: 3730
Extensible Provisioning Protocol Domain Name Mapping RFC: 3731
Extensible Provisioning Protocol Host Mapping RFC: 3732
Extensible Provisioning Protocol Contact Mapping RFC: 3733
Extensible Provisioning Protocol Transport Over TCP RFC: 3734

The abridged version of test presented herein verifies the correct interface with the Registry for standard Registrar operations. They do not cover all possible error and unusual conditions. The Registrar client application is responsible for correctly handling all unusual error conditions. EPP v1.0 compliant Registrars will not be required to take the EPP v1.0 OT&E test. They are to successfully complete this test only.

1.2. Formatting Conventions

Proper completion of the test requires that all commands and data must be entered exactly as given in this document. Any deviations will be considered a failure. The following items show the formatting conventions included in this document for required input and output values and for variable input and output responses.

Regular text in this format represents expected system input and output values that the client system will send to the server and that the server system will display in response to an action or actions provided by the Registrar. The following example illustrates an expected system output.

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

When **bold** text is located in Regular text, this represents a required input value that the Registrar must provide - the Registrar must enter the text exactly as shown. The following example illustrates the format for the required input values.

Domain Name: **epptest1.aero**

Italicized text in output represents data returned from the server, which may or may not be the exact values represented in this document. It is the responsibility of the client to interpret these values properly and possibly reuse these for subsequent commands.

<domain:exDate>*2007-07-11T22:07:28.0Z*</domain:exDate>

1.3. Accounts

For the duration of the test, the Registrar will use a seeded test account, called **Client A**. The Registrar will provide the Registry Technical Support Group with a valid email address. Standard registry transfer notifications, processed by the registry during the initial test seeding (see Appendix A for details), will be sent to this e-mail address for Registrar reference. Upon the scheduling of a test, the Registry Technical Support Group will provide hostnames and port numbers for the Registrar's client connection.

1.4. Additional Requirements

Registry Operator will prime the Test Registry with data required to complete this test. Please refer to Appendix A if you wish to review this data. Do not attempt to enter this data into the Test Registry.

1.5. Successful Command & Test Completion

While performing this test, if the response to a command is not exactly as shown, then stop your test and contact .aero Technical Support.

1.6. Passing the Test

The Registrar must complete the test perfectly (with no typos or breaking the sequence of operations) from start to finish within the allotted time.

1.7. Contact and Name Server Policy Requirements

There are certain policies that are enforced in the .aero implementation of EPP:

A minimum of 4 contacts (including 1 Registrant and at least 1 of each Admin, Billing and Technical contacts) must be provided during the create domain transaction.

For the purpose of this test, all domains must be created with at least 2 name servers. Registrars may, however, when working with the "live" registry, create domains with fewer than 2 name servers, though DNS resolution depends upon a minimum of 2 assigned name servers.

2. EPP Communications

Registrar to Registry communications utilize the Extensible Provisioning Protocol (EPP) mapped over TCP (Transport Control Protocol). EPP commands are formulated using the Extensible Markup Language (XML). The Registrars' application client must utilize XML to send commands to the Registry and utilize an XML parser to interpret the server's responses. EPP itself relies exclusively upon user authentication for security. Additional security is provided by the use of Transport Layer Security (TLS), for session cryptography. Clients must communicate with the EPP server using a commercial or open source implementation of TLS, such as OpenSSL. Additional information concerning mapping EPP over TCP is available in 'Extensible Provisioning Protocol Transport Over TCP RFC 3734. Additional information concerning the TLS may be found in RFC 2246.

2.1. Session Management

2.1.1. Start Session

After making an initial connection to the Registry, the server shall reply with a greeting. A Registrar must receive the greeting message before attempting authentication and/or other supplementary commands.

2.1.2. Authentication

After the initial greeting the registrar client shall send the Login command to authenticate itself to the test registry with the following information:

Client ID: **ClientA**
Password: **aerotest123**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.1.3. Change Password

To change a Registrar's password, an additional field is required in the Login command. At this point, the client must logout (keep the connection open), then log back in, and pass the following information to the Login command.

Client ID: **ClientA**
Password: **aerotest123**
New Password: **newpasswd123**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2. Domain Name Operations

The following tests exercises EPP commands that revolve around Domain Name creation and manipulation.

2.2.1. Create Domain with Minimum Length Domain Name (3 Chars + .aero)

Using the Create command, pass the following data.

Domain Name: **xtf.aero**
Domain Server: **ns1.eppvalid.aero**
Domain Server: **ns2.eppvalid.aero**
Domain registrant contact ID: **EPPOTE-C2**
Domain Admin contact ID: **EPPOTE-C3**
Domain Billing contact ID: **EPPOTE-C4**

Domain Technical contact ID: **EPPOTE-C5**
ENS Auth ID: **auth225**
ENS Auth Key: **authkey225**
Auth info: **my secret**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2.2. Create Domain with Maximum Length Domain Name (63 Chars + .aero)

Using the Create command, enter the following data.

Domain Name:
eppabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefgh.aero
Domain Server: **ns1.eppvalid.aero**
Domain Server: **ns2.eppvalid.aero**
Domain registrant contact ID: **EPPOTE-C2**
Domain Admin contact ID: **EPPOTE-C3**
Domain Billing contact ID: **EPPOTE-C4**
Domain Technical contact ID: **EPPOTE-C5**
ENS Auth ID: **auth226**
ENS Auth Key: **authkey226**
Auth info: **my secret**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2.3. Create Two Character Reserved Domain with Domain AuthID

Using the Create command, enter the following data.

Domain Name: **ab.aero**
Domain Server: **ns1.eppvalid.aero**
Domain Server: **ns2.eppvalid.aero**
Domain registrant contact ID: **EPPOTE-C2**
Domain Admin contact ID: **EPPOTE-C3**
Domain Billing contact ID: **EPPOTE-C4**
Domain Technical contact ID: **EPPOTE-C5**
ENS Auth ID: **auth227**
ENS Auth Key: **authkey227**
Auth info: **my secret**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2.4. Create Three character Reserved Domain with Domain AuthID

Using the Create command, enter the following data.

Domain Name: **abc.aero**
Domain Server: **ns1.eppvalid.aero**
Domain Server: **ns2.eppvalid.aero**
Domain registrant contact ID: **EPPOTE-C2**
Domain Admin contact ID: **EPPOTE-C3**
Domain Billing contact ID: **EPPOTE-C4**
Domain Technical contact ID: **EPPOTE-C5**
ENS Auth ID: **auth228**
ENS Auth Key: **authkey228**
Auth info: **my secret**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2.5. Create Third Level (Airport.aero and Airline.aero)

Using the Create command, enter the following data.

Domain Name: **eppaerotest.airline.aero**
Domain Server: **ns1.eppvalid.aero**
Domain Server: **ns2.eppvalid.aero**
Domain registrant contact ID: **EPPOTE-C2**
Domain Admin contact ID: **EPPOTE-C3**
Domain Billing contact ID: **EPPOTE-C4**
Domain Technical contact ID: **EPPOTE-C5**
ENS Auth ID: **auth229**
ENS Auth Key: **authkey229**
Auth Info: **my secret**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

2.2.6. Check Third Level domain, Domain Auth ID (Domain not Available)

Use the Check command with the following data to determine that the domain is not available. Provide the following information to the Check command.

Domain Name: **notavailable.airline.aero**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>
domain:name avail='0'

2.2.7. Check minimum length domain name (3 character; Domain not available)

Use the Check command with the following data to determine that the domain is not available. Provide the following information to the Check command.

Domain Name: **uad.aero**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>
domain:name avail='0'

2.2.8. Check minimum length reserved domain name (2 character, Domain available)

Use the Check command with the following data to determine that the domain is available. Provide the following information to the Check command.

Domain Name: **av.aero**

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>
domain:name avail='1'

2.2.9. Query Domain (Sponsoring Registrar)

The info command is used to retrieve information associated with a Domain. Enter the following information to the info command.

Domain Name: eppinfodomain.aero

Verify that the following response is received:

Domain Name: eppinfodomain.aero
Client ID: **D102-LRMS**
Domain Status: ok
Domain Contact (Registrant) ID: EPPOTE-C2
Domain Admin Contact: EPPOTE-C3
Domain Billing Contact: EPPOTE-C4
Domain Technical Contact: EPPOTE-C5
Domain Name Server: ns1.eppinfodomain.aero
Domain Name Server: ns2.eppinfodomain.aero
Domain Host Server: ns1.eppinfodomain.aero
Domain Host Server: ns2.eppinfodomain.aero
ENS Auth ID: **queryens2210**
Auth info: my secret
Created By: ClientA
Created Date: *1999-04-03T22:00:00.0Z*
Expiration Date: *2005-04-03T22:00:00.0Z*

Last Updated By: ClientA

2.2.10. Query Domain (Non – Sponsoring Registrar – Thick Reply)

Enter the following information to the info command.

Domain Name: eppinfodomainb.aero
Domain Auth Info: my secret

Verify that the following response is received:

Domain Name: eppinfodomainb.aero
Client ID: ClientB
Domain Status: ok
Domain Contact (Registrant) ID: EPPOTE-C2
Domain Admin Contact: EPPOTE-C3
Domain Billing Contact: EPPOTE-C4
Domain Technical Contact: EPPOTE-C5
Domain Name Server: ns1.eppinfodomain.aero
Domain Name Server: ns2.eppinfodomain.aero
Domain Host Server: ns1.eppinfodomain.aero
Domain Host Server: ns2.eppinfodomain.aero
ENS Auth ID: **infodomain2211**
Auth info: my secret
Created By: ClientB
Created Date: *1999-04-03T22:00:00.0Z*
Expiration Date: *2005-04-03T22:00:00.0Z*
Last Updated By: ClientB

2.2.11. Query Domain (Thin Reply)

Enter the following information to the info command.

Domain Name: eppinfodomainb.aero

Verify that the following response is received:

Domain Name: eppinfodomainb.aero
Domain Registry ID: **D112-LRMS**
Client ID: ClientB
Domain Status: ok

2.2.12. Renew Domain to Maximum Registration Period

First, get the Expiration Date of the Domain by issuing the DomainInfo command with the following data:

Domain Name: epprenewablea.aero

Examine the Expiration Date returned from the previous DomainInfo command (output should be similar to the following):

Domain Expiration Date: 2012-04-03T22:00:00.0Z

Issue the Renew command with the following data:

Domain Name: epprenewablea.aero
Current Expiration Date: *2012-04-03* (returned in the previous DomainInfo command)
Domain Period (Years): **4**

Verify the change by issuing the DomainInfo command and compare the output here so that the expected Expiration Date is correct.

Domain name: epprenewablea.aero
Expiration Date: *2016-04-03T22:00:00.0Z*

2.3. Contact Operations

The following tests exercises EPP commands that revolve around .aero Contact creation and manipulation.

2.3.1. Query ENS Contact

Supply the following information to the info command.

ContactID: enscontact231
ENS Auth Key: authkey231

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully</msg>

ContactID: **enscontact231**
Contact Name: John Doe
Contact Organization: Example Corp, Inc
Contact Address Street1: 123 Example St.
Contact Address Street2: Suite 100
Contact Address City: Anytown
Contact Address State/Province: Any Prov
Contact Address Postal Code: A1A1A1
Contact Address Country: CA
Contact Voice: +1.4165555555
Contact Voice Extension: 1111
Contact Fax: +1.4165555556
Contact Email: jdoe@eppvalid.aero
Auth info: my secret
Status: ok

2.4. Operations involving PendingCreate functionality

2.4.1. Create Domain using PendingCreate Functionality

Enter the following to the Create command

Domain Name: pendingcreate.aero
Domain registrant contact ID: EPPOTE-C2
Domain Admin contact ID: EPPOTE-C3
Domain Billing contact ID: EPPOTE-C4
Domain Technical contact ID: EPPOTE-C5
Auth Info: my secret
Nameserver1: ns1.eppvalid.aero
Nameserver2: ns2.eppvalid.aero
ENS Class: airport
Registrant Group: Airport
ENSO: sita
ENS Request Type: Test Data
Registration Type: Test Data
Credentials Type: Test Data
Credentials Value: Test Data
Code Value: Test Data
Unique Identifier: Test Data

Verify that the following response is received:

<result code='1001'><msg lang='en-US'>Command completed successfully; action pending</msg>

2.4.2. Query Domain

Enter the following information to the info command.

Domain Name: pendingcreate.aero
Domain Auth Info: my secret

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully; action pending</msg>

Domain Name: pendingcreate.aero
Client ID: ClientA
Domain Status: pendingCreate
Domain Contact (Registrant) ID: EPPOTE-C2
Domain Admin Contact: EPPOTE-C3
Domain Billing Contact: EPPOTE-C4
Domain Technical Contact: EPPOTE-C5
Auth info: my secret
Created By: ClientA

Created Date: 2006-*09-03T22:00:00.0Z*
Expiration Date: *2007-09-03T22:00:00.0Z*
Nameserver1: ns1.otetest.aero
Nameserver2: ns2.otetest.aero
ENS Class: airport
Registrant Group: Airport
ENSO: sita
ENS Request Type: Test Data
Registration Type: Test Data
Credentials Type: Test Data
Credentials Value: Test Data
Code Value: Test Data
Unique Identifier: Test Data

Once you have completed this test, contact .aero Technical Support and inform them of the pending create. Technical Support will approve the domain creation.

2.4.3. Change ENS AuthID

Enter the following information to the Domain Update command

Domain Name: pendingcreate2.aero
Registrant ENS AuthID: AuthTrans
Registrant ENS AuthKey: a2sd3f3

Verify that the following response is received:

<result code='1000'><msg lang='en-US'>Command completed successfully; action pending</msg>

2.5. Client Error Handing

The following section exercises the client's ability to correctly handle EPP exceptions. The client should remain connected to the Test Registry despite the receipt of exceptions. A definition of each exception code is provided.

2.5.1. Correctly Handle 2201 Exception (Query ENS contact without ENS Auth Key)

2201 "Authorization error" This response code MUST be returned when a server notes a client authorization error when executing a command. This error is used to note that a client lacks privileges to execute the requested command.

Submit the following to the info command:

ENS Contact ID: **enscontact241**

Verify that the following response is received:

<result code='2201'><msg lang='en-US'>Authorization error</msg>

2.5.2. Correctly handle 2201 Exception (Update ENS contact)

Submit the following to the update command:

ENS Contact ID: **enscontact242**
Contact Name: **Jack Joe**

Verify that the following response is received.

<result code='2201'><msg lang='en-US'>Authorization error</msg>

2.6. End Session

For a client Registrar to end communications with the Registry, the Logout command is used with no arguments.

If successful, the Registry will send the following response and then end the session.

<result code='1500'><msg lang='en-US'>Command completed successfully; ending session</msg>

At this point, contact .aero Technical Support at techsupport@registry.aero or +1.416.619.3031 and inform them you have completed this test.

Appendix A - Seeded Registry information

The OT&E test requires the creation and manipulation of several EPP objects prior to the client's initial connection. .aero Technical Support will perform the necessary operations before the client's initial connection. The data within this appendix is to be used for informational purposes only.

The following information has been seeded in the database:

Contacts:
EPPOTE-C2
EPPOTE-C3
EPPOTE-C4
EPPOTE-C5

ENS Contacts:
t64rhjK9
ensauth623
abcAuth654
queryens2210
infodomain2211
enscontact231
AuthTrans

Hosts:
ns1.eppvalid.aero
ns2.eppvalid.aero
ns1.eppinfodomain.aero
ns2.eppinfodomain.aero
ns1.eppinfodomain2.aero
ns2.eppinfodomain2.aero
ns1.otetest.aero
ns2.otetest.aero

Domains:
eppvalid.aero
eppinfodomain.aero
eppinfodomain2.aero
uad.aero
notavailable.airline.aero
pendingcreate2.aero

Registrars:
ClientA
ClientB