



Technical Integration guide 2019

V6.1

afnic

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Preface

About this document

This integration guide compiles all the information needed to integrate the application interface for managing AFNIC domain names.

This interface provides two access methods:

- **The Web interface**
- **EPP** (Extensible Provisioning Protocol): a standard protocol for exchanges between registries and registrars.

All the operations available in the EPP are also available on the web interface, except changing the EPP password.

Regarding EPP, AFNIC complies with the standard described in the RFCs (see § RFCs). This document describes the points specific to the protocol integrated by AFNIC.

Target audience

This technical document is intended for developers wishing to:

- obtain a detailed description of the interface;
- find examples that facilitate their integration.

This document does not give details of the procedures. For further information on procedures, please refer to **Procedures Guide** and **The Naming Charter**.

Typographic conventions

Throughout the document, the following conventions are used:

Between < > the xml tags describing the EPP frames.

In a box in a blue frame, examples of EPP frames.

The prefixes of EPP frames are represented as follows:

- secDNS for urn:ietf:params:xml:ns:secDNS-1.1,
- domain for urn:ietf:params:xml:ns:domain-1.0,
- frnic for http://www_afnic_fr/xml/epp/frnic-1_4,
- contact for urn:ietf:params:xml:ns:contact-1.0,
- host for urn:ietf:params:xml:ns:host-1.0,
- rgp for urn:ietf:params:xml:ns:rgp-1.0.

Main integration principles of the EPP protocol

RFCs

As a reminder, here are the **RFCs** on which our EPP implementation is based, and which must be read:

- **RFC 3375** - Generic Registry-Registrar Protocol Requirements : <http://www.ietf.org/rfc/rfc3375.txt>
- **RFC 5730** - Extensible Provisioning Protocol (EPP) : <http://www.ietf.org/rfc/rftxt>
- **RFC 5731** - Domain Name Mapping : <http://www.ietf.org/rfc/rftxt>
- **RFC 5732** - Host Mapping : <https://tools.ietf.org/html/rfc5732>
- **RFC 5733** - Contact Mapping : <http://www.ietf.org/rfc/rftxt>
- **RFC 5734** - EPP over TCP : <http://www.ietf.org/rfc/rfc5734.txt>
- **RFC 3915** - Domain Registry Grace Period Mapping : <http://www.ietf.org/rfc/rfctxt>
- **RFC 5910** - Domain Name System (DNS) Security Extensions Mapping : <http://www.ietf.org/rfc/rfctxt>

Apart from the EPP standard as described in the RFCs, AFNIC has laid down a number of integration principles that you need to know before embarking on the development of an EPP client.

Case of operations with return code 1000 and server behaviour in case of problems

One precaution is necessary when developing clients connecting to our EPP server. At several times in the rest of the document we mention operations returning a return code **1000**. This is the expected behaviour under normal operating conditions of the registration chain.

In the case of a blocking problem, the server reacts more radically and no operation of the "transform" type on domain names can be taken into account. An error message "command failed" (code **2400/2500**) is then returned for a new command.

Integration options for the list of notification messages

In the case of any response from the server, we have chosen to specify the number of messages in the queue (unless there is no message, in which case, this information will not be provided).

RFC 5730 does not require this information in the case of responses to **<poll>** command, whereas it is optional for other types of commands. In practice this means that when a message is to be notified to a registrar, the latter is notified by the presence of the **<msgQ>** element in the responses to all the commands sent to the main EPP server (the EPP server for the .FR Rush service does not have this information).

It is strongly recommended to consult these messages as and when they arrive. Indeed, in the list of follow-up messages involving technical change operations, there may well be **TRANSFER** requests that may require a response.

DNSSEC support

The EPP server manages the **secDNS-1.1** extension as described in **RFC 5910**, excluding any other version.

The implementation specifics are as follows:

- The server only supports the "DS data interface" (**<secDNS:dsData>**), section 1 of **RFC 5910**, without any information on the associated key (no **<secDNS:keyData>**) element; the inclusion of information on the key will generate a **2102** error.
- A domain name can have multiple associated DS records: the number of **<secDNS:dsData>** elements present in the **<secDNS:add>** section in an **UPDATE** operation is therefore limited so that the final status of the domain name has no more than 6 DS records.
- The **maxSigLife** element is not supported; its inclusion in the client request will generate an error.
- The "urgent" attribute is not supported; its inclusion in the client request with value 1 will generate a **2102** error.
- During a **TRANSFER** operation, the AFNIC extension part **frnic** must include a **keepDS** flag which is a Boolean:
 - if it is 1, the current DS records of the domain name are retained after the transfer if they are already present;
 - if it is 0, if the transfer is successful, all the existing DS records will be deleted.
- The **RECOVER** operation functions identically to the **TRANSFER** operation described above.

frnic-1.4 extension

General description of the frnic extension:

XSD schema: <https://www.afnic.fr/medias/frnic-1.4.xsd.xml>

XML namespace: <http://www.afnic.fr/xml/epp/frnic-1.4>

Prefix used: **frnic**

Various operations require the use of the **frnic** extension. We will briefly describe its usefulness (descriptions of elements and examples of commands in more detail in the sections on the operations).

The **frnic** extension is required for the following:

- **contact:create**: creating a contact
- **domain:transfer**: transferring a domain name
- **frnic:recover**: compulsory transfer

Description of elements for creating a contact:

- Individual (PP) :

Element name	Number of occurrences
<frnic:list>	0-1
<frnic:individualInfos>	0-1
<frnic:birthDate>	1
<frnic:birthCity>	0-1
<frnic:birthPc>	0-1
<frnic:birthCc>	1
<frnic:firstName>	1

- Legal entity (PM) :

Element Name	Number of occurrences
<frnic:legalEntityInfos>	1
<frnic:legalStatus s="">	1
<frnic:siren>	0-1
<frnic:VAT>	0-1
<frnic:trademark>	0-1
<frnic:assos>	0-1
<frnic:waldec>	0-1
<frnic:decl>	1 si <frnic:waldec> est absent
<frnic:publannounce="" page="">	1 si <frnic:waldec> est absent
<frnic:DUNS>	0-1
<frnic:local>	0-1

Description of elements for a transfer :

Element name	Number of occurrences
<frnic:domain keepDS="0">	1
<frnic:contact type="admin">	1
<frnic:contact type="tech">	1-3

Description of elements for a recover:

Element name	Number of occurrences
<frnic:domain keepDS="0">	1
<frnic:name>	1
<frnic:authInfo>	1
<frnic:contact type="registrant">	1
<frnic:contact type="admin">	1
<frnic:contact type="tech">	1-3

The **frnic** extension can also be used optionally in the contact update to change the attributes related to the qualification process.

It is also used in response by the EPP server for the **domain:check** and certain EPP notifications.

Launch Phase extension

We have integrated the **Launch Phase** extension. It has been used for the opening of 1 and 2 characters in .fr and from the end of this phase it is no longer used.

Here is the integrated version on the EPP server: <https://tools.ietf.org/html/draft-ietf-eppext-launchphase-02>

IDN (IDNA2008)

Reference documents

The implementation of IDNs at Afnic is based on the IDN 2008 standard (**IDNA2008**), as per the following reference documents:

Definitions and protocol:

- [RFC 5890 \(08/2010 23 pages\)](#) : Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework
- [RFC 5891 \(08/2010 17 pages\)](#) : Internationalized Domain Names in Applications (IDNA): Protocol
- [RFC 5892 \(08/2010 70 pages\)](#) : The Unicode Code Points and Internationalized Domain Names for Applications (IDNA)
- [RFC 5894 \(08/2010 43 pages\)](#) : Internationalized Domain Names for Applications (IDNA): Background, Explanation, and Rationale

Punycode encoding algorithm:

- [RFC 3492 \(03/2003 35 pages\)](#) : Punycode: A Bootstring encoding of Unicode for Internationalized Domain Names in Applications (IDNA)

Brief background on IDN technology

The DNS protocol was not originally defined to be restricted to a set of characters. It is its use and other limitations of the "past" (the protocol is 30 years old) that have resulted in the definition of the syntactic rules we know today.

The purpose of the **IDNA2008** standard is to reconcile human needs and technical constraints by allowing the use of all forms of writing in domain names.

All these forms of writing and the characters they use are defined and grouped together under a standard called **Unicode**. Since the syntactic rules for domain names require the use of single letters of the Latin alphabet ("a" to "z"), as well as numbers, hyphens, and periods to separate labels, a mechanism for the canonical formation of Unicode domain names and for encoding them has been developed to create names consistent with these rules.

While in applications such as web browsers, Unicode names will be displayed, their DNS resolution will be performed using their encoded form (this is normally transparent to the user who should not have to handle this type of domain name).

Warning

Although the impact may seem limited, it is important to note that Afnic implements the **IDNA2008** standard, which differs slightly from the **IDNA2003** standard.

With regard to the treatment of characters supported, the German eszett (ß) is encoded, not transformed into "ss" as in the previous version of the IDN standard.

In addition, the canonicalisation step (nameprep) has been deleted, which will have some impact on the use of our interfaces.

Each Afnic application is now free to apply its own rules on the matter. Besides the fact that Unicode domain names must be in Normal Form C, we have chosen to allow the input of uppercase characters. However, it is their lowercase character equivalents that will actually be taken into account by the system.

Note: the eszett is only accepted in its lowercase version.

Recommendation: it is preferable to enter lowercase characters to anticipate any changes in our IDN policy.

Example: the domain name "Thé-ou-Café.fr" is not legal according to the **IDNA2008** standard. However, we will accept it once it has been normalised as "thé-ou-café.fr".

Vocabulary

- **Unicode:** Standard enabling any character in any form of writing to be encoded in a unique fashion ([Unicode on wikipedia](#)).
- **UTF-8:** One of the encoding formats used to encode Unicode characters.
- **ISO-8859-15:** One of the ISO 8-bit encoding standards of the Latin alphabet. Also known as Latin9.
- **LatinX:** Other names of certain ISO standards. Unlike Latin1, Latin9 includes the ligation "e in o".
- **LDH:** "LETTER-DIGIT-HYPHEN" the only ASCII characters authorised for the composition of a label in a domain name.
- **ASCII:** "American Standard Code for Information Interchange", the oldest computer standard for encoding characters. Strictly speaking 7-bit, it can only encode 128 characters.
- **ACE:** "ASCII Compatible Encoding" is the encoded version of a domain name in its LDH form (xn-caf-dma in Punycode, i.e. its "A-label form").
- **IDN:** "Internationalized Domain Name" containing characters other than ASCII characters alone.
- **Canonicalisation:** The canonical formation of a string of characters. For example, in Latin, putting a string of characters in their lowercase form is one of the operations that can be involved in a canonicalisation process.
- **Normal Form C:** Normal form requiring that the characters be (pre)composed. A character corresponds to a unique code point. This excludes characters obtained by using diacritical marks combined with base characters.
- **Code point:** Single number associated with a character.
- **Glyph:** Graphical representation of a character.
- **NAMEPREP:** Defines the version in canonical form of a Unicode domain name (was part of **IDNA2003**, no longer exists in **IDNA2008**).
- **Punycode:** Reversible and unique algorithm, used to transform a canonicalised IDN into its ACE form.

Table of accepted characters

The following table represents the set of characters may be used to compose the label of a domain name.

Code point	Glyph	Name	ASCII equivalent
U+002D	-	HYPHEN-MINUS SIGN	
U+0030	0	DIGIT ZÉRO	
U+0031	1	DIGIT UN	
U+0032	2	DIGIT DEUX	
U+0033	3	DIGIT TROIS	
U+0034	4	DIGIT QUATRE	
U+0035	5	DIGIT CINQ	
U+0036	6	DIGIT SIX	
U+0037	7	DIGIT SEPT	
U+0038	8	DIGIT HUIT	
U+0039	9	DIGIT NEUF	
U+0061	a	LATIN LOWERCASE A	
U+0062	b	LATIN LOWERCASE B	
U+0063	c	LATIN LOWERCASE C	
U+0064	d	LATIN LOWERCASE D	
U+0065	e	LATIN LOWERCASE E	
U+0066	f	LATIN LOWERCASE F	
U+0067	g	LATIN LOWERCASE G	
U+0068	h	LATIN LOWERCASE H	
U+0069	i	LATIN LOWERCASE I	
U+006A	j	LATIN LOWERCASE J	
U+006B	k	LATIN LOWERCASE K	
U+006C	l	LATIN LOWERCASE L	
U+006D	m	LATIN LOWERCASE M	
U+006E	n	LATIN LOWERCASE N	
U+006F	o	LATIN LOWERCASE O	
U+0070	p	LATIN LOWERCASE P	
U+0071	q	LATIN LOWERCASE Q	
U+0072	r	LATIN LOWERCASE R	
U+0073	s	LATIN LOWERCASE S	
U+0074	t	LATIN LOWERCASE T	
U+0075	u	LATIN LOWERCASE U	
U+0076	v	LATIN LOWERCASE V	
U+0077	w	LATIN LOWERCASE W	
U+0078	x	LATIN LOWERCASE X	
U+0079	y	LATIN LOWERCASE Y	
U+007A	z	LATIN LOWERCASE Z	
U+00DF	ß	LATIN LOWERCASE SHARP S	ss
U+00E0	à	LATIN LOWERCASE A WITH GRAVE	a
U+00E1	á	LATIN LOWERCASE A WITH ACUTE	a
U+00E2	â	LATIN LOWERCASE A WITH CIRCUMFLEX	a
U+00E3	ã	LETTRE MINUSCULE LATINE A TILDE	a

U+00E4	ä	LATIN LOWERCASE A WITH DIAERESIS	a
U+00E5	å	LATIN LOWERCASE A WITH RING ABOVE	a
U+00E6	æ	LATIN LOWERCASE AE	ae
U+00E7	ç	LATIN LOWERCASE C WITH CEDILLA	c
U+00E8	è	LATIN LOWERCASE E WITH GRAVE	e
U+00E9	é	LATIN LOWERCASE E WITH ACUTE	e
U+00EA	ê	LATIN LOWERCASE E WITH CIRCUMFLEX	e
U+00EB	ë	LATIN LOWERCASE E WITH DIAERESIS	e
U+00EC	ì	LATIN LOWERCASE I WITH GRAVE	i
U+00ED	í	LATIN LOWERCASE I WITH ACUTE	i
U+00EE	î	LATIN LOWERCASE I WITH CIRCUMFLEX	i
U+00EF	ï	LATIN LOWERCASE I WITH DIAERESIS	i
U+00F1	ñ	LATIN LOWERCASE N WITH TILDE	n
U+00F2	ò	LATIN LOWERCASE O WITH GRAVE	o
U+00F3	ó	LATIN LOWERCASE O WITH ACUTE	o
U+00F4	ô	LATIN LOWERCASE O WITH CIRCUMFLEX	o
U+00F5	õ	LATIN LOWERCASE O WITH TILDE	o
U+00F6	ö	LATIN LOWERCASE O WITH DIAERESIS	o
U+00F9	ù	LATIN LOWERCASE U WITH GRAVE	u
U+00FA	ú	LATIN LOWERCASE U WITH ACUTE	u
U+00FB	û	LATIN LOWERCASE U WITH CIRCUMFLEX	u
U+00FC	ü	LATIN LOWERCASE U WITH DIAERESIS	u
U+00FD	ÿ	LATIN LOWERCASE Y WITH ACUTE	y
U+00FF	ÿ	LATIN LOWERCASE Y WITH DIAERESIS	y
U+0153	œ	LATIN LOWERCASE LIGATURE OE	oe

Unicode use vs. LDH use

Domain names are present in server names, in URLs, and in email addresses.

Here are the forms accepted by AFNIC interfaces. Detailed error messages will be returned in case of non-compliance with these rules.

Domain name:

- EPP interface: **the only acceptable form for domain names is the LDH form, i.e. the ACE version for IDNs.**
- Web interface: Unicode and LDH forms are accepted

Server name: **ONLY** the LDH version is acceptable.

URL: **ONLY** the LDH version is acceptable.

Email: **ONLY** the LDH version is acceptable.

Interface connection settings

EPP configuration and settings

EPP production bench :

- epp.nic.fr
- port: 700
- access authenticated by certificate and login/password
- number of connections available: 3
- account available: 1
- timeout: 20 min

EPP test bench:

- epp.sandbox.nic.fr
- port: 700
- access authenticated by certificate and login/password
- number of connections available: 2
- accounts available: 2
- timeout: 20 min

FR Rush production service:

- epprush.nic.fr
- port: 700
- access authenticated by certificate and login/password
- number of connections available: number of connection(s) purchased
- account available: 1 (the same as epp.nic.fr)
- timeout: 20 min

FR Rush test service:

- epprush.sandbox.nic.fr
- port : 700
- accès authentifié par certificat et login/mot de passe
- nombre de connexions disponibles : nombre de connexion(s) achetée(s)
- comptes disponibles : 2 (identiques à ceux d'epp.sandbox.nic.fr)
- timeout : 20 min

Extranet

Production bench:

- <https://extranet.nic.fr/>
- access authenticated with login/password specific to the Extranet
- account available: 1

Test bench:

- <https://extranet-sandbox.nic.fr/>
- access authenticated with login/password specific to the Extranet
- account(s) available: 2

Two-factor authentication service:

A two-factor authentication service is available on the Extranet. To access this service, the account administrator must connect to the Extranet and go to "My account" in the "Access management" section. For more information, see the two-factor authentication service user guide.

X.509 certificates

Server certificates:

You can consult the list of AFNIC certificates for EPP servers (among others) on our website www.afnic.fr.

Certificats clients:

According to **RFC 5734**, EPP TCP Transport, the authentication of the connection to the EPP server is made with a certificate that you have to upload to the Extranet under "My Account" in the "Technical Information" section.

Rules for installing an EPP certificate:

- A valid certificate in terms of dates, minimum validity of one year (CERTIFICATE_DATES).
- A certificate title that identifies the holder of the certificate. We want to see the name of the registrar in the subject.
- The certificate file provided must be in PEM (PEM_STRUCTURE) format.
- The certificate must have the "ssclient" role in its structure (SSLCLIENT_PURPOSE).
- The complete certification chain must be provided in the PEM file (Intermediate CA in particular) if it is not a self-signed certificate (AUTOSIGNED and CERTIFICATION_CHAIN).
- Self-signed certificates are accepted, as well as official client certificates generated by a certified authority on the internet.

A check will be made when downloading the certificate to verify that the downloaded certificate follows all of these rules. Any anomaly detected on the certificate will be listed at the end of the check. We do not consult the lists of certificate revocations.

Strong recommendations (which do not block installing technically but risky in practice):

- Do not put the private key in the file sent to AFNIC (PRIVATE_KEY_IN_FILE).
- Public key size 2048 bits minimum (PUBLIC_KEY_SIZE).
- SHA256 signature algorithm (MD5 and SHA1 are strongly discouraged, even banned in the case of MD5).
- If you suspect/know certainly that your private key has been compromised, revoke the certificate as soon as possible and re-generate a new key and certificate.

Limitations of the EPP server and Extranet

First rate-limiting (EPP):

- Any command following a `<login>` command is executed immediately, but the following command cannot be taken into account before a period of 2 seconds. The following commands are not penalised (unless they fall within the scope of one of the limitation rules).
- For a given domain name, `<domain:check>` commands cannot be concatenated at a rate greater than 2 every 4 seconds. Over that limit, a penalty of 2 seconds is applied to the next `<domain:check>` command (for the same domain name).

For example, it is possible to concatenate a `<domain:check>` command to check the availability of a domain name with a `<domain:create>` command, and then another `<domain:check>` command on the same name domain without any penalty being applied.

On the other hand, a registrar which concatenates a series of `<domain:check>` commands for the same domain name, must allow up to 4 seconds between the first and the third call in order not to be penalised.

- Any `<domain:create>` command concerning an already existing domain induces an extra response time of 2 seconds on the command.
- Any `<domain:info>` command concerning a domain name that is not in the holder's portfolio and for which the `authinfo` is unknown induces an additional response time of 1 second on this command.

Second rate-limiting:

Each registrar will have a bucket of 50 tokens per 24 days for all its EPP and Extranet connections (except for the .FR Rush server). A creation failure costs 1 token from the EPP server and 25 tokens for the Extranet. If more than 50 tokens are used within 24 hours:

- You will not be able to authenticate yourself for new connections;
- You will be disconnected from the EPP servers (including the FR Rush Service) as soon as you send an action operation on a domain name (excluding querying operations such as check and info) on the servers;
- You can use the registration interfaces again 24 hours after your fiftieth penalty.

Example of an error generating a penalty via EPP

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="2302">
            <msg>Object exists</msg>
            <extValue>
                <value xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                    <domain:name>afnic.fr</domain:name>
                </value>
                <reason>domain name in use</reason>
            </extValue>
            <value>Your current counter of penalties available is 49</value>
        </result>
        <msgQ count="1" id="5498465" />
        <trID>
            <clTRID>dd769cd3392e95baeb3268dae5654bb1c24770da</clTRID>
            <svTRID>FR-PREPROM-epp01-6848-19-1568810473.69301</svTRID>
        </trID>
    </response>
</epp>
```

Example of an error received when disconnecting from the EPP servers

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="2500">
            <msg>Command failed; server closing connection</msg>
            <extValue>
                <value xmlns="urn:ietf:params:xml:ns:epp-1.0">
                    <create>
                        <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0" xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0 domain-1.0.xsd">
                            <domain:name>afnic.fr</domain:name>
                            <domain:period unit="y">1</domain:period>
                            <domain:registrant>TEST21</domain:registrant>
                            <domain:contact type="admin">TEST21</domain:contact>
                            <domain:contact type="tech">TEST21</domain:contact>
                            <domain:authInfo>
                                <domain:pw>iGhhuhHHJhj1</domain:pw>
                            </domain:authInfo>
                        </domain:create>
                    </create>
                </value>
                <reason>maximum number of penalty points reached, command refused</reason>
            </extValue>
        </result>
        <trID>
            <clTRID>6edd971c00318f8db5f1f95e90b306bc1cc9628b</clTRID>
            <svTRID>FR-PREPROD-epp01-17009-706-1568811306.06913</svTRID>
        </trID>
    </response>
</epp>
```

Example of an error during an authentication attempt when access is blocked

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="2501">
            <msg>Authentication error; server closing connection</msg>
            <value>Access currently deactivated due to too many penalties; will be allowed again after 2019-09-19T12:55:03Z</value>
        </result>
        <msgQ count="1" id="5498464" />
        <trID>
            <clTRID>eb38e71cbb48040e38f2afab73981f6cba0d579a</clTRID>
            <svTRID>FR-PREPROD-epp01-17838-139-1568811646.34615</svTRID>
        </trID>
    </response>
</epp>
```

.FR Rush service

This service is dedicated to registrars and especially those having a "snapping" activity.

It is a second EPP server with the following characteristics:

- Operations allowed:
 - login
 - logout
 - domain:check
 - domain:create
- Option to purchase as many connections as necessary;
- Login and password identical to the main EPP server;
- Fewer limitations than on the main EPP server. The rate-limiting is as follows:
 - Any command following a **<login>** command is executed immediately, but the following command cannot be taken into account before a period of 2 seconds. The following commands are not penalised (unless they fall within the scope of one of the limitation rules).
 - For a given domain name, **<domain:check>** commands cannot be concatenated at a rate greater than 2 every 4 seconds. Over that limit, a penalty of 2 seconds is applied to the next **<domain:check>** command (for the same domain name).

For example, it is possible to concatenate a **<domain:check>** command to check the availability of a domain name with a **<domain:create>** command, and then another **<domain:check>** command on the same name domain without any penalty being applied.

On the other hand, a client that concatenates a series of **<domain:check>** commands for the same domain name, must allow up to 4 seconds between the first and the third call in order not to be penalized.

- Any **<domain:create>** command concerning an already existing domain induces an extra response time of 0.1 seconds on the command.
- Any **<domain:info>** command concerning a domain name that is not in the holder's portfolio and for which the **Authinfo** is unknown induces an additional response time of 1 second on this command.

Attention: this rate-limiting may be modified (hardened) if the proper functioning of the .fr Rush service is disrupted.

To subscribe, go to your Extranet or contact your customer relationship officer.

Session management commands

<greeting>

The **<greeting>** is not a command that the client can send to the EPP server but the welcome banner that the EPP server will send when the connection is made. It is also the reply that will be sent in response to a **<hello>** command (the command is discussed in the next section).

Why dwell on this banner if it is not a command? Simply because the information it provides is important and necessary, among other things, for the **<login>** command.

Although **<greeting>** which is reproduced below is given as an example and that the details of what it may contain can be found in the **RFC 5730**, you have to be particularly attentive to at least two elements of information, namely:

- the versions of the supported protocols (**<version>** element),
- and the languages supported (**<lang>** element).

Only one of these values will be accepted when the session starts with the **<login>** command.

Example of <greeting> that can be sent by the AFNIC EPP server:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <greeting>
        <svID>EPP PROD Server on epp01.prive.nic.fr (V2.0.0)</svID>
        <svDate>2019-09-04T22:00:00.0Z</svDate>
        <svcMenu>
            <version>1.0</version>
            <lang>en</lang>
            <objURI>urn:ietf:params:xml:ns:domain-1.0</objURI>
            <objURI>urn:ietf:params:xml:ns:contact-1.0</objURI>
            <objURI>urn:ietf:params:xml:ns:host-1.0</objURI>
            <svcExtension>
                <extURI>urn:ietf:params:xml:ns:rgp-1.0</extURI>
                <extURI>http://www.afilic.fr/xml/epp/frnic-1.4</extURI>
                <extURI>urn:ietf:params:xml:ns:secDNS-1.1</extURI>
                <extURI>urn:ietf:params:xml:ns:launch-1.0</extURI>
            </svcExtension>
        </svcMenu>
        <dcp>
            <access>
                <all/>
            </access>
            <statement>
                <purpose>
                    <admin/>
                    <prov/>
                </purpose>
                <recipient>
                    <ours/>
                    <public/>
                </recipient>
                <retention>
                    <stated/>
                </retention>
            </statement>
        </dcp>
    </greeting>
</epp>
```

<hello> command

Although it is not an EPP command in itself, this command is particularly important and useful because it will allow an EPP client to verify that the connection to the server has been properly established. Indeed, once a connection is established with the server, it is possible at any time to send this command to which the server will respond by sending the EPP welcome banner (the <greeting>), even if the (<login>) authentication phase has not yet been completed.

To the extent that the time-out mechanisms should be enabled to close the “inactive” sessions, it is quite possible to make a “heartbeat” by regularly executing this command to keep seldom used sessions open (of course, the frequency of this “heartbeat” should remain reasonable, taking into account the “time-out” and rate-limiting parameters eventually set up). For example, this command could very well be executed every 2 minutes to keep a connection open and ensure that the server is still listening, which is an acceptable frequency.

Example of a <hello> request sent by the client

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:
schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <hello>Test</hello>
</epp>
```

Session management commands

The EPP protocol provides two commands to establish (**<login>**) and end a session with the server (**<logout>**). Once the session is established, it will only terminate:

- on client request (**<logout>**),
- or if the server, for internal reasons, has to close it ("time-out" during an idle session, technical problems, etc.),
- if the client interrupts the TCP connection (if the interrupt is during the normal course of use of the client, it is strongly recommended to perform a **<logout>** before cutting the TCP connection).

Since the number of simultaneous sessions can be limited, their management must be rigorous.

The **<login>** command

When connecting to the server, it sends a **<greeting>** banner to the client, thereby indicating that it is ready to receive a session start command. This command requires knowing the EPP identifier generated by AFNIC and the password associated with it. For security reasons and to "segregate" the various interfaces offered by AFNIC, we have chosen to have a different identifier between the EPP interface and the Extranet. If they are properly input and the number of currently established sessions has not reached the maximum number allowed, the session must normally be established.

The **<login>** command can also be used to change the password associated with this identifier. There is no limitation to this use and it is even strongly advised to change it at the first login to the EPP server.

Example of **<login>** command with password change sent by a client

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <command>
        <login>
            <cID>-xxxxxx-.fr</cID>
            <pw>Old-password</pw>
            <newPW>New-password</newPW>
            <options>
                <version>1.0</version>
                <lang>en</lang>
            </options>
            <svcs>
                <objURI>urn:ietf:params:xml:ns:domain-1.0</objURI>
                <objURI>urn:ietf:params:xml:ns:contact-1.0</objURI>
                <objURI>urn:ietf:params:xml:ns:host-1.0</objURI>
                <svcExtension>
                    <extURI>urn:ietf:params:xml:ns:rpg-1.0</extURI>
                    <extURI>http://www.afnic.fr/xml/epp/frnic-1.4</extURI>
                    <extURI>urn:ietf:params:xml:ns:secDNS-1.1</extURI>
                    <extURI>urn:ietf:params:xml:ns:launch-1.0</extURI>
                </svcExtension>
            </svcs>
        </login>
        <cLRID>TEST-AUTO-1568812243361-pesojejola</cLRID>
    </command>
</epp>
```

The result of this command will be the opening of a session for the registrar whose EPP identifier is "**-xxxxxx-.fr**", the password is "Old-password", and which for security reasons decides change it to "New-password".

Of course it is the "New-password" that must be used when the next session starts, since the effect of this change is immediate.

Strict authentication

For any command after the login, a strict check is made to ensure the EPP extensions (XML namespaces) used or defined have been actually announced by the client previously during the login.

If a new extension appears in a command, this command will be rejected.

This means that you must at least explicitly announce:

- the **frnic-4** extension for operations on contacts and certain operations on domain names such as **transfer**, **recover**, etc.,
- the **rgp-0** extension in order to restore a domain name,
- and possibly the **secDNS-1** extension if you want to manage DNSSEC.

Furthermore, a strict check is made to ensure that the EPP extensions chosen by the client at the time of authentication are among the EPP extensions announced by the server. The presence of any other "exotic" extension will result in a failed authentication, as will the absence of any mandatory extension.

The combination of these two tests thus requires you to authenticate yourself with one of the following two combinations:

- **domain-1.0, contact-1.0, frnic-1.4, rgp-1.0, host-1.0**
- **domain-1.0, contact-1.0, frnic-1.4, rgp-1.0, secDNS-1.1, host-1.0**

The <logout> command

As we have already indicated, a client wishing to manage EPP sessions must send a session end command **<logout>** (and, ideally, wait for the response from the server) before switching off the TCP connection with the server.

Although the server is able to detect "wild" disconnections from EPP clients, this type of disconnection may not release the limited resources allocated to each registrar as quickly as they want.

To be absolutely clear, if, for example, we only allow N concurrent sessions per registrar on the EPP server, and they are all used at a given time, disconnecting a client without a **<logout>** phase could have the effect of not taking this disconnection immediately into account.

At the same time this prevents any new connection and so sends back a return code 2502 until the system detects and properly handles the disconnection.

Exemple de commande <logout> envoyée par un client

```
<?xml version="1.0" encoding="UTF-8"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <command>
        <logout/>
        <cLTRID>874c8fa49805e07cba4faf2904227e84623103a6</cLTRID>
    </command>
</epp>
```

Examples of connection in different languages

Example of connection in PHP language:

```
<?php
$host = 'epp.sandbox.nic.fr';
$port = 700;
$cert = 'cert-and-key-combined.pem';
$login = '-xxxxx-.fr';
$password = 'XXXXXX';
$context = stream_context_create(array('ssl' => array('local_cert' => $cert)));

function fullread($fp, $count) {
    $buffer = "";
    while ($count > 0) {
        $data = fread($fp, $count);
        if ($data === FALSE) {
            die("ERROR: fread failed");
        }
        $count -= strlen($data);
        $buffer .= $data;
    }
    return $buffer;
}

function receive($fp) {
    $data = fullread($fp, 4);
    $count = unpack('N', $data);
    $count = $count[1];
    $buffer = fullread($fp, $count - 4);
    return $buffer;
}

$fp = stream_socket_client('ssl://'.$host.':'.$port, $errno, $errstr, 30, STREAM_CLIENT_CONNECT,
$context);
if (! $fp) {
    exit("ERROR: $errno - $errstr<br />\n");
}
$frame = receive($fp);
printf("RECEIVED:\n%s\n", $frame);
$xlogin = htmlspecialchars($login, ENT_XML1);
$xpw = htmlspecialchars($password, ENT_XML1);
$buffer = "<?xml version='1.0' encoding='UTF-8'?><epp xmlns='urn:ietf:params:xml:ns:epp-
1.0'><command><login><clID>$xlogin</clID><pw>$xpw</pw><options><version>1.0</version><lang>en</lang><
/options><svcs><objURI>urn:ietf:params:xml:ns:contact-1.0</objURI><objURI>urn:ietf:params:xml:ns:domain-1.0<
/objURI><objURI>urn:ietf:params:xml:ns:host-1.0</objURI><svcExtension><extURI>urn:ietf:params:xml:ns:rgp-1.0<
/extURI><extURI>http://www.afnic.fr/xml/epp/frnic-1.4</extURI></extURI></svcs></login></command><
/epp>";
fwrite($fp, pack('N', 4 + strlen($buffer)));
fwrite($fp, $buffer);
printf("SENT:\n%s\n", $buffer);
$frame = receive($fp);
printf("RECEIVED:\n%s\n", $frame);
fclose($fp);
?>
```

Example of connection in JAVA language:

```
package epp;

import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.io.File;
import java.io.IOException;
import java.net.Socket;
import java.security.KeyStore;
import java.security.Principal;
import java.security.PrivateKey;
import java.security.cert.X509Certificate;
import java.util.Enumeration;
import java.util.HashMap;
import java.util.Map;
import javax.net.SocketFactory;
import javax.net.ssl.KeyManager;
import javax.net.ssl.KeyManagerFactory;
import javax.net.ssl.SSLContext;
import javax.net.ssl.X509KeyManager;

public class CMain {
    private static int serverPort = 700;
    private static String serverHost = "epp.sandbox.nic.fr";
    private static String login = "-xxxxx-.fr";
    private static String password = "XXXXXX";

    private static File keystoreFile = new File("keystore.jks");
    private static char keystorePass[] = "changeit".toCharArray();

    public static void main(String[] args) throws Exception {
        // If the client certificate is delivered by a CA listed in
        // the server's certificate request message then you can use
        // the default SSLSocketFactory:
        //
        // SocketFactory socketFactory = javax.net.ssl.SSLSocketFactory.getDefault();
        //
        // Otherwise we must tweak the KeyManager to force the use of
        // this certificate from an unlisted CA.
        KeyStore ksClient = KeyStore.getInstance(keystoreFile, keystorePass);
        Map<String, String> typeToAlias = new HashMap<String, String>();
        for (Enumeration<String> e = ksClientAliases(); e.hasMoreElements()) {
            String alias = e.nextElement();
            if (ksClient.isKeyEntry(alias)) {
                String algo = ksClient.getKey(alias, keystorePass)
                    .getAlgorithm();
                typeToAlias.put(algo, alias);
            }
        }
        KeyManagerFactory kmf = KeyManagerFactory.getInstance("SunX509");
        kmf.init(ksClient, keystorePass);
        KeyManager[] kmList = kmf.getKeyManagers();
        for (int i = 0; i < kmList.length; i++) {
            if (kmList[i] instanceof X509KeyManager) {
                X509KeyManager manager = (X509KeyManager)kmList[i];
                kmList[i] = new WrappedX509KeyManager(manager, typeToAlias);
            }
        }
        // Create the context and open the connection
        SSLContext sslContext = SSLContext.getInstance("TLSv1.2");
        sslContext.init(kmList, null, null);
        SocketFactory socketFactory = sslContext.getSocketFactory();

        // Connection
        try (Socket socket = socketFactory.createSocket(serverHost, serverPort);
             DataOutputStream out = new DataOutputStream(socket.getOutputStream());
             DataInputStream in = new DataInputStream(socket.getInputStream())) {
            String buffer = new String(readMessage(in), "UTF-8");
        }
    }
}
```

```

        System.out.println("RECEIVED:");
        System.out.println(buffer);
        buffer = "<?xml version='1.0' encoding='UTF-8'?><epp xmlns='urn:ietf:params:xml:ns:epp-1.0'><command><login><cID>" +
            + XMLEncode(login) +
            + "</cID><pw>" +
            + XMLEncode(password) +
            + "</pw><options><version>1.0</version><lang>en</lang></options><svcs><objURI>urn:ietf:params:xml:ns:contact-1.0</objURI><objURI>urn:ietf:params:xml:ns:domain-1.0</objURI><objURI>urn:ietf:params:xml:ns:host-1.0</objURI><svcExtension><extURI>urn:ietf:params:xml:ns:rgp-1.0</extURI><extURI>http://www.afnic.fr/xml/epp/frnic-1.4</extURI></svcExtension></svcs></login></command></epp>";
        writeMessage(out, buffer);
        System.out.println("SENT:");
        System.out.println(buffer);
        buffer = new String(readMessage(in), "UTF-8");
        System.out.println("RECEIVED:");
        System.out.println(buffer);
    }
}

private static String XMLEncode(String s) {
    return s.replace("&", "&#38;").replace("<", "&#60;");
}

private static int eppHeaderLength = 4;

private static byte[] readMessage(DataInputStream is) throws IOException {
    int messageLength = is.readInt() - eppHeaderLength;
    byte[] message = new byte[messageLength];
    is.readFully(message);
    return message;
}

private static void writeMessage(DataOutputStream os, byte[] bytes) throws IOException {
    os.writeInt(eppHeaderLength + bytes.length);
    os.write(bytes);
    os.flush();
}

private static void writeMessage(DataOutputStream os, String message) throws IOException {
    writeMessage(os, message.getBytes("UTF-8"));
}

private static class WrappedX509KeyManager implements X509KeyManager {

    private X509KeyManager manager;
    private Map<String, String> typeToAlias;

    public WrappedX509KeyManager(X509KeyManager manager,
                                  Map<String, String> typeMap) {
        this.manager = manager;
        this.typeToAlias = typeMap;
    }

    @Override
    public String chooseClientAlias(String[] keyType,
                                   Principal[] issuers,
                                   Socket socket) {
        String result = manager.chooseClientAlias(keyType, issuers, socket);
        for (int i = 0; result == null && i < keyType.length; i++) {
            result = typeToAlias.get(keyType[i]);
        }
        return result;
    }

    @Override
    public String chooseServerAlias(String keyType, Principal[] issuers,
                                   Socket socket) {
        return manager.chooseServerAlias(keyType, issuers, socket);
    }
}

```

```
@Override  
public X509Certificate[] getCertificateChain(String alias) {  
    return manager.getCertificateChain(alias);  
}  
  
@Override  
public String[] getClientAliases(String keyType, Principal[] issuers) {  
    return manager.getClientAliases(keyType, issuers);  
}  
  
@Override  
public PrivateKey getPrivateKey(String alias) {  
    return manager.getPrivateKey(alias);  
}  
  
@Override  
public String[] getServerAliases(String keyType, Principal[] issuers) {  
    return manager.getServerAliases(keyType, issuers);  
}  
}
```

Example of connection in PERL language:

```

use IO::Socket::SSL;

my $server = 'epp.sandbox.nic.fr';
my $port = 700;
my $login = '-xxxxx-.fr';
my $password = 'XXXXXX';

sub full_read {
    my ($fp, $count) = @_;
    my $buffer;
    my $n;
    for (my $idx = 0; $idx < $count; $idx += $n) {
        $n = read($fp, $buffer, $count, $idx);
    }
    return $buffer;
}

sub epp_receive {
    my ($fp) = @_;
    my $buffer = full_read($fp, 4);
    my $count = unpack("N", $buffer) - 4;
    return full_read($fp, $count);
}

sub epp_send {
    my ($fp, $data) = @_;
    print $fp pack("N", 4 + length($data)), $data;
}

my $epp = IO::Socket::SSL->new(
    PeerAddr => $server,
    PeerPort => $port,
    SSL_use_cert => 1,
    SSL_cert_file => $ARGV[0],
    SSL_key_file => $ARGV[1],
    SSL_passwd_cb => sub { return $ARGV[2]; })
or die('Unable to create socket: ' . IO::Socket::SSL::errstr() . "\n");

my $data = epp_receive($epp);
print "RECEIVED:\n$data\n";
my $xlogin = $login;
$xlogin =~ s/&/&#38;/g;
$xlogin =~ s/</&#60;/g;
my $xpw = $password;
$xpw =~ s/&/&#38;/g;
$xpw =~ s/</&#60;/g;
$data = "<?xml version='1.0' encoding='UTF-8'?><epp xmlns='urn:ietf:params:xml:ns:epp-1.0'><command><login><clID>$xlogin</clID><pw>$xpw</pw><options><version>1.0</version><lang>en</lang></options><svcs><objURI>urn:ietf:params:xml:ns:contact-1.0</objURI><objURI>urn:ietf:params:xml:ns:domain-1.0</objURI><objURI>urn:ietf:params:xml:ns:host-1.0</objURI><svcExtension><extURI>urn:ietf:params:xml:ns:rge-1.0</extURI><extURI>http://www.afnic.fr/xml/epp/frnic-1.4</extURI></svcExtension></svcs></login></command></epp>";
epp_send($epp, $data);
print "SENT:\n$data\n";
$data = epp_receive($epp);
print "RECEIVED:\n$data\n";

```

Contact management

Description

The contact is an object linked to a domain name. It is defined in the register by a nic-handle (or roid) in the form of a sequence of letters, numbers and the suffix “-FRNIC”.

The ID of the contact is the nic-handle prefix, i.e. the front part of “-FRNIC”.

The operations allowed on contact objects are as follows:

- CREATE
- UPDATE
- INFO

Contacts settings

Minimum/maximum size of the name: 1 to 128 characters

Minimum size/maximum of the first name (case of individual (PP) contact type): 1 to 64 characters

Minimum/maximum size of the organisation: 1 to 128 characters

Minimum/maximum size of the street: 3 fields from 1 to 255 characters

Minimum/maximum size of the city: 1 to 64 characters

Minimum/maximum size of the state/region (optional): 1 to 255 characters

Minimum/maximum size of the postal code: 1 to 16 characters

Minimum/maximum size of the country code: 2 characters only

Minimum/maximum size of the telephone number: 4 to 17 characters (including + and .)

Minimum/maximum size of the fax number (optional): 4 to 17 characters (including + and .)

Minimum/maximum size of the email address: 6 to 256 characters (64 before @, 191 after @)

contact:create - Creating a contact

The contact:create operation can create contacts that will serve as a holder, administrative contact and technical contact for your domain names.

On the .fr, contacts are of two types:

- Individual (PP)
- Legal entity (PM)

We will have to use the EPP frnic extension to differentiate between the creation of a PP and a PM.

Here are the elements of the extension used for “Individuals”:

Element name	Number of occurrences
<frnic:list>	0-1
<frnic:firstName>	1

- <frnic:list>: Makes the contact anonymous in the WHOIS publication only for holder and/or administrative contacts.
- The “restrictedPublication” value must be provided to enable the anonymous status. To disable it, simply update the contact by not providing this element.
- <frnic:firstName>: First Name of the contact (the <contact:name> element will be the family name).

Example of creating a PP type contact with the minimum information required

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Petit</contact:name>
          <contact:addr>
            <contact:street>1 rue Stephenson</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>nZuGUTUVCjwFYvcMFXf+wOrXDFi9C4mQ</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:firstName>Marie</frnic:firstName>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="552" id="5492840"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>MP6113</contact:id>
                <contact:crDate>2019-07-02T09:05:11.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>zEvosWCSHqbCNr7OlMaZ1lF3</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-117-1562058304.98658</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PP type contact with restricted publication enabled

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Petit</contact:name>
          <contact:addr>
            <contact:street>1 rue Stephenson</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>pwrr0dzPqnOolaVN5508JdjHlHBvtr/i9e</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:list>restrictedPublication</frnic:list>
            <frnic:firstName>Marie</frnic:firstName>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>SoTT2VGgdMjRDwo5CR4Q06tv</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="532" id="5492860"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>MP6114</contact:id>
                <contact:crDate>2019-07-02T09:08:29.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>SoTT2VGgdMjRDwo5CR4Q06tv</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-118-1562058313.74078</svTRID>
        </trID>
    </response>
</epp>
```

Here are the elements of the extension needed for “Legal entities”:

Element name	Number of occurrences
<frnic:legalStatus s="">	1
<frnic:siren>	0-1
<frnic:VAT>	0-1
<frnic:trademark>	0-1
<frnic:asso>	0-1
<frnic:waldec>	0-1
<frnic:decl>	1 if <frnic:waldec> is absent
<frnic:publ announce="" page="">	1 if <frnic:waldec> is absent
<frnic:DUNS>	0-1
<frnic:local>	0-1

<frnic:legalEntityInfos>: This element is mandatory to create a “Legal Entity” type contact and must include at least the sub-element <frnic:legalStatus s=""> described below.

List of sub-elements of <frnic:legalEntityInfos>:

- <frnic:legalStatus s="">: This element is used to indicate through the attribute "s", the business name of the entity to be identified (“company”, “partnership”, “other”). The element is empty except in the case where the attribute "s" is equivalent to “other”.
- <frnic:siren>: contains the SIREN number.
- <frnic:VAT>: contains the intra-Community VAT number.
- <frnic:trademark>: contains the trademark number.
- <frnic:asso>: comprises one or more sub-elements to identify the association:
 - <frnic:waldec>: contains the WALDEC number,
 - <frnic:decl>: contains the date of declaration to the prefecture,
 - <frnic:publ announce="" page=""> contains the date of publication in the OJ (the “announce” attribute specifies the number of the announcement, the “page” attribute the page number of this announcement).
- <frnic:DUNS>: contains the DUNS number,
- <frnic:local>: contains a local identifier corresponding to none of those described above.

Example of creating a PM type contact with the minimum information required

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>L0SBTWtnB7xxufoQyKiVwHGJaQVhXiHO</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="association"/>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <cLTRID>oWzQllkmSPz5A+uKWHIoUMdr</cLTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="572" id="5491997"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4968</contact:id>
                <contact:crDate>2019-07-01T09:31:39.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>oWzQllkmSPz5A+uKWHIoUMdr</clTRID>
            <svTRID>FR-PREPROM-epp01-9411-104-1561973490.20215</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with a SIREN number

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>AQhHf+MNmhB0MT1HpA89ChEekRY368bd</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="company"/>
              <frnic:siren>000000000</frnic:siren>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>4JruLD8/7mwxDs+ltcncZe/s</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="464" id="5492156"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4969</contact:id>
                <contact:crDate>2019-07-01T09:42:24.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>4JruLD8/7mwxDs+1tcncZe/s</clTRID>
            <svTRID>FR-PREPROM-epp01-9421-114-1561974141.78316</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with a DUNS number

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>iPzZ+OqkCsgBPTjzRuDxqeBspa5drX2Z</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="company" />
              <frnic:DUNS>000000000</frnic:DUNS>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>vaqZhp7Sb/yL2uxCONXOr0YJ</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4970</contact:id>
                <contact:crDate>2019-07-01T10:44.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>vaqZhp7Sb/yL2uxCONXOr0YJ</clTRID>
            <svTRID>FR-PREPROD-epp01-9418-121-1561975840.98857</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with a trademark number

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>g2A1/HrK3HzLimUXplVhSh+KeKa5CIiJ</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="company"/>
              <frnic:trademark>000000000</frnic:trademark>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>vAqUf0bl78KuVS71zASGa0Rp</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4971</contact:id>
                <contact:crDate>2019-07-01T10:13:44.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>vAqUf0b178KuVS71zASGa0Rp</clTRID>
            <svTRID>FR-PREPROD-epp01-9418-122-1561975846.49229</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with an intra-Community VAT number

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>jTzgSydOsf+DCYZZ1DNC8FHUm2SQm7ol</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="company" />
              <frnic:VAT>000000000</frnic:VAT>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>4Hpw5/Kotfr4zELmFRzjb/kx</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="88" id="5492752"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4972</contact:id>
                <contact:crDate>2019-07-01T11:53:49.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>4Hpw5/Kotfr4zELmFRzjb/kx</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-103-1561982025.50501</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with a local identifier

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>XT5rWTeDT8SdfkctXKr5Xk9nGxf79EWB</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="company"/>
              <frnic:local>000000000</frnic:local>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>NyIqQDFkoO/G1N2PprtA2pv9</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="88" id="5492752"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4973</contact:id>
                <contact:crDate>2019-07-01T12:03:28.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>NyIqQDFkoO/G1N2PprtA2pv9</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-104-1561982031.81146</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type contact with a WALDEC (associations only)

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>zz3OJ8DI1G0RA1I8gXKr1dSmciU4dsI+</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="association"/>
              <frnic:asso>
                <frnic:waldec>00000000</frnic:waldec>
              </frnic:asso>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <cLTRID>nAjtvTajgEOtuiULyJqnjio9</cLTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="88" id="5492752"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4974</contact:id>
                <contact:crDate>2019-07-01T12:08:35.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>nAjtvTajgEOtuiULyJqnjio9</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-105-1561982608.90526</svTRID>
        </trID>
    </response>
</epp>
```

Example of creating a PM type of contact with the reporting information to the prefecture and the OJ (associations only)

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <contact:create xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>XXX</contact:id>
        <contact:postalInfo type="loc">
          <contact:name>Contact Afnic</contact:name>
          <contact:org>Association Française pour le Nommage Internet en Coopération</contact:org>
          <contact:addr>
            <contact:street>Immeuble Le Stephenson</contact:street>
            <contact:street>1, rue Stephenson</contact:street>
            <contact:street>Hall A2 - 3ème étage</contact:street>
            <contact:city>Montigny le Bretonneux</contact:city>
            <contact:pc>78180</contact:pc>
            <contact:cc>FR</contact:cc>
          </contact:addr>
        </contact:postalInfo>
        <contact:voice>+33.139308300</contact:voice>
        <contact:fax>+33.139308301</contact:fax>
        <contact:email>contact@afnic.fr</contact:email>
        <contact:authInfo>
          <contact:pw>ATXhZJKWPro9aKjGSCpqhlTmpm3C828a</contact:pw>
        </contact:authInfo>
      </contact:create>
    </create>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:create>
          <frnic:contact>
            <frnic:legalEntityInfos>
              <frnic:legalStatus s="association"/>
              <frnic:asso>
                <frnic:decl>1789-07-14</frnic:decl>
                <frnic:publ announce="15" page="2">1789-08-26</frnic:publ>
              </frnic:asso>
            </frnic:legalEntityInfos>
          </frnic:contact>
        </frnic:create>
      </frnic:ext>
    </extension>
    <clTRID>9dZtF0VpteSXwXFSy/LGNc/7</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="552" id="5492840"/>
        <resData>
            <contact:creData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4975</contact:id>
                <contact:crDate>2019-07-02T08:27:03.0Z</contact:crDate>
            </contact:creData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:creData>
                        <frnic:nhStatus new="1"/>
                        <frnic:idStatus/>
                    </frnic:creData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>9dZtF0VpteSXwXFSy/LGNc/7</clTRID>
            <svTRID>FR-PREPROM-epp01-9422-105-1562055495.48117</svTRID>
        </trID>
    </response>
</epp>
```

Specifics of the .fr for the management of postal addresses:

Contrary to what is indicated in **RFC 5731**:

- only one element of the <**contact:postalInfo**> type can be provided;
- only the "loc" type for postal addresses is accepted.

Contrary to what is indicated in RFC 5733:

- the <**contact:id**> element, although mandatory, is not taken into account by our server. This implies that, contrary to the EPP standard, the registrar cannot choose the identifier for the contact whose creation is requested. AFNIC allocates contact identifiers using its own algorithms. Of course, if the creation is successful, the identifier is indicated in the server response.
- the <**contact:authInfo**> element, although mandatory, is not taken into account because it is not used. It is not possible to associate a password per contact object, but like <**contact:id**>, we have chosen to keep it in the request sent to ensure simpler compatibility with existing client codes.
- the <**contact:disclose**>, element which is optional in the mapping contact, is not processed either. So it should not be present, otherwise the command will return an error message.

contact:update - Updating a contact

The contact:update operation is used to update certain attributes of a contact.

Only the registrar to which this contact is attached can request a change in it. The authentication mechanism via <**contact:authInfo**> has not been set up to manage contacts.

The information contained in the <**frnic:individualInfos**> and <**frnic:legalEntityInfos**> elements cannot be changed. The surname and first name of the contacts cannot be changed.

An extension is necessary to restrict the publication of personal information. This is done using the <**frnic:rem**> and <**frnic:add**> elements. The <**frnic:list**> element, presented above, is used in the same manner as during a creation.

Example of contact change with a change in the phone number and the email address

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <update>
      <contact:update xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>CA4975</contact:id>
        <contact:chg>
          <contact:voice>+1.2065550142</contact:voice>
          <contact:email>support@afnic.fr</contact:email>
        </contact:chg>
      </contact:update>
    </update>
    <clTRID>qCT/i5FguIYA0/U1cmY4HuDo</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="11" id="5493491"/>
    <trID>
      <clTRID>qCT/i5FguIYA0/U1cmY4HuDo</clTRID>
      <svTRID>FR-PREPROD-epp01-9414-108-1562060097.35145</svTRID>
    </trID>
  </response>
</epp>
```

Example of a change in contact with a change in the postal address and name of the organisation

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <update>
      <contact:update xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>CA4975</contact:id>
        <contact:chg>
          <contact:postalInfo type="loc">
            <contact:org>Afnic</contact:org>
            <contact:addr>
              <contact:street>2 rue Stephenson</contact:street>
              <contact:city>Montigy le Bretonneux</contact:city>
              <contact:pc>78180</contact:pc>
              <contact:cc>FR</contact:cc>
            </contact:addr>
          </contact:postalInfo>
        </contact:chg>
      </contact:update>
    </update>
    <clTRID>808EzyL3qGahdKbDp8KE2Gxs</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <trID>
      <clTRID>808EzyL3qGahdKbDp8KE2Gxs</clTRID>
      <svTRID>FR-PREPROD-epp01-9415-129-1562061464.5807</svTRID>
    </trID>
  </response>
</epp>
```

Example of a change in contact to remove the restricted publication

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <update>
      <contact:update xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>MP6114</contact:id>
        <contact:chg />
      </contact:update>
    </update>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:update>
          <frnic:contact>
            <frnic:rem>
              <frnic:list>restrictedPublication</frnic:list>
            </frnic:rem>
          </frnic:contact>
        </frnic:update>
      </frnic:ext>
    </extension>
    <clTRID>FlAmLrn6MaNh5zBqnXW484Di</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <trID>
      <clTRID>FlAmLrn6MaNh5zBqnXW484Di</clTRID>
      <svTRID>FR-PREPROM-epp01-9411-129-1562061900.25394</svTRID>
    </trID>
  </response>
</epp>
```

Example of a change in contact to apply restricted publication

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <update>
      <contact:update xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>MP6113</contact:id>
        <contact:chg />
      </contact:update>
    </update>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:update>
          <frnic:contact>
            <frnic:add>
              <frnic:list>restrictedPublication</frnic:list>
            </frnic:add>
          </frnic:contact>
        </frnic:update>
      </frnic:ext>
    </extension>
    <clTRID>ua3hPR6AIRA3NF6SWiLiJS9S</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <trID>
      <clTRID>ua3hPR6AIRA3NF6SWiLiJS9S</clTRID>
      <svTRID>FR-PREPROM-epp01-9411-132-1562061997.31916</svTRID>
    </trID>
  </response>
</epp>
```

contact:info - Information on a contact

The contact:info operation provides detailed information on the contact polled.

Specifics of the .fr for the contact:info command:

Given the particular management of these objects, a number of elements are not present or have a meaning different from that described in **RFC 5733** in the response sent by the server. Here is the list:

- <contact:crlD> (adapted),
- <contact:crDate> (adapted),
- <contact:uplD> (deleted),
- <contact:trDate> (deleted),
- <contact:authInfo> (deleted),
- <contact:disclose> (deleted).

In addition, the frnic extension is needed to take into account the identification data.

The value of the <contact:crlD> element is that of the registrar with whom it is currently referenced.

The value of the <contact:crDate> element is systematically returned but remains questionable due to the history of AFNIC contacts.

Another limitation with respect to **RFC 5733** is that only the registrar related to this contact object can request information about it.

Example contact:info on a contact of the “Legal Entity” type

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <info>
      <contact:info xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>CA4968</contact:id>
      </contact:info>
    </info>
    <c1TRID>p9erd31/GVvRPs/JtEFj9BQD</c1TRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="88" id="5492752"/>
        <resData>
            <contact:infData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>CA4968</contact:id>
                <contact:roid>CA4968-FRNIC</contact:roid>
                <contact:status s="ok"/>
                <contact:postalInfo type="loc">
                    <contact:name>Contact Afnic</contact:name>
                    <contact:org>Association Française pour le Nommeage Internet en Coopération</contact:org>
                    <contact:addr>
                        <contact:street>Immeuble Le Stephenson</contact:street>
                        <contact:street>1, rue Stephenson</contact:street>
                        <contact:street>Hall A2 - 3ème étage</contact:street>
                        <contact:city>Montigny le Bretonneux</contact:city>
                        <contact:sp/>
                        <contact:pc>78180</contact:pc>
                        <contact:cc>FR</contact:cc>
                    </contact:addr>
                </contact:postalInfo>
                <contact:voice>+33.139308300</contact:voice>
                <contact:fax>+33.139308301</contact:fax>
                <contact:email>contact@afnic.fr</contact:email>
                <contact:cID>-yyyyyy-.fr</contact:cID>
                <contact:cRID>-yyyyyy-.fr</contact:cRID>
                <contact:crDate>2019-07-01T09:31:39.0Z</contact:crDate>
                <contact:upDate>2019-07-01T09:31:39.0Z</contact:upDate>
            </contact:infData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:infData>
                        <frnic:contact>
                            <frnic:legalEntityInfos>
                                <frnic:idStatus>no</frnic:idStatus>
                                <frnic:legalStatus s="association"/>
                            </frnic:legalEntityInfos>
                            <frnic:obsoleted>0</frnic:obsoleted>
                            <frnic:reachable>0</frnic:reachable>
                        </frnic:contact>
                    </frnic:infData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>p9erd31/GVvRPs/JtEFj9BQD</clTRID>
            <svTRID>FR-PREPROD-epp01-9424-137-1561980992.236</svTRID>
        </trID>
    </response>
</epp>
```

Example of server response for an “Individual” type contact

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <info>
      <contact:info xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
        <contact:id>MP6113</contact:id>
      </contact:info>
    </info>
    <cLTRID>v64bEG0F7d6LcyyIejBnWf0G</cLTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="430" id="5492971"/>
        <resData>
            <contact:infData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>MP6113</contact:id>
                <contact:roid>MP6113-FRNIC</contact:roid>
                <contact:status s="ok"/>
                <contact:postalInfo type="loc">
                    <contact:name>Petit</contact:name>
                    <contact:addr>
                        <contact:street>1 rue Stephenson</contact:street>
                        <contact:city>Montigny le Bretonneux</contact:city>
                        <contact:sp/>
                        <contact:pc>78180</contact:pc>
                        <contact:cc>FR</contact:cc>
                    </contact:addr>
                </contact:postalInfo>
                <contact:email>contact@afnic.fr</contact:email>
                <contact:cldID>-yyyyyy-.fr</contact:cldID>
                <contact:crID>-yyyyyy-.fr</contact:crID>
                <contact:crDate>2019-07-02T09:05:11.0Z</contact:crDate>
                <contact:upDate>2019-07-02T09:05:11.0Z</contact:upDate>
            </contact:infData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:infData>
                        <frnic:contact>
                            <frnic:individualInfos>
                                <frnic:idStatus>no</frnic:idStatus>
                            </frnic:individualInfos>
                            <frnic:firstName>Marie</frnic:firstName>
                            <frnic:obsoleted>0</frnic:obsoleted>
                            <frnic:reachable>0</frnic:reachable>
                        </frnic:contact>
                    </frnic:infData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>v64bEG0F7d6LcyyIejBnWf0G</clTRID>
            <svTRID>FR-PREPROM-epp01-9427-119-1562058509.70128</svTRID>
        </trID>
    </response>
</epp>
```

Example of contact:info command for an individual with restricted publication

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <info>
            <contact:info xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>GFFD101</contact:id>
            </contact:info>
        </info>
        <clTRID>TEST-AUTO-1512566705252-xekopakove</clTRID>
    </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="63" id="58368753"/>
        <resData>
            <contact:infData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>GFFD101</contact:id>
                <contact:roid>GFFD101-FRNIC</contact:roid>
                <contact:status s="ok"/>
                <contact:postalInfo type="loc">
                    <contact:name>fazadibawuroboz denutawekupevolixopu</contact:name>
                    <contact:addr>
                        <contact:street>1 rue du test 1568816908867</contact:street>
                        <contact:city>Vimoutiers</contact:city>
                        <contact:sp/>
                        <contact:pc>61120</contact:pc>
                        <contact:cc>FR</contact:cc>
                    </contact:addr>
                </contact:postalInfo>
                <contact:voice>+0.00000000</contact:voice>
                <contact:fax>+0.00000000</contact:fax>
                <contact:email>xozupicudepepowecimiputur@auto-190918-cevexadozacidajabudu.re</contact:email>
                <contact:cID>-yyyyyy-.fr</contact:cID>
                <contact:crID>-yyyyyy-.fr</contact:crID>
                <contact:crDate>2019-09-18T14:28:29.0Z</contact:crDate>
                <contact:upDate>2019-09-18T14:28:29.0Z</contact:upDate>
            </contact:infData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www_afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:infData>
                        <frnic:contact>
                            <frnic:list>restrictedPublication</frnic:list>
                            <frnic:individualInfos>
                                <frnic:idStatus>no</frnic:idStatus>
                            </frnic:individualInfos>
                            <frnic:firstName>gikexasovapanuw fivabibajunoxiwelino</frnic:firstName>
                            <frnic:obsoleted>0</frnic:obsoleted>
                            <frnic:reachable>0</frnic:reachable>
                        </frnic:contact>
                    </frnic:infData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>TEST-AUTO-1568816909689-biletonabu</clTRID>
            <svTRID>FR-PROD-epp01-62659-216-1568816911.73968</svTRID>
        </trID>
    </response>
</epp>
```

Domain name management

Multi-year and expiry date calculation

Number of years available

Domain names can be registered and renewed for a period of 1 to 10 years.

Explicit renewal rules

The validity period of a .fr domain name can be from 1 to 10 years. This period may be renewed by a **RENEW** operation.

Functioning of explicit **RENEW**:

The **RENEW** operation renews the domain name over a maximum period of 10 years from the expiry date of the domain name.

Example conforming to the renewal rule for a maximum period of 10 years:

- Initial expiry date: 13/12/2016 at 12:34,
- Date of renew operation: 13/12/2016 at 12:54,
- Number of additional years requested: 10

The new expiry date requested should be 13/12/2026 at 12:34.

Example non-conforming to the renewal rule for a maximum period of 10 years:

- Initial expiry date: 14/12/2016
- Date of renew operation: 15/11/2015
- Number of additional years requested: 9

The **RENEW** command should renew the name until 14/12/2025. By calculating the number of years between the RENEW operation date and the new expiry date, the result is greater than 10 years. The renewal is therefore denied by the registration chain.

Special cases of TRANSFER, RECOVER and RESTORE operations:

If a **TRANSFER**, **RECOVER** or **RESTORE** operation involves a domain name for which the validity period is over 9 years at the time of the operation, the operation will not add 1 year but will change the expiry date so that it corresponds to 10 maximum years of registration.

The **TRANSFER**, **RECOVER** and **RESTORE** operations therefore are not blocked in this specific case.

Example of the specific case:

- Domain name expiry date: 09 September 2024
- Date of operation: 17 October 2014
- If the operation is completed successfully, the new expiry date will be: 17 October 2024

Rule for calculating expiration dates

Two rules must be taken into account to calculate the domain name expiration date when a Transfer operation is made :

1 / If a Transfer operation is initiated (Day + Month. Example: May 8) before the actual expiration date (Day + Month. Example: June 20) of the domain name (see Example 1) then the expiration date will be extended for one year.

The new expiration date will be:

- The day and month of the end of the transfer operation
- The actual domain name expiration date + 1 additional year

2 / If a Transfer operation is initiated (Day + Month. Example: May 8) after the actual expiration date (Day + Month. Example: January 2) of the domain name (see Example 2) then the expiration will remain the same one.

The new expiration date will be:

- The day and month of the end of the transfer operation
- The actual domain name expiration date

Examples

	Example 1	Example 2	Example 3	Example 4
Domain name expiry date	20/06/2015	02/01/2016	20/06/2015	20/06/2020
End of transfer	08/05/2015	08/05/2015	20/06/2015	04/04/2015
New expiry date	08/05/2016	08/05/2016	20/06/2016	04/04/2021

Grace periods

General description

Following:

- There is a 5-day grace period for **CREATE, TRANSFER and RENEW** operations,
- **DELETE** operations have a 30-day grace period,
- **AUTORENEW** operation have a 45-day grace period,

If the domain name is deleted during the grace period, the operation is charged and a credit note will be issued.

If the charged operation is an explicit or automatic transfer or renewal, the expiry date is reset to its value before the operation in question.

List, duration and description

List of grace periods activated for the .fr and the French Overseas Territories (as per [RFC 3915](#)):

Grace period	Duration (days)	Description
addPeriod	5	After a CREATE operation
transferPeriod	5	After a TRANSFER operation
renewPeriod	5	After a RENEW operation
redemptionPeriod	30	After a DELETE operation

Cancellation of a grace period

When a domain name is within the grace period and it is subject to a new fee-paying operation, the grace period corresponding to the initial operation is cancelled. If the new fee-paying operation entitles the holder to a grace period, it is activated at the end of this new operation.

Specific case:

A **DELETE** operation on a domain name during a grace period following a **CREATE "addPeriod"** operation does not trigger a redemption period "**redemptionPeriod**". The domain name immediately deleted and available again for registration.

The possible cases are summarised in the following table:

Initial operation / grace period activated	Operation performed during the grace period	Cancellation of the grace period (Yes/No)	New grace period activated	Billing of initial operation	Credit note (Yes/No)
CREATE / addPeriod	TRANSFER	Yes	transferPeriod	Yes	No
CREATE / addPeriod	RECOVER	Yes	-	Yes	No
CREATE / addPeriod	RENEW	Yes	renewPeriod	Yes	No
CREATE / addPeriod	DELETE	-	-	Yes	Yes
CREATE / addPeriod	UPDATE	No	-	Yes	No
RENEW / renewPeriod	TRANSFER	Yes	transferPeriod	Yes	No
RENEW / renewPeriod	RECOVER	Yes	-	Yes	No
RENEW / renewPeriod	RENEW	Yes	renewPeriod	Yes	No
RENEW / renewPeriod	DELETE	-	redemptionPeriod	Yes	Yes
RENEW / renewPeriod	UPDATE	No	-	Yes	No
TRANSFER / transferPeriod	TRANSFER	Yes	transferPeriod	Yes	No
TRANSFER / transferPeriod	RECOVER	Yes	-	Yes	No
TRANSFER / transferPeriod	RENEW	Yes	renewPeriod	Yes	No
TRANSFER / transferPeriod	DELETE	-	redemptionPeriod	Yes	Yes
TRANSFER / transferPeriod	UPDATE	No	-	Yes	No
DELETE / redemptionPeriod	RESTORE	-	-	No	No
AUTORENEW / autorenewPeriod	DELETE	Yes	redemptionPeriod	No	No

Credit note limit for CREATE operations

In the case of grace periods related to CREATE operations, we want to limit “domain tasting” and apply the same rule as ICANN.

The amount of the monthly credit note per registrar cannot exceed 50 domain names or 10% of the number of net creations per month. AFNIC retains the higher value of the two to set the credit note amount.

Qualification process (verification and substantiation)

The qualification process (see Procedures guide: article Qualification) concerns the holder of a domain name, but it can impact the status of the domain names of the holder's entire portfolio.

If the holder is in the substantiation procedure, this holder's entire portfolio of domain names will switch from suspended status to blocked status, which will modify the EPP status.

[Summary table of the operations allowed according to the status of the qualification procedure:](#)

Qualification procedure status	Whois: reachstatus	Whois: eligstatus	Operations denied	EPP status of the domain name
Start	Pending	Pending	contact:update	-
problem (suspended)	ok/-	ok/-	contact:update domain:update (registrar) domain:transfer	serverTransferProhibited
problem (blocked)	ok/-	ok/-	contact:update domain:transfer domain:restore domain:delete domain:update domain:create	serverHold serverUpdateProhibited serverDeleteProhibited serverTransferProhibited
Finished	ok/-	ok/-	none	-

For more details, please refer to the current version of the Procedures Guide and to the Qualification specifications.

Domain name settings

Minimum/maximum size of the label in LDH form, to the left of the . (dot): 1 to 63 characters

Minimum/maximum number of holder contacts: 1

Minimum/maximum number of administrative contacts: 1

Minimum/maximum number of technical contacts: 1 to 3

Minimum/maximum number of billing contacts: 0

Minimum/maximum number of creation years: 1 to 10

Minimum/maximum number of name servers: 0 to 8

Minimum/maximum number of DS records: 0 to 6

Minimum/maximum size of authInfo: 12 to 32 characters containing at least one lowercase, one uppercase and one digit.

The operations allowed on domain objects are as follows:

- CHECK
- CREATE
- UPDATE
- INFO
- TRANSFER
- RECOVER
- RENEW
- DELETE
- RESTORE

domain:check

The domain:check operation is used to verify the availability of a domain name and determine the reasons for its unavailability.

The availability in the domain:check is immediate availability.

If you are told that the domain name is available, you can immediately register it with a domain:create command.

Unavailability does not mean that the domain cannot be registered, but it is sometimes necessary to go through the preliminary stages (see the Procedures Guide).

Availability is indicated via a boolean (0 or 1) in the response to the domain:check:

- <domain:name avail="0">[domaine-non-disponible.fr](#)</domain:name> means that the domain is not available.
- <domain:name avail="1">[domaine-disponible.fr](#)</domain:name> means that the domain is available.

This response, in the case of an unavailable domain name, contains the reason for the unavailability: domain:reason.

Here are the messages in the domain:reason element in response to the domain:check:

Message	Details
In use	The domain name already exists. Whatever its status, a domain name being deleted, for example, is not available.
Zone not opened	The domain name belongs to a zone managed by AFNIC which is not open for registration.
Zone unknown	The domain name is not in a zone managed by AFNIC.
Bad syntax	The argument used as a parameter is not a domain name.
Equivalent name in use	An "equivalent" domain name already exists and prevents the domain name from being filed.
Forbidden name	The domain name is part of a list of terms which are subject to prior review to be filed.

The frnic extension provides additional information as to whether there is a "forbidden" or "reserved" term (terms subject to prior review).

There are 3 elements:

- frnic:name with reserved and forbidden attributes i.e. Boolean value 0 or 1,
- frnic:rsvReason if reserved=1 and provides the reason for the term being reserved,
- frnic:fbdReason if forbidden=1 and provides the reason for the term being forbidden.

It is possible to query up to 7 domain names. The response of the command will include the results for each domain name.

Example of domain:check command

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <check>
      <domain:check xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'>
        <domain:name>afnic.fr</domain:name>
      </domain:check>
    </check>
    <clTRID>rMVmEWKgUj2LL4UTZYj8K+ig</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="455" id="5493502"/>
    <resData>
      <domain:chkData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
        <domain:cd>
          <domain:name avail="0">afnic.fr</domain:name>
          <domain:reason>In use</domain:reason>
        </domain:cd>
      </domain:chkData>
    </resData>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:resData>
          <frnic:chkData>
            <frnic:domain>
              <frnic:cd>
                <frnic:name forbidden="0" reserved="0">afnic.fr</frnic:name>
              </frnic:cd>
            </frnic:domain>
          </frnic:chkData>
        </frnic:resData>
      </frnic:ext>
    </extension>
    <trID>
      <clTRID>rMVmEWKgUj2LL4UTZYj8K+ig</clTRID>
      <svTRID>FR-PREPROD-epp01-9418-142-1562074558.26767</svTRID>
    </trID>
  </response>
</epp>
```

domain:create

The domain:create operation is used to register a domain name. It consists of the following elements:

- The domain name,
- The holder contact,
- The administrative contact,
- 1 to 3 technical contacts,
- 0 to 8 authoritative hosts,
- 1 to 10 years of registration,
- The authInfo,
- With the secDNS-1.1 extension, it can also include DS records.

Example of the creation of a domain name

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <domain:create xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'>
        <domain:name>test-create-ipgrpekqblrnus339hhupvyo.fr</domain:name>
        <domain:period unit="y">1</domain:period>
        <domain:registrant>TEST21</domain:registrant>
        <domain:contact type="admin">TEST21</domain:contact>
        <domain:contact type="tech">TEST21</domain:contact>
        <domain:authInfo>
          <domain:pw>iv2252UtF8N/kF7atGH3iCaf</domain:pw>
        </domain:authInfo>
      </domain:create>
    </create>
    <clTRID>TMcF3I+zG01VS5gO7pJWDkVn</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="2484" id="5452892"/>
    <resData>
      <domain:creData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
        <domain:name>test-create-ipgrpekqblrnus339hhupvyo.fr</domain:name>
        <domain:crDate>2019-06-03T10:01:50Z</domain:crDate>
        <domain:exDate>2020-06-03T10:01:50Z</domain:exDate>
      </domain:creData>
    </resData>
    <trID>
      <clTRID>TMcF3I+zG01VS5gO7pJWDkVn</clTRID>
      <svTRID>FR-PREPROM-epp01-1853-288-1559556091.34028</svTRID>
    </trID>
  </response>
</epp>
```

Example of the creation of a domain name with hosts and DS key

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <domain:create xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'>
        <domain:name>test-create-oev5tnpt4f3bjrsxvonvhoebk6bx1l.fr</domain:name>
        <domain:period unit="y">1</domain:period>
        <domain:ns>
          <domain:hostObj>ns1.test-tri-epp.fr</domain:hostObj>
          <domain:hostObj>ns2.test-tri-epp.fr</domain:hostObj>
        </domain:ns>
        <domain:registrant>TEST21</domain:registrant>
        <domain:contact type="admin">TEST21</domain:contact>
        <domain:contact type="tech">TEST21</domain:contact>
        <domain:authInfo>
          <domain:pw>Hb79KEMn6s5+bizqLUzU140+J8zrkwPT</domain:pw>
        </domain:authInfo>
      </domain:create>
    </create>
    <extension>
      <secDNS:create xmlns:secDNS="urn:ietf:params:xml:ns:secDNS-1.1">
        <secDNS:dsData>
          <secDNS:keyTag>12346</secDNS:keyTag>
          <secDNS:alg>3</secDNS:alg>
          <secDNS:digestType>1</secDNS:digestType>
          <secDNS:digest>38EC35D5B3A34B44C39B38EC35D5B3A34B44C39B</secDNS:digest>
        </secDNS:dsData>
      </secDNS:create>
    </extension>
    <c1TRID>TeFrmzmhdqvDgP2yzFGsWLPb</c1TRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="2657" id="5452892"/>
    <resData>
      <domain:creData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
        <domain:name>test-create-oev5tnpt4f3bjrsxvonvhoebk6bx1l.fr</domain:name>
        <domain:crDate>2019-06-03T12:03:24Z</domain:crDate>
        <domain:exDate>2020-06-03T12:03:24Z</domain:exDate>
      </domain:creData>
    </resData>
    <trID>
      <c1TRID>TeFrmzmhdqvDgP2yzFGsWLPb</c1TRID>
      <svTRID>FR-PREPROD-epp01-1862-278-1559563394.20601</svTRID>
    </trID>
  </response>
</epp>
```

domain:create with authorisation code

For domain names subject to prior review, registration requires the provision of an authorisation code in the create command.

This operation requires the provision of the inseparable triplet "domain name / id of the holder contact / authorisation code" as well as new administrative and technical contact(s).

The operation is a domain:create with the authorisation code generated by AFNIC which you provide in the authInfo element of the command.

Be careful to use the same holder contact id provided to AFNIC to generate the authorisation code.

For information on obtaining an authorisation code, please refer to the Procedures Guide.

Example of creating a domain name with authorisation code

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <command>
        <create>
            <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0" xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0 domain-1.0.xsd">
                <domain:name>mairie-yyyy.fr</domain:name>
                <domain:period unit="y">1</domain:period>
                <domain:registrant>THDM223</domain:registrant>
                <domain:contact type="admin">THDM223</domain:contact>
                <domain:contact type="tech">THDM223</domain:contact>
                <domain:authInfo>
                    <domain:pw>CreateDo20190305RUZOCYBA27732719</domain:pw>
                </domain:authInfo>
            </domain:create>
        </create>
        <cLTRID>TEST-AUTO-1551802882629-bikuwulule</cLTRID>
    </command>
</epp>
```

server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="5" id="5452892"/>
        <resData>
            <domain:creData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>mairie-yyyy.fr</domain:name>
                <domain:crDate>2019-03-05T16:21:25Z</domain:crDate>
                <domain:exDate>2020-03-05T16:21:25Z</domain:exDate>
            </domain:creData>
        </resData>
        <trID>
            <cLTRID>TEST-AUTO-1551802882629-bikuwulule</cLTRID>
            <svTRID>FR-PREPROD-epp01-28289-128-1551802776.17475</svTRID>
        </trID>
    </response>
</epp>
```

domain:update

The domain:update operation is used to update the attributes of the domain name:

- Holder contact,
- Administrative contact,
- Technical contact(s),
- Authoritative host(s),
- DS record(s),
- authInfo,
- clientHold (publication of the domain name).

The command may include a single attribute or all the attributes. It is therefore possible to change all of your domain name attributes at the same time.

Depending on the attributes to change, here are the structures to use:

- For administrative and technical contact(s), for authoritative hosts and clientHold status:
Use **<domain:add>** and **<domain:rem>** (if an attribute must be replaced or removed) to indicate the new and old attributes. The order is important and you must therefore put **<domain:add>** before **<domain:rem>**, see examples below.
- For DS records:
Use the secDNS-1.1 extension which you must have declared during login. Use the elements **<secDNS:add>** and **<secDNS:rem>** (if records must be added or removed).
- For the holder contact and authInfo:
Use **<domain:chg>** by then providing only the final attribute(s) required.

Example of a domain name update with the addition of authoritative hosts and a change in technical contact

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <update>
            <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-190918-bamuxerudidetocuwebi.fr</domain:name>
                <domain:add>
                    <domain:ns>
                        <domain:hostObj>ns.1568817961262.cewasuvupuvanojigowa.com</domain:hostObj>
                    </domain:ns>
                    <domain:contact type="tech">MD38305</domain:contact>
                </domain:add>
                <domain:rem>
                    <domain:contact type="tech">WB3916</domain:contact>
                </domain:rem>
            </domain:update>
        </update>
        <clTRID>TEST-AUTO-1568817963637-vizesocuta</clTRID>
    </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="65" id="58368753"/>
        <trID>
            <clTRID>TEST-AUTO-1568817963637-vizesocuta</clTRID>
            <svTRID>FR-PROD-epp01-47028-457-1568817963.16194</svTRID>
        </trID>
    </response>
</epp>
```

Example of a domain name update with a change in authoritative hosts

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <update>
            <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-190918-bamuxerudidetocuwebi.fr</domain:name>
                <domain:add>
                    <domain:ns>
                        <domain:hostObj>ns.newhost.net</domain:hostObj>
                    </domain:ns>
                </domain:add>
                <domain:rem>
                    <domain:ns>
                        <domain:hostObj>ns.oldhost.net</domain:hostObj>
                    </domain:ns>
                </domain:rem>
            </domain:update>
        </update>
        <cLTRID>TEST-AUTO-1568817963637-vizesocuta</cLTRID>
    </command>
</epp>
```

Example of a domain name update with a change in holder

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <update>
            <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:chg>
                    <domain:registrant>TFB779</domain:registrant>
                </domain:chg>
            </domain:update>
        </update>
        <cLTRID>TEST-AUTO-1568819208690-pukugomiro</cLTRID>
    </command>
</epp>
```

Example of domain name update with the addition of a DS key

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <update>
            <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyyy.fr</domain:name>
            </domain:update>
        </update>
        <extension>
            <secDNS:update xmlns:secDNS="urn:ietf:params:xml:ns:secDNS-1.1">
                <secDNS:add>
                    <secDNS:dsData>
                        <secDNS:keyTag>58459</secDNS:keyTag>
                        <secDNS:alg>7</secDNS:alg>
                        <secDNS:digestType>2</secDNS:digestType>
                        <secDNS:
digest>4CD0B2E770C0C99FE454076334C19ABB185A88824812234B4E6E3A8FB7C3FC7E</secDNS:digest>
                    </secDNS:dsData>
                </secDNS:add>
            </secDNS:update>
        </extension>
        <clTRID>TEST-AUTO-1568819299225-genomugide</clTRID>
    </command>
</epp>
```

domain:info

The domain:info operation retrieves information about a domain name.

If you are not the registrar in charge of the domain name in question, you must provide the authInfo to perform the domain:info information operation.

The response that the server returns does not contain all the elements described in [RFC 5731](#):

- The first notable difference is the **<domain:roid>** element:
Although we have unique identifiers for domain names in our database, they do not quite meet the "specifications" defined in RFC.
A "roid" should be created for each creation of object in the database; a domain name once created, deleted and re-created should, logically, be assigned different "roids" for each create operation.
At Afnic, a unique ID is associated with a domain name when it is inserted for the first time into the database. It follows it, even if it is deleted in the meantime (it is never re-assigned).
To this unique ID we concatenate the "-FRNIC" suffix, as we do for all contact objects.
- The status of a domain name can be specified either in the **<resData>** part of the response or in the extensions. However, unlike the RFC, this information is not optional. A domain name that does not have a specific status necessarily has the **<domain:status s="ok"/>** element present in the **<resData>** part of the response. The particular statuses are prohibitions (*Prohibited*, *Hold), pending operations (pending*) and the absence of host (inactive). Similarly, the absence of this element necessarily implies that information on the status of the domain name is in the **<extension>** part of the response.
- The elements **<domain:crlD>** (the ID of the registrar that created the domain name the first time), **<domain:upID>** (the ID of the registrar that last updated the domain name) and **<domain:trDate>** (the date of the last completed transfer) are not present.

Example of the domain:info command for a domain name belonging to the registrar's portfolio

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <info>
      <domain:info xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'>
        <domain:name>test-tri-epp.fr</domain:name>
      </domain:info>
    </info>
    <cLTRID>M/WuZjOzt1PG0MuvHDV5izqP</cLTRID>
  </command>
</epp>
```

Server response

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="2484" id="5452892"/>
        <resData>
            <domain:infData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:roid>DOM000002965030-FRNIC</domain:roid>
                <domain:status s="clientHold"/>
                <domain:registrant>TEST22</domain:registrant>
                <domain:contact type="admin">TEST21</domain:contact>
                <domain:contact type="tech">TEST22</domain:contact>
                <domain:ns>
                    <domain:hostObj>nsl.test.net</domain:hostObj>
                </domain:ns>
                <domain:host>nsl.test-zzzzz.fr</domain:host>
                <domain:host>ns2.test-zzzzz.fr</domain:host>
                <domain:cID>-yyyyyyy-.fr</domain:cID>
                <domain:crDate>2016-04-20T12:00:10Z</domain:crDate>
                <domain:exDate>2021-04-20T12:00:10Z</domain:exDate>
                <domain:upDate>2018-03-15T12:52:39Z</domain:upDate>
                <domain:authInfo>
                    <domain:pw>TesttrtrTtyy1</domain:pw>
                </domain:authInfo>
            </domain:infData>
        </resData>
        <extension>
            <secDNS:infData xmlns:secDNS="urn:ietf:params:xml:ns:secDNS-1.1">
                <secDNS:dsData>
                    <secDNS:keyTag>12346</secDNS:keyTag>
                    <secDNS:alg>3</secDNS:alg>
                    <secDNS:digestType>1</secDNS:digestType>
                    <secDNS:digest>38EC35D5B3A34B44C39B38EC35D5B3A34B44C39B</secDNS:digest>
                </secDNS:dsData>
            </secDNS:infData>
        </extension>
        <trID>
            <clTRID>M/WuZjOzt1PG0MuvHDV5izqP</clTRID>
            <svTRID>FR-PREPROD-epp01-1859-231-1559555560.44493</svTRID>
        </trID>
    </response>
</epp>

```

Example of the domain:info command for a domain name not belonging to the registrar's portfolio with the auth info

```

<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <info>
            <domain:info xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:authInfo>
                    <domain:pw>RtzzZarfTT12</domain:pw>
                </domain:authInfo>
            </domain:info>
        </info>
        <clTRID>TEST-AUTO-1568819436159-ljiniminu</clTRID>
    </command>
</epp>

```

domain:transfer

The domain:transfer operation transfers a domain name to your portfolio.

Make a transfer

Specifics of the .fr for the domain:transfer command:

- The **<domain:pw>** element (sub-element of **<domain:authInfo>**) cannot be used with the “roid” attribute to indicate that the **authInfo** provided is linked to the holder or a contact associated with the domain name instead of the domain name itself. For the .fr, the **authInfo** can be linked only to the domain name.
- During the **TRANSFER**, the holder contact data is cloned in the incoming registrar (unless a “contact” object with exactly the same information already exists with this registrar). Be careful: the cloning occurs after the **transfer** operation has been completed.
- In RFC 5731, section 3.2.4, the **TRANSFER** command may include the optional **<domain:period>** element. Given that the transfer operation adds no more than one year of registration to the domain name, our EPP server will ignore the **<domain:period>** element provided and will not return an error message. Since the change is validated only at the end of the operation, the new expiry date is applied to the domain name at that time. As a result, the **<domain:exDate>** element is absent from the server response.
- The frnic extension is necessary to:
 - associate with the transferred domain name the technical and administrative contacts related to the registrar that carried out the **transfer**,
 - specify whether any DNSSEC configuration present (DS records) should be kept in case the **transfer** is successful.

Here are the specific elements found in the XML query sent by the EPP client:

Element name	Number of occurrences
<domain:pw>	1
<frnic:domain keepDS="0">	1
<frnic:contact type="admin">	1
<frnic:contact type="tech">	1-3

The keepDS element is an XML boolean and must be a value of either: 0, 1, true, false.

Its presence is mandatory.

The domain name has “pendingTransfer” status enabled.

Example of a transfer operation command

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <transfer op="request">
      <domain:transfer xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
        <domain:name>auto-yyyyy.fr</domain:name>
        <domain:period unit="y">1</domain:period>
        <domain:authInfo>
          <domain:pw>Test190918rthtr</domain:pw>
        </domain:authInfo>
      </domain:transfer>
    </transfer>
    <extension>
      <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
        <frnic:transfer>
          <frnic:domain keepDS="1">
            <frnic:contact type="admin">THM1136</frnic:contact>
            <frnic:contact type="tech">THM1136</frnic:contact>
          </frnic:domain>
        </frnic:transfer>
      </frnic:ext>
    </extension>
    <clTRID>TEST-AUTO-1568819610328-bufenufowe</clTRID>
  </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1001">
            <msg>Command completed successfully; action pending</msg>
        </result>
        <msgQ count="1" id="5498464" />
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:trStatus>pending</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-18T15:13:35.0Z</domain:reDate>
                <domain:acID>-yyyyyy-.fr</domain:acID>
                <domain:acDate>2019-09-19T15:13:35.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568819610328-bufenufowe</clTRID>
            <svTRID>FR-PREPROD-epp01-18354-655-1568819612.37829</svTRID>
        </trID>
    </response>
</epp>
```

Approve or reject a TRANSFER (only for the outgoing registrar)

When the transfer is initiated by a registrar, the current domain name registrar may approve the **TRANSFER** or reject it:

- Approving the **TRANSFER** will immediately validate the operation.
- Rejecting the **TRANSFER** will extend the operation deadline to 22 days.

For more details, please refer to the *Procedures Guide*.

Example of the approval of a transfer operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <transfer op="approve">
            <domain:transfer xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:authInfo>
                    <domain:pw>Test190918rthtr</domain:pw>
                </domain:authInfo>
            </domain:transfer>
        </transfer>
        <clTRID>TEST-AUTO-1568819615840-kunofipivi</clTRID>
    </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5498465"/>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:trStatus>clientApproved</domain:trStatus>
                <domain:reID>-xxxxxx.fr</domain:reID>
                <domain:reDate>2019-09-18T15:13:34.0Z</domain:reDate>
                <domain:acID>-yyyyyy.fr</domain:acID>
                <domain:acDate>2019-09-18T15:13:40.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568819615840-kunofipivi</clTRID>
            <svTRID>FR-PREPROD-epp01-10722-23-1568819609.00696</svTRID>
        </trID>
    </response>
</epp>
```

Example of the rejection of a transfer operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <transfer op="reject">
            <domain:transfer xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:authInfo>
                    <domain:pw>Test190918rthtr</domain:pw>
                </domain:authInfo>
            </domain:transfer>
        </transfer>
        <clTRID>TEST-AUTO-1568822312045-pezanubiro</clTRID>
    </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5498465"/>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:trStatus>clientRejected</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-18T15:58:30.0Z</domain:reDate>
                <domain:acID>-yyyyyy-.fr</domain:acID>
                <domain:acDate>2019-09-20T15:58:30.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568822312045-pezanubiro</clTRID>
            <svTRID>FR-PREPROM-epp01-17838-147-1568822304.52837</svTRID>
        </trID>
    </response>
</epp>
```

Cancel the TRANSFER (only for the incoming registrar)

It is possible, while the transfer is in progress, to cancel it with the domain:transfer {cancel} command.

Example of the cancellation of a transfer operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <transfer op="cancel">
            <domain:transfer xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:authInfo>
                    <domain:pw>Test190918rthtr</domain:pw>
                </domain:authInfo>
            </domain:transfer>
        </transfer>
        <clTRID>TEST-AUTO-1568822316366-wabaworoca</clTRID>
    </command>
</epp>
```

Server response

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5498464"/>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>auto-yyyyy.fr</domain:name>
                <domain:trStatus>clientCancelled</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-18T15:58:30.0Z</domain:reDate>
                <domain:acID>-xxxxxx-.fr</domain:acID>
                <domain:acDate>2019-09-18T15:58:39.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568822316366-wabaworoca</clTRID>
            <svTRID>FR-PREPROD-epp01-16992-679-1568822312.15536</svTRID>
        </trID>
    </response>
</epp>
```

Monitoring of operations for 2 registrars (incoming and outgoing)

The domain:transfer {query} operation to obtain information about a past or current TRANSFER is not available.

Instead, the server generates searchable EPP notifications in your notification queue, enabling monitoring of a current transfer operation.

Below is the list of notifications and the registrar concerned:

- TRANSFER initiated (only outgoing registrar): *Transfer requested*.
- TRANSFER approved (only for the incoming registrar): *Transfer approved*.
- TRANSFER rejected (only for the incoming registrar): *Transfer rejected*.
- TRANSFER completed (2 registrars): *Transfer completed*.
- TRANSFER cancelled (2 registrars): *Transfer aborted*.

frnic:recover - RECOVER

The frnic:recover operation enables a “forced” change in holder and may also allow a change in registrar in the same operation.

This operation is used in certain procedures.

For more details, please refer to the Procedures Guide.

This operation requires the provision of:

- The inseparable triplet “domain name / id of the contact holder / authorisation code” as well as new administrative and technical contact(s).
- The <frnic:keepDS> element (DNSSEC configuration).

Example of a forced transmission operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <extension>
        <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4" xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
            <frnic:command>
                <frnic:recover op="request">
                    <frnic:domain keepDS="1">
                        <frnic:name>test-yyyyyy.fr</frnic:name>
                        <frnic:authInfo>
                            <domain:pw>RECOVERD20130612ZYROMATA86393816</domain:
pw>
                            </frnic:authInfo>
                            <frnic:registrant>TEST22</frnic:registrant>
                            <frnic:contact type="admin">TEST22</frnic:contact>
                            <frnic:contact type="tech">TEST22</frnic:contact>
                        </frnic:domain>
                    </frnic:recover>
                    <frnic:clTRID>TEST-AUTO-1568822316366-wabaworoca</frnic:clTRID>
                </frnic:command>
            </frnic:ext>
        </extension>
    </epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5388288"/>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:recData>
                        <frnic:domain>
                            <frnic:name>test-yyyyyy.fr</frnic:name>
                            <frnic:reID>-yyyyyy-.fr</frnic:reID>
                            <frnic:reDate>2018-10-04T12:16:13.0Z</frnic:reDate>
                            <frnic:reHldID>TEST22</frnic:reHldID>
                            <frnic:acID>-yyyyyy-.fr</frnic:acID>
                            <frnic:acHldID>TEST21</frnic:acHldID>
                        </frnic:domain>
                    </frnic:recData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>TEST-AUTO-1568822316366-wabaworoca</clTRID>
            <svTRID>FR-PREPROD-epp01-2796-64-1538655355.67234</svTRID>
        </trID>
    </response>
</epp>
```

domain:renew - RENEW

The domain:renew operation allows you to renew a domain name for 1 to 10 years of the registration.

See section ==> Rule on maximum registration period.

The command requires the provision of:

- the domain name,
- the requisite number of additional years of registration,
- the current expiry date.

Note that we only accept the additional registration time in years.

Example of an explicit renew operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <renew>
            <domain:renew xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:curExpDate>2020-09-19</domain:curExpDate>
                <domain:period unit="y">1</domain:period>
            </domain:renew>
        </renew>
        <clTRID>TEST-AUTO-1568897110022-lowuvijuja</clTRID>
    </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5498465" />
        <resData>
            <domain:renData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:exDate>2021-09-19T12:45:07Z</domain:exDate>
            </domain:renData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568897110022-lowuvijuja</clTRID>
            <svTRID>FR-PREPROD-epp01-18334-646-1568897110.44946</svTRID>
        </trID>
    </response>
</epp>
```

domain:delete - DELETE

The domain:delete operation is used to delete a domain name. The latter then enters a redemption period for 30 days.

A domain:delete operation during an "addPeriod" does not trigger a redemption period; the domain is completely deleted and available again for registration.

For more details, please refer to the Procedures Guide.

The domain name has "pendingTransfer" statusenabled. This status can be viewed using the domain:info command.

The extension also indicates that the domain nm is in redemption period: "redemptionPeriod".

A notification is generated in your notification queue when the domain name is actually deleted after 30 days of redemption.

Example of deleting a domain:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <delete>
            <domain:delete xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-yyyyy.fr</domain:name>
            </domain:delete>
        </delete>
        <clTRID>TEST-AUTO-1568897116162-xudemotori</clTRID>
    </command>
</epp>
```

The server response after deletion of a domain that is not in addPeriod

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1001">
            <msg>Command completed successfully; action pending</msg>
        </result>
        <msgQ count="1" id="5498465" />
        <trID>
            <clTRID>TEST-AUTO-1568897116162-xudemotori</clTRID>
            <svTRID>FR-PREPROD-epp01-18334-648-1568897116.5731</svTRID>
        </trID>
    </response>
</epp>
```

The server response after deletion of a domain that is in addPeriod

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5340438" />
        <trID>
            <clTRID>TEST-AUTO-1534948981279-wibalubafo</clTRID>
            <svTRID>FR-PREPROD-epp01-23052-271-1534948981.4371</svTRID>
        </trID>
    </response>
</epp>
```

Recommendation :

Before performing a domain:delete command, we recommend that you perform a domain:info command to identify the list of hosts that depend on this domain name.

In fact, if the domain name to be deleted is used in the name of the host object and this host object is used by other domain names, your domain: delete command will not be successful.

You must first rename the host(s) using the domain name that you want to delete.

rgp:restore - RESTORE

The rgp:restore operation as part of a domain:update restores a domain name that is in a redemption period (following a deletion).

Specifics of the .fr:

Unlike the restoration in two phases that is practised for certain TLDs, for the .fr, the restoration is immediate and it is not necessary to send a report.

A notification is generated in your notification queue when the domain name has been restored to indicate that deletion has been aborted.

Attention: the rgp:restore operation as part of a domain:update does not allow any other parameter of the domain name to be modified. Any command containing another modified parameter will result in the failure of the command.

For example, we cannot restore and change the name servers in the same update command.

Example of a restore operation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <update>
            <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-yyyyy.fr</domain:name>
            </domain:update>
        </update>
        <extension>
            <rgp:update xmlns:rgp="urn:ietf:params:xml:ns:rgp-1.0">
                <rgp:restore op="request"/>
            </rgp:update>
        </extension>
        <clTRID>TEST-AUTO-1535035979240-vigefanesu</clTRID>
    </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1000">
            <msg>Command completed successfully</msg>
        </result>
        <msgQ count="1" id="5340438"/>
        <extension>
            <rgp:upData xmlns:rgp="urn:ietf:params:xml:ns:rgp-1.0">
                <rgp:rpgStatus s="pendingRestore"/>
            </rgp:upData>
        </extension>
        <trID>
            <clTRID>TEST-AUTO-1535035979240-vigefanesu</clTRID>
            <svTRID>FR-PREPROD-epp01-19200-57-1535035979.97785</svTRID>
        </trID>
    </response>
</epp>
```

Host management

Description

The EPP server is compliant with **RFC 5732** for all syntactic constraints, attributes, and the number of occurrences of each attribute.

The operations allowed on host objects are as follows:

- **CHECK**,
- **CREATE**,
- **UPDATE**,
- **INFO**,
- **DELETE**.

TRANSFER and **RENEW** operations are not supported.

EPP statuses are not supported.

Definitions:

Sponsor of a host object: the sponsor of a host object is a registrar that has created the host and that has the ability to perform the **UPDATE** and **DELETE** operations on this host object.

Specific case: In the case of domain names configured with glue hosts. If the domain is transferred, the glue host is also transferred. The incoming registrar becomes the sponsor of the host.

Internal host: this host is part of the .fr, .re, .yt, .tf, .pm and .wf zones.

External host: this host is not part of the .fr, .re, .yt, .tf, .pm and .wf zones.

host:check

The **<host:check>** command is used to know the availability of a host. It is useful in particular before initiating a host object create command.

Availability is indicated via a boolean (0 or 1) in the response to the host:check.

This response, in the case of an unavailable host, contains the reason for the unavailability: (<host:reason>In use</host:reason>).

This command accepts up to seven hosts as input.

The command consists of only one element:

- The name of the host object: **<host:name>**.

Example of a check command on 2 host objects

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <check>
      <host:check xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
        <host:name>vnq-supmlkmusxur.test-tri-epp.fr</host:name>
      </host:check>
    </check>
    <clTRID>D6jHsFBAfdGERV2aL8HonX4w</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="4848" id="5453534" />
    <resData>
      <host:chkData xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:cd>
          <host:name avail="0">elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
          <host:reason>In use</host:reason>
        </host:cd>
        <host:cd>
          <host:name avail="1">vnq-supmlkmusxur.test-tri-epp.fr</host:name>
        </host:cd>
      </host:chkData>
    </resData>
    <trID>
      <clTRID>D6jHsFBAfdGERV2aL8HonX4w</clTRID>
      <svTRID>FR-PREPROM-epp01-9428-97-1561716520.87121</svTRID>
    </trID>
  </response>
</epp>
```

In case of an error, the server returns the error code and the reason for the error.

host:create

A <host:create> command for a host object is made up of 2 elements:

- <host:name> The name of the host object. To create an **Internal host**, the domain name must necessarily exist.
- <host:addr ip="..."> 0 to 8 IP addresses associated with the host object. To create an External Host, the <host:create> command must not contain any IP addresses.

Example of the creation of a host object

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <create>
      <host:create xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7c1y8cb21dy.test-tri-epp.fr</host:name>
        <host:addr ip="v4">192.0.2.83</host:addr>
        <host:addr ip="v4">198.51.100.79</host:addr>
        <host:addr ip="v6">2001:db8:ea:f4:894e:9bf1:6:15cb:8e4a</host:addr>
      </host:create>
    </create>
    <clTRID>qU/dhdG9NqXdVlrfRTZNeGZc</clTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="4925" id="5452892"/>
    <resData>
      <host:creData xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7c1y8cb21dy.test-tri-epp.fr</host:name>
        <host:crDate>2019-06-28T09:55:58.0Z</host:crDate>
      </host:creData>
    </resData>
    <trID>
      <clTRID>qU/dhdG9NqXdVlrfRTZNeGZc</clTRID>
      <svTRID>FR-PREPROM-01-9421-98-1561715741.41304</svTRID>
    </trID>
  </response>
</epp>
```

In case of an error, the server returns the error code and the reason for the error.

host:update

The **<host:update>** command is used to update a host object. This operation is subject to conditions.

A host object can only be updated:

- by the Sponsor of the object (**<host:cID>** attribute of the object),
- in the case of an external host object (excluding .fr, etc.), if it is not used by a domain name of another registrar.

Only the IP addresses and the host name can be modified.

In the case of an external host, it is not possible to add IP addresses.

It is not possible to delete all the IP addresses of a glue host.

The command consists of only one mandatory element:

- **<host:name>** The name of the host object.

And 3 optional elements:

- **<host:add>** one or more **<host:addr>** to be added,
- **<host:rem>** one or more **<host:addr>** to be deleted,
- **<host:chg>** new **<host:name>** of this host object.

Example of update of a host object

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <update>
      <host:update xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
        <host:add>
          <host:addr ip="v4">203.0.113.32</host:addr>
        </host:add>
        <host:rem>
          <host:addr ip="v6">2001:0db8:ea:f4:894e:9b1f:f916:15cb:8e4a</host:addr>
        </host:rem>
        <host:chg>
          <host:name>vnq-supmlkmusxur.test-tri-epp.fr</host:name>
        </host:chg>
      </host:update>
    </update>
    <c1TRID>8g7n23AGOcn+Oy49aJlg2axC</c1TRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="1425" id="5489936"/>
    <trID>
      <c1TRID>8g7n23AGOcn+Oy49aJlg2axC</c1TRID>
      <svTRID>FR-PREPROD-epp01-9414-87-1561726673.38802</svTRID>
    </trID>
  </response>
</epp>
```

In case of an error, the server returns the error code and the reason for the error.

host:info

The **<host:info>** command provides all the information associated with a host object. The command consists of a single element:

- The name of the host object.

Example of a host object info request

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <info>
      <host:info xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
      </host:info>
    </info>
    <cLTRID>j9n+K6IUJ0sM/nXCos6g32zT</cLTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="4925" id="5452892"/>
    <resData>
      <host:infData xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
        <host:roid>HOST189296-FRNIC</host:roid>
        <host:addr ip="v4">192.0.2.83</host:addr>
        <host:addr ip="v4">198.51.100.79</host:addr>
        <host:addr ip="v6">2001:db8:eaf4:894e:9b1f:f916:15cb:8e4a</host:addr>
        <host:cLID>-naqjanir485-.fr</host:cLID>
        <host:cRID>-naqjanir485-.fr</host:cRID>
        <host:cRDate>2019-06-28T09:55:58.0Z</host:cRDate>
      </host:infData>
    </resData>
    <trID>
      <cLTRID>j9n+K6IUJ0sM/nXCos6g32zT</cLTRID>
      <svTRID>FR-PREPROM-epp01-9421-99-1561715761.16531</svTRID>
    </trID>
  </response>
</epp>
```

In case of an error, the server returns the error code and the reason for the error.

A domain:info command will allow you to identify the list of hosts that depend on this domain name.

host:delete

The **<host:delete>** command is used to delete a host object. This operation is subject to conditions:

- A host object can only be deleted by the object's sponsor (**<host:cIID>** attribute of the object)
- A host object cannot be deleted if it is associated with a domain object.

The command consists of only one element:

- The name of the host object.

Example of deletion of a host object

```
<?xml version="1.0"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
  <command>
    <delete>
      <host:delete xmlns:host="urn:ietf:params:xml:ns:host-1.0">
        <host:name>elrk7clyp8cb21dy.test-tri-epp.fr</host:name>
      </host:delete>
    </delete>
    <cLTRID>xax+4x1dBo2PmhB8jLU0BQAg</cLTRID>
  </command>
</epp>
```

Server response

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1000">
      <msg>Command completed successfully</msg>
    </result>
    <msgQ count="1737" id="5489554"/>
    <trID>
      <cLTRID>xax+4x1dBo2PmhB8jLU0BQAg</cLTRID>
      <svTRID>FR-PREPROD-epp01-9425-98-1561725468.20626</svTRID>
    </trID>
  </response>
</epp>
```

In case of an error, the server returns the error code and the reason for the error.

Recommendations

Internal Host objects under .fr, .pm, .re, .tf, .wf and .yt can only be modified by:

- the sponsor registrar
- if the host is not being used as a host by (at least) a locked domain (.FR Lock)

External host objects under .fr, .pm, .re, .tf, .wf and .yt can only be modified by:

- the sponsor registrar
- if the host is not already in use as a host for another domain name

We therefore recommend that you exclusively use host objects for which you are sponsor so that they are not modified without your knowledge /consent

ANSSI, in its good practices guide for the acquisition and operation of domain names <https://www.ssi.gouv.fr/guide/bonnes-pratiques-pour-lacquisition-et-exploitation-de-noms-de-domaine/>, recommends giving priority to glue delegations when the use of glueless delegations introduces new third-party dependencies.

Notifications

This notification queue displays notifications from the most recent to the oldest. We recommend that you empty this notification list as you go along.

The number of notifications received is displayed in all orders.

- There are two steps in viewing the notifications, req and ack
- The number of notifications present is systematically mentioned in all the responses of any command.

Management of the notification queue

Retrieve the first message from the queue

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <poll op="req" />
        <clTRID>TEST-AUTO-1568898762690-zarukapuri</clTRID>
    </command>
</epp>
```

Acknowledge receipt of the first message in the queue

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
    <command>
        <poll op="ack" msgID="5513145" />
        <clTRID>TEST-AUTO-1568898761540-bevosipazo</clTRID>
    </command>
</epp>
```

Asynchronous notifications

In this chapter we give examples of notification for:

- **TRANSFER approved** (incoming registrar),
- **TRANSFER completed** (incoming registrar),
- **TRANSFER aborted** (incoming registrar),
- **RESTORE completed**.

Example of notification following TRANSFER approved (incoming registrar)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="2" id="5513145">
            <qDate>2019-09-19T13:12:34.0Z</qDate>
            <msg>Transfer approved.</msg>
        </msgQ>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:trStatus>clientApproved</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-19T13:12:30.0Z</domain:reDate>
                <domain:acID>-yyyyyy-.fr</domain:acID>
                <domain:acDate>2019-09-19T13:12:34.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568898756760-rilukikusi</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-17-1568898751.09397</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following TRANSFER completed (incoming registrar)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513143">
            <qDate>2019-09-19T13:12:35.0Z</qDate>
            <msg>Transfer completed.</msg>
        </msgQ>
        <resData>
            <domain:panData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name paResult="1">test-zzzzz.fr</domain:name>
                <domain:paTRID>
                    <clTRID>TEST-AUTO-1568898746562-copefurere</clTRID>
                    <svTRID>FR-PREPROD-epp01-13695-16-1568898748.66892</svTRID>
                </domain:paTRID>
                <domain:paDate>2019-09-19T13:12:30.0Z</domain:paDate>
            </domain:panData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568898762690-zarukapuri</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-19-1568898763.13889</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following TRANSFER rejected (incoming registrar)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513150">
            <qDate>2019-09-19T13:24:47.0Z</qDate>
            <msg>Transfer rejected.</msg>
        </msgQ>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:trStatus>clientRejected</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-19T13:24:43.0Z</domain:reDate>
                <domain:acID>-yyyyyy-.fr</domain:acID>
                <domain:acDate>2019-09-21T13:24:43.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568899489380-nedicotawa</clTRID>
            <svTRID>FR-PREPROD-epp01-6842-52-1568899484.60678</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following TRANSFER aborted (incoming registrar)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513152">
            <qDate>2019-09-19T13:33:26.0Z</qDate>
            <msg>Transfer aborted.</msg>
        </msgQ>
        <resData>
            <domain:panData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name paResult="0">test-zzzzz.fr</domain:name>
                <domain:paTRID>
                    <clTRID>TEST-AUTO-1568899998735-bejajojiva</clTRID>
                    <svTRID>FR-PREPROD-epp01-14801-3-1568900001.01086</svTRID>
                </domain:paTRID>
                <domain:paDate>2019-09-19T13:33:22.0Z</domain:paDate>
            </domain:panData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1568900008140-zozegavigo</clTRID>
            <svTRID>FR-PREPROD-epp01-14801-5-1568900006.21608</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following RESTORE completed

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513157">
            <qDate>2019-09-19T13:37:25.0Z</qDate>
            <msg>Deletion aborted. Domain successfully restored.</msg>
        </msgQ>
        <resData>
            <domain:panData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name paResult="0">test-zzzzz.fr</domain:name>
                <domain:paTRID>
                    <clTRID>TEST-AUTO-1568900239669-zuwokegunu</clTRID>
                    <svTRID>FR-PREPROD-epp01-18334-658-1568900239.92342</svTRID>
                </domain:paTRID>
                <domain:paDate>2019-09-19T13:37:21.0Z</domain:paDate>
            </domain:panData>
        </resData>
        <trID>
            <clTRID>00d5478f1c2059af2c913284564a8807770f09c5</clTRID>
            <svTRID>FR-PREPROD-epp01-13260-24-1568900309.67868</svTRID>
        </trID>
    </response>
</epp>
```

Exogenous notifications

In this chapter we give examples of notification for:

- **TRANSFER** requested (outgoing registrar),
- **TRANSFER** completed (outgoing registrar),
- **TRANSFER** aborted,
- **RECOVER** completed (outgoing registrar),
- Notification of start of qualification procedure,
- Notification of end of qualification procedure:
 - Case of reachability and eligibility successfully completed and Case of reachability and/or eligibility failed
- Notification of switch to substantiation procedure:
 - In the event of a complaint, or a report without being able to check the eligibility and reachability data, or in case of contact details that are implausible
- Notification of the suspension of a domain name:
 - This notification is sent as many times as there are suspended domain names.
- Notification of the blocking of a domain name:
 - This notification is sent as many times as there are blocked domain names.
- Notification of the unblocking of a domain name portfolio:
 - The domain name switches from **serverHold** to **ok** if the unblocking corresponds to the positive outcome of the substantiation procedure. The domain name switches from **serverHold** to **serverTransferProhibited** if the unblocking corresponds to a return to the suspended state (exceptional cases). This notification is sent as many times as there are unblocked domain names.
- Notification of the end of the substantiation procedure with deletion of the portfolio:
 - The qualification process completed notification has already been presented earlier in this chapter. The notifications for deleted domain names are added to it. This notification is sent as many times as there are deleted domain names.
- Notification of the positive outcome of the substantiation procedure with unblocking of the portfolio and updating of the WHOIS database:
 - This corresponds to the issuance of the notifications already presented above ("Case of reachability and eligibility successfully completed" and "Portfolio unblocked notification").
- Contact obsolete notification
- Contact permanently deleted notification

Example of notification following TRANSFER requested (outgoing registrar)

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
  <response>
    <result code="1301">
      <msg>Command completed successfully; ack to dequeue</msg>
    </result>
    <msgQ count="1" id="5513536">
      <qDate>2019-09-24T08:03:21.0Z</qDate>
      <msg>Transfer requested.</msg>
    </msgQ>
    <resData>
      <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
        <domain:name>test-zzzzz.fr</domain:name>
        <domain:trStatus>pending</domain:trStatus>
        <domain:reID>-xxxxxx-.fr</domain:reID>
        <domain:reDate>2019-09-24T08:03:19.0Z</domain:reDate>
        <domain:acID>-yyyyyy-.fr</domain:acID>
        <domain:acDate>2019-09-25T08:03:19.0Z</domain:acDate>
      </domain:trnData>
    </resData>
    <trID>
      <clTRID>TEST-AUTO-1569312196688-bucimifewu</clTRID>
      <svTRID>FR-PREPROM-epp01-6842-103-1569312193.43237</svTRID>
    </trID>
  </response>
</epp>
```

Example of notification following TRANSFER completed (outgoing registrar)

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513543">
            <qDate>2019-09-24T08:58:40.0Z</qDate>
            <msg>Transfer completed.</msg>
        </msgQ>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:trStatus>clientApproved</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-24T08:58:33.0Z</domain:reDate>
                <domain:acID>-yyyyy-.fr</domain:acID>
                <domain:acDate>2019-09-24T08:58:40.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1569315518266-kapudoxoxe</clTRID>
            <svTRID>FR-PREPROD-epp01-13260-242-1569315523.27424</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following TRANSFER aborted

```
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513547">
            <qDate>2019-09-24T09:02:43.0Z</qDate>
            <msg>Transfer aborted.</msg>
        </msgQ>
        <resData>
            <domain:trnData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:trStatus>clientCancelled</domain:trStatus>
                <domain:reID>-xxxxxx-.fr</domain:reID>
                <domain:reDate>2019-09-24T09:02:40.0Z</domain:reDate>
                <domain:acID>-xxxxxx-.fr</domain:acID>
                <domain:acDate>2019-09-24T09:02:43.0Z</domain:acDate>
            </domain:trnData>
        </resData>
        <trID>
            <clTRID>TEST-AUTO-1569315763860-subadukiri</clTRID>
            <svTRID>FR-PREPROD-epp01-18951-48-1569315768.84683</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification following RECOVER completed (outgoing registrar)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513555">
            <qDate>2019-09-24T09:40:13.0Z</qDate>
            <msg>Recover completed.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:recData>
                        <frnic:domain>
                            <frnic:name>test-zzzzz.fr</frnic:name>
                            <frnic:reID>-xxxxxx-.fr</frnic:reID>
                            <frnic:reDate>2019-09-24T09:40:07.0Z</frnic:reDate>
                            <frnic:acID>-yyyyyyy-.fr</frnic:acID>
                        </frnic:domain>
                    </frnic:recData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>848d8779c121c63ff01680e377cdf3de8870d145</clTRID>
            <svTRID>FR-PREPROM-epp01-13695-196-1569318049.80374</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of start of qualification procedure

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513557">
            <qDate>2019-09-24T09:50:16.0Z</qDate>
            <msg>Qualification process begins.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:quaData>
                        <frnic:contact>
                            <frnic:id>TSR250</frnic:id>
                            <frnic:qualificationProcess s="start"/>
                            <frnic:legalEntityInfos>
                                <frnic:idStatus>pending</frnic:idStatus>
                                <frnic:legalStatus s="other">Test Nom</frnic:legalStatus>
                            </frnic:legalEntityInfos>
                            <frnic:reachability>
                                <frnic:reStatus>pending</frnic:reStatus>
                                <frnic:voice>+1.123456789</frnic:voice>
                                <frnic:email>mail@wwwwww.fr</frnic:email>
                            </frnic:reachability>
                        </frnic:contact>
                    </frnic:quaData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>fe9040b50eeded315d310aafb417e496cf273166</clTRID>
            <svTRID>FR-PREPROM-epp01-13695-212-1569318839.0036</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of end of qualification process (case of reachability and eligibility successfully completed)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513558">
            <qDate>2019-09-24T09:58:24.0Z</qDate>
            <msg>Qualification process finished.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:quaData>
                        <frnic:contact>
                            <frnic:id>TSR250</frnic:id>
                            <frnic:qualificationProcess s="finished"/>
                            <frnic:legalEntityInfos>
                                <frnic:idStatus when="2019-09-24T00:00:00"
source="registry">ok</frnic:idStatus>
                                <frnic:legalStatus s="other">Test Nom</frnic:
legalStatus>
                            </frnic:legalEntityInfos>
                            <frnic:reachability>
                                <frnic:reStatus>ok</frnic:reStatus>
                                <frnic:email>mail@wwwwww.fr</frnic:email>
                            </frnic:reachability>
                        </frnic:contact>
                    </frnic:quaData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>e05dfeb10251bd314f71d4ed04de68e13f4417e5</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-219-1569319129.72627</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of switch to substantiation procedure: In the event of a complaint, or a report without being able to check the eligibility and reachability data, or in case of contact details that are implausible

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513561">
            <qDate>2019-09-24T10:09:08.0Z</qDate>
            <msg>Qualification process in progress.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:quaData>
                        <frnic:contact>
                            <frnic:id>TSR250</frnic:id>
                            <frnic:qualificationProcess s="problem"/>
                            <frnic:legalEntityInfos>
                                <frnic:idStatus>pending</frnic:idStatus>
                                <frnic:legalStatus s="other">Test Nom</frnic:legalStatus>
                            </frnic:legalEntityInfos>
                            <frnic:reachability>
                                <frnic:reStatus>pending</frnic:reStatus>
                                <frnic:voice>+1.123456789</frnic:voice>
                                <frnic:email>mail@wwwwww.fr</frnic:email>
                            </frnic:reachability>
                        </frnic:contact>
                    </frnic:quaData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>af58c1333ebd73ebc742b4ba83f71e8b6e6fc3ea</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-238-1569319824.54205</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of the suspension of a domain name: This notification is sent as many times as there are suspended domain names

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="2" id="5513560">
            <qDate>2019-09-24T10:09:06.0Z</qDate>
            <msg>Holder qualification status prevents some operations.</msg>
        </msgQ>
        <resData>
            <domain:infData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:roid>DOM000000000001-FRNIC</domain:roid>
                <domain:status s="serverTransferProhibited"/>
                <domain:registrant>TSR250</domain:registrant>
                <domain:clID>-yyyyy-.fr</domain:clID>
            </domain:infData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:infData>
                        <frnic:domain>
                            <frnic:status s="serverTradeProhibited"/>
                        </frnic:domain>
                    </frnic:infData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>28bcd755a50ac650cbf185036c4899defe90a11d</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-235-1569319716.13073</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of the blocking of a domain name: This notification is sent as many times as there are blocked domain names

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513562">
            <qDate>2019-09-24T10:35:42.0Z</qDate>
            <msg>Holder qualification status prevents some operations.</msg>
        </msgQ>
        <resData>
            <domain:infData xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                <domain:name>test-zzzzz.fr</domain:name>
                <domain:roid>DOM000003066779-FRNIC</domain:roid>
                <domain:status s="serverHold"/>
                <domain:status s="serverDeleteProhibited"/>
                <domain:status s="serverUpdateProhibited"/>
                <domain:status s="serverTransferProhibited"/>
                <domain:registrant>TSR250</domain:registrant>
                <domain:cID>-yyyyy-.fr</domain:cID>
            </domain:infData>
        </resData>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:infData>
                        <frnic:domain>
                            <frnic:status s="serverTradeProhibited"/>
                        </frnic:domain>
                    </frnic:infData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <cLTRID>209b77feb408f0d0d9aadc10361a968086ef911f</cLTRID>
            <svTRID>FR-PREPROD-epp01-13695-266-1569321352.01065</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of the end of the substantiation procedure with deletion of the portfolio: The qualification process completed notification has already been presented earlier in this chapter. The notifications for deleted domain names are added to it. This notification is sent as many times as there are deleted domain names.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513570">
            <qDate>2019-09-24T12:11:33.0Z</qDate>
            <msg>Recover completed.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:recData>
                        <frnic:domain>
                            <frnic:name>test-zzzzz.fr</frnic:name>
                            <frnic:reID>-xxxxxx-.fr</frnic:reID>
                            <frnic:reDate>2019-09-24T12:11:30.0Z</frnic:reDate>
                            <frnic:acID>-yyyyyy-.fr</frnic:acID>
                        </frnic:domain>
                    </frnic:recData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>0971517be04e581ae45c89a5ff7ff357eb3c7857</clTRID>
            <svTRID>FR-PREPROM-epp01-10723-80-1569327065.43347</svTRID>
        </trID>
    </response>
</epp>
```

Example of notification of the positive outcome of the substantiation procedure with unblocking of the portfolio and updating of the WHOIS database:

This corresponds to the issuance of the notifications already presented above ("Case of reachability and eligibility successfully completed" and "Portfolio unblocked notification")

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513558">
            <qDate>2019-09-24T09:58:24.0Z</qDate>
            <msg>Qualification process finished.</msg>
        </msgQ>
        <extension>
            <frnic:ext xmlns:frnic="http://www.afnic.fr/xml/epp/frnic-1.4">
                <frnic:resData>
                    <frnic:quaData>
                        <frnic:contact>
                            <frnic:id>TSR250</frnic:id>
                            <frnic:qualificationProcess s="finished"/>
                            <frnic:legalEntityInfos>
                                <frnic:idStatus when="2019-09-24T00:00:00"
source="registry">ok</frnic:idStatus>
                                <frnic:legalStatus s="other">Test Nom</frnic:
legalStatus>
                            </frnic:legalEntityInfos>
                            <frnic:reachability>
                                <frnic:reStatus>ok</frnic:reStatus>
                                <frnic:email>mail@www.afnic.fr</frnic:email>
                            </frnic:reachability>
                        </frnic:contact>
                    </frnic:quaData>
                </frnic:resData>
            </frnic:ext>
        </extension>
        <trID>
            <clTRID>e05dfeb10251bd314f71d4ed04de68e13f4417e5</clTRID>
            <svTRID>FR-PREPROD-epp01-13695-219-1569319129.72627</svTRID>
        </trID>
    </response>
</epp>
```

Example of contact obsolete notification

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="1" id="5513160">
            <qDate>2019-09-20T02:33:19.0Z</qDate>
            <msg>Contact deletion planned</msg>
        </msgQ>
        <resData>
            <contact:infData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>TKM292</contact:id>
                <contact:roid>TKM292-FRNIC</contact:roid>
                <contact:status s="ok"/>
                <contact:postalInfo type="loc">
                    <contact:name>Test nom</contact:name>
                    <contact:org>Test org</contact:org>
                    <contact:addr>
                        <contact:street>1 rue du test</contact:street>
                        <contact:city>Paris</contact:city>
                        <contact:sp/>
                        <contact:pc>75000</contact:pc>
                        <contact:cc>FR</contact:cc>
                    </contact:addr>
                </contact:postalInfo>
                <contact:voice>+1.123456789</contact:voice>
                <contact:fax>+1.987654321</contact:fax>
                <contact:email>mail@wwwwww.fr</contact:email>
                <contact:cID>-yyyyyy-.fr</contact:cID>
                <contact:cRID>-yyyyy-.fr</contact:cRID>
                <contact:crDate>2019-06-21T02:12:13.0Z</contact:crDate>
                <contact:upDate>2019-09-20T02:33:18.0Z</contact:upDate>
            </contact:infData>
        </resData>
        <trID>
            <cLTRID>5711a62997c08fd2514cd88d2fb37e6981705b50</cLTRID>
            <svTRID>FR-PREPROM-epp01-19087-39-1569309947.13702</svTRID>
        </trID>
    </response>
</epp>
```

Example of contact permanently deleted notification

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="1301">
            <msg>Command completed successfully; ack to dequeue</msg>
        </result>
        <msgQ count="201" id="5513166">
            <qDate>2019-09-20T02:33:35.0Z</qDate>
            <msg>Contact deletion completed</msg>
        </msgQ>
        <resData>
            <contact:infData xmlns:contact="urn:ietf:params:xml:ns:contact-1.0">
                <contact:id>TIDC226</contact:id>
                <contact:roid>TIDC226-FRNIC</contact:roid>
                <contact:status s="ok"/>
                <contact:postalInfo type="loc">
                    <contact:name>Test nom</contact:name>
                    <contact:org>Test org</contact:org>
                    <contact:addr>
                        <contact:street>1 rue du test</contact:street>
                        <contact:city>Paris</contact:city>
                        <contact:sp/>
                        <contact:pc>75000</contact:pc>
                        <contact:cc>FR</contact:cc>
                    </contact:addr>
                </contact:postalInfo>
                <contact:voice>+1.123456789</contact:voice>
                <contact:fax>+1.987654321</contact:fax>
                <contact:email>mail@wwwwww.fr</contact:email>
                <contact:cID>-yyyyyy-.fr</contact:cID>
                <contact:cRID>-yyyyyy-.fr</contact:cRID>
                <contact:crDate>2019-06-07T02:27:34.0Z</contact:crDate>
                <contact:upDate>2019-09-05T02:33:18.0Z</contact:upDate>
            </contact:infData>
        </resData>
        <trID>
            <clTRID>e33a4a5f2112d64066670f511b2721aaa12457ba</clTRID>
            <svTRID>FR-PREPROM-epp01-19087-66-1569310849.73098</svTRID>
        </trID>
    </response>
</epp>
```

Return codes and error messages

Although it is strongly recommended to refer to **RFC 4930** which contains an exhaustive list of all return codes that can be sent by an EPP server following a command from a client, we indicate below those actually implemented in our server.

You will also find a list of error messages that the server will return when necessary.

While it is important to correctly interpret the return codes, as the list is not liable to change and their interpretation is little prone to ambiguity, it is risky to script error messages.

These can change according to new administrative rules, and some cases may be refined.

They are most often associated with a part of the client request whose problematic elements will be replicated in the server response. In addition, even if at the time of writing this document, only English is available as a language choice, any new language will result in the localisation of the error messages. Return codes, however, are not affected by this "problem".

Here is an example of a message returned by the server following a command that contains an error:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<epp xmlns="urn:ietf:params:xml:ns:epp-1.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
    <response>
        <result code="2004">
            <msg>Parameter value range error</msg>
            <extValue>
                <value xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
                    <domain:hostObj>ns2.host-test.fr</domain:hostObj>
                </value>
                <reason>host object doesn't exist</reason>
            </extValue>
        </result>
        <trID>
            <c1TRID>1e022a2c3cff3de103ff065f80e49c676d8c4fd7</c1TRID>
            <svTRID>FR-PREPROD-epp01-10723-219-1569333364.15883</svTRID>
        </trID>
    </response>
</epp>
```

Return codes

The return codes (element `<result code="xyzz">`) respond to a logic and are coded in 4 digits.

The **RFC 4930** describes the literal values that are associated with these codes and returned in the `<msg>` element. If the server has to be localised, a corresponding translation will be proposed; the meaning of titles will however be kept as close as possible.

The "1000 series" corresponds to the codes returned when the operation requested by the client has been taken into account:

- **1000:** This is the normal return code for a command that has been normally and completely executed and is not addressed by any other return code for this series.
- **1001:** This code indicates that the command has been taken into account but that its complete execution has been delayed. The final result will be known later on and will be sent in a message placed in the notification queue of the registrar(s) concerned by this operation. The number of commands for which this code is systematically returned is limited, but it is also returned if, for unusual reasons, the server needs to delay the execution of a command (only for restore) that would normally return a **1000** code.
- **1300:** This result code is reserved for the `<polls>` command (in query mode) and indicates that there are no pending messages.
- **1301:** This result code is also reserved for the `<polls>` command and indicates that there is a message in the server's response that is ready to be deleted from the message queue.
- **1500:** This return code will be used to respond to a successful `<logout>` request.

The "2000 series" corresponds to the codes returned when a problem has been encountered and the command could not be taken into account normally.

- **2000:** Code returned when the command sent is unknown.
- **2001:** Code returned when a syntax error has been encountered.
- **2002:** Code returned when the command received is syntactically correct but cannot be interpreted because it is out of context.
 - Example: a logout command received while the client has not yet completed the login phase.
- **2003:** Code returned when a required parameter is missing in a command.
 - Example: a `<transfer op="query">` command for which the `<authInfo>` element is missing.
- **2004:** Code returned when the value of an element is outside the range specified by the EPP protocol.
 - Example: trying to create the domain name "`trop-de-tirets- -et-d-espaces-.fr`" will return this type of error.
- **2101:** This code is returned when the server receives a valid EPP command that however is not implemented in our integration.
 - Example: a `<contact:transfer>` command.
- **2102:** This code is returned when the client sends a command that is implemented by our server but contains an option that is not implemented.
- **2103:** This code is returned if the client sends a command containing an extension that is unknown to the server.
- **2106:** Code returned when `<domain:transfer>` command is executed on a domain name which is not eligible for transfer. For example, if the request is from the registrar that already manages this domain name.
- **2200:** Code returned when validating the login/password while logging in to the EPP server.
- **2201:** Code returned when the registrar attempts to execute a command for which it does not have the rights.
 - Example: an outgoing registrar that tries to send a "cancel" command on a domain name after a **TRANSFER** operation.
- **2202:** Code returned when the registrar wishing to execute a command could have done so if it had provided the correct authorisations. This code is typically used for a domain name **TRANSFER** request when the password provided (`<authInfo>`) is invalid.
- **2300:** Code returned when a domain name **TRANSFER** command is sent and the domain in question is already pending **TRANSFER**.
- **2304:** Code returned when the status of an object is not compatible with the command sent to the server.
 - Example: a domain name update command sent when the domain has the "deleted" status and is in the redemption period.
- **2305:** Code returned when the execution of a command cannot be completed due to dependencies on other objects in the database prevent it.
 - Example: a domain name deletion request when the zone still contains name servers used for other domain names administered by AFNIC.
- **2306:** Code returned when the server receives a syntactically valid EPP command element value that however does not comply with an AFNIC-specific rule. In most cases, the error returned indicates the problematic element as well as the rule that was not complied with. Sometimes the error message is not present, this code being used as a default value.
 - Example: when an individual type of contact with civil status data (a potential holder of a domain name) is used as a technical contact in a command.
- **2400:** Code returned when an internal problem is preventing the command from being completed. This code indicates that our registration chain is encountering problems. It is important to warn the AFNIC support service when this event occurs.
- **2500:** Code returned in a case similar to code 2400. But in this case the server decides to close the session. It is important to warn the AFNIC support service when this event occurs.
- **2501:** This code is returned if the `<login>` phase cannot be completed.
- **2502:** This code is returned if the number of sessions per registrar is limited and if the limit has been reached when a new `<login>` command is sent.

Error messages

The list of messages reproduced below corresponds to what is indicated in the **<reason>** element of the server response.

Unlike the content of the **<msg>** element, whose final list can be found in [RFC 4930](#), this list is liable to change. Some cases can be refined while others may disappear, depending on changes in registration policies, for example. For now, only an English version exists for these messages.

The first list concerns the errors that may be encountered during operations on domain names.

- « not an AFNIC zone »,
- « zone is not opened for registration »,
- « domain name in use »,
- « domain name doesn't exist »,
- « domain name in use (deletion process) »,
- « domain name in use (deletion process, waiting for purge) »,
- « bad syntax »,
- « registry bad syntax »,
- « forbidden Name »,
- « city name (AFNIC authinfo mandatory) »,
- « special request (AFNIC authinfo mandatory) »,
- « protected Sub Level Domain (AFNIC authinfo mandatory) »,
- « protected label syntax (AFNIC authinfo mandatory) »,
- « no operation allowed on this domain name »,
- « authInfo value is not correct »,
- « authInfo/holder/registrar/domain relationship is invalid »,
- « legal entity infos seems to be incorrect »,
- « there are still subordinate hosts »,
- « registrant is not a sponsored contact »,
- « registrant is not a "physical person" »,
- « registrant seems to have a bad birth date »,
- « identification data problem »,
- « registrant is obsoleted »,
- « admin contact has no E-Mail address »,
- « admin contact has no phone number »,
- « admin contact is not a sponsored contact »,
- « admin contact doesn't exist »,
- « admin contact is obsoleted »,
- « tech contact doesn't exist »,
- « tech contact is not a sponsored contact »,
- « potential holder physical person contact can't be used as a tech contact »,
- « other operation in progress »,
- « glue is needed for this name server »,
- « holder identification problem prevents it's usage »,
- « holder identification problem prevents operation »,
- « legal issue prevents operation »,
- « pending request prevents operation »,
- « mandatory admin or technical contact is missing »,
- « similar domain name already exists »,
- « domain name MUST have, at least, TWO different name servers »,
- « domain name MUST have either 0 or, at least, TWO different name servers ».

The second list concerns the errors that may be encountered during operations on contacts.

- « country code is illegal »,
- « country code is undefined »,
- « street is illegal »,
- « street is undefined »,
- « post code is illegal »,
- « post code is undefined »,
- « city is illegal »,
- « city is undefined »,
- « city cedex is illegal for this country »,
- « city cedex is illegal »,
- « birth place geographical check failure »,
- « non-profit announcePage mandatory if publishedDate present »,
- « non-profit publishedDate mandatory if announcePage present »,
- « can't update contact disclosure restriction for legal entitie holders »,
- « can't update contact disclosure restriction for tech class »,
- « can't update contact country code for tech class »,
- « can't update phone number »,
- « 'legalStatus' value is illegal »,
- « phone number is illegal »,
- « fax number is illegal »,
- « bogus organization contact without extended data. Should not exist. »

Must not be used in operations »:

- « waldec ID prohibited if 'legalStatus' is set to 'company' »,
- « non-profit publishedDate prohibited if 'legalStatus' is set to 'company' »,
- « 'trademark' element value seems to be syntactically incorrect according AFNIC rules »,
- « role objects can't be updated through EPP interface »,
- « 'siren' element value seems to be syntactically incorrect according AFNIC rules »,
- « contact handle is illegal »,
- « registrant doesn't exist ».

Operations manageable only by email

For situations requiring a reply mail, you will receive an email from this address auto-gdd@afnic.fr in addition to the informative notification.

Qualification procedure monitoring notification

In parallel to the EPP notifications, email notifications are sent to registrars not using EPP.

Format of the email notifications:

Start of the qualification process

From: valorisation@afnic.fr

Subject: [Qxxxxx] AFNIC - Qualification ET1323-FRNIC - STATUS=start
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS=start

[Texte conclusif]

End of the qualification process

From: valorisation@afnic.fr

Subject: [Qxxxxx] AFNIC - Qualification ET1323-FRNIC - STATUS=finished
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS= finished

ELIG=Ok ou Ko

REACH=Ok ou Ko

[Texte conclusif]

Switch to “problem” status

From: Afnic <justification@afnic.fr>
Subject: [Qxxxxx] AFNIC - Qualification ET1323-FRNIC - STATUS=problem
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS=problem

[Texte conclusif]

Notification of suspension, bloking and deletion of domain name portfolio

When a domain name portofolio is subject to a justification procedure, the domain names associated with the portfolio are suspended.

Without receipt of the supporting documents requested from the holder during the suspension period, the domain names associated with the holder are blocked for a period of 30 days.

Without receipt of the supporting documents requested from the holder during the blocking period, the domain names associated with the holder are deleted.

At each stage of the procedure (suspension/blocking/deletion of the portofolio), a notification email is sent to the registrar and to the holder of the domain names in question.

For more details, please refer to the current version of the Procedures Guide.

Format of the email notifications concerning the suspension/blocking/deletion of a portfolio of domain names:

Suspension of domain name portfolio

From: justification@afnic.fr
Subject: [Qxxxxx] AFNIC - Justification ET1323-FRNIC - Gel de portefeuille de domaines / Substantiation ET1323-FRNIC - Suspension of domain name portfolio
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS=problem

DOMAIN=nomededomaine1.fr

DOMAIN=nomededomaine2.fr

[Texte conclusif]

Blocking of domain name portfolio

From: justification@afnic.fr
Subject: [Qxxxxx] AFNIC - Justification ET1323-FRNIC - Blocage de portefeuille de noms de domaine / Substantiation ET1323-FRNIC - Blocking of domain name portfolio
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS=problem

DOMAIN=nomededomaine1.fr

DOMAIN=nomededomaine2.fr

[Texte conclusif]

unlocking of a domain name portfolio (an email per domain name)

From: "Équipe Afnic/Afnic Team" <nic@nic.fr>
Subject: FR-NIC, nomdedomaine1.fr: Fini/Completed [NICxxxxxxxxxxxx]
To: noc

[Texte introductif]

DOMAIN/DOMAIN=nomededomaine1.fr
OPERATION/OPERATION=Deblocage/Unblock
ETAT/STATUS=Fini/Completed

TICKET/TICKET=NICxxxxxxxxxxxx/yyyyyy

[Texte conclusif]

Deletion of a domain name portfolio

From: justification@afnic.fr
Subject: [Qxxxxx] AFNIC - Justification ET1323-FRNIC - Suppression de portefeuille de domaines / Substantiation ET1323-FRNIC - Deletion of a domain name portfolio
To: noc

[Texte introductif]

HOLDER=ET1323-FRNIC

STATUS=problem

DOMAIN=nomdedomaine1.fr

DOMAIN=nomdedomaine2.fr

[Texte conclusif]

Justification email

Whether the registrar works with EPP or email, in the case of substantiation procedure, an email is sent by justification@afnic.fr to request additional information in order to solve the problem.

DAS (Domain Availability Service)

The domain availability check service DAS (*Domain Availability Service*) is preferable to the EPP <check> command.

This service is based on a standard whose technical specifications can be found in:

- **RFC 5144** (*A Domain Availability Check (DCHK) Registry Type for the Internet Registry Information Service (IRIS)*) for a description of the data structures used,
- **RFC 4993** (*A Lightweight UDP Transfer Protocol for the Internet Registry Information Service*) for a description of the transport protocol.

Settings to query the service

In production, the server name and port number are not necessary thanks to automatic discovery.

E.g. **dchk afnic.fr**

On the test bench, it is necessary to indicate the test server: **dchk.sandbox.nic.fr** and the port number: **715**

E.g. **dchk -h dchk.sandbox.nic.fr -p 715 nic.fr**

Available information

Domain name validity tested

The first tests concern the validity of the domain name. A specific error code will be returned if the name syntax is not correct, either because of the presence of forbidden characters or because of a rule specific to AFNIC (domain names with only one letter for example).

Availability of the domain name

This is the primary function of this service. If the answer is "**nameNotFound**", the domain name can be filed and will be subject to no special restrictions on registration. In addition, in the case of an existing domain name, the "**redemptionPeriod**" and "**delete**" statuses indicate that the domain is in redemption period after a delete operation in the case of the former status, and the domain name will be destroyed in the case of the latter status (redemption period ended awaiting the Garbage Collector).

Status of DNS publishing

When a domain name is in the registry, the service distinguishes between whether the domain name has been published in the DNS or not:

- If the "**active**" status is returned for a domain name, it means that it exists and has been published in the DNS.
- The "**inactive**" status indicates on the other hand that the domain name exists but has not been published in DNS.

Information on restrictions on the domain name

Whether registered or not, a domain name may be subject to certain limitations on registration.

Some are binding, others require authorisation codes.

In both cases, we have been forced to introduce certain types of "sub-status" specific to AFNIC in order to be more accurate in the information returned.

Reserved domain names:

For these domain names in "**reserved**" status, a procedure with an authorisation code is required:

- "city" indicates that the name is reserved for a city.
- "special"/"sld"/"protectedLabel" are subject to specific legal frameworks.

Another type of restriction ("policyNonCompliant" status)

Domain names in "**policyNonCompliant**" status cannot be registered:

- "forbidden" indicates that the name can never be registered.
- "equivalentExists" indicates that a domain name with the same label already exists in the zone.

Key dates for existing domain names

Up to three dates can be returned for a given domain name:

- The creation date "**createdDateTime**" of the domain name,
- The last modification date "**lastDatabaseUpdateDateTime**",
- The domain name's expiry date "**expirationDateTime**".

It is important to note that for the sake of consistency, we use exactly the same date format as the EPP server. Dates are in UTC format.

DAS and IDN

The consideration of IDNs is an integral part of the existing DAS protocol at AFNIC, namely **IRIS:DCHK** ([RFC 5144](#)). However this protocol refers to the **IDNA2003** standard.

In that implemented by AFNIC ([IDNA2008](#)), the **NamePrep** step no longer exists. However, as discussed above in the section on IDN, given the alphabet used, and in order to be consistent with our other interfaces and current practices at AFNIC, we also accept uppercase input.

It is possible to query an IDN in its ASCII or Unicode form. On the other hand, the '**entityClass**' attribute of the **<lookupEntity>** element will not be the same:

- In the case of an ASCII form, indicate "**domain-name**".
- In the case of a Unicode form, indicate "**idn**".

This is not specific to AFNIC. If your client code complies with the RFC, no change is to be expected.

The response, in the case of an IDN query, contains an additional element, namely **<idn>** containing the Unicode version of the domain name.

However, unlike the input domain, only 67 characters specified in § 2. IDNs are used as output (no capital letters). The **<domainName>** element of the response will always contain the ASCII form of the domain name. The values of the '**entityClass**' and '**entityName**' attributes in the response will be identical to those in the query.

Examples of DAS queries and responses

Example of DAS query in verbose mode

```
dchk -v --ex afnic.fr
```

Example of response to a DAS query on a domain name that does not exist and is not subject to any restrictions

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="nom-de-domaine-qui-n-existe-pas.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer/>
    <iris:nameNotFound/>
  </iris:resultSet>
</iris:response>

[Result]
nom-de-domaine-qui-n-existe-pas.fr: free
```

Example of response to a DAS query on a domain name that does not exist and is subject to prior review

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="mairie-xxxxxxxx.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="mairie-xxxxxxxx.fr">
        <domainName>mairie-xxxxxxxx.fr</domainName>
        <status>
          <reserved>
            <subStatus authority="fr">protectedLabel</subStatus>
            <description language="en">Protected label syntax</description>
          </reserved>
        </status>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
mairie-xxxxxxxx.fr: reserved
```

Example of response to a DAS query on an invalid domain name

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="domaine@incorrect.fr" />
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer/>
    <iris:invalidName/>
  </iris:resultSet>
</iris:response>

[Result]
domaine@incorrect.fr: invalid
```

Example of response to a DAS query on a domain name that exists and published in the DNS (which is not subject to any restrictions)

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="test.fr" />
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="test.fr">
        <domainName>test.fr</domainName>
        <status>
          <active/>
        </status>
        <createdDateTime>2003-12-16T23:00:00</createdDateTime>
        <lastDatabaseUpdateDateTime>2017-06-28T14:29:34</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
test.fr: active [2017-06-28T14:29:34]
```

Example of response to a DAS query on a domain name that exists but not published in the DNS (which is not subject to any restrictions)

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="test-zzzzz.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="test-dba-web-20180222.fr">
        <domainName>test-zzzzz.fr</domainName>
        <status>
          <inactive/>
        </status>
        <createdDateTime>2018-02-22T08:01:42</createdDateTime>
        <lastDatabaseUpdateDateTime>2019-03-07T15:07:43</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
test-zzzzz.fr: inactive [2019-03-07T15:07:43]
```

Example of response to a DAS query on a domain name that is deleted and is in redemption period

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="test-zzzzz.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="test-zzzzz.fr">
        <domainName>test-zzzzz.fr</domainName>
        <status>
          <inactive/>
          <redemptionPeriod/>
        </status>
        <createdDateTime>2017-12-11T08:51:35</createdDateTime>
        <expirationDateTime>2019-10-24T14:13:21</expirationDateTime>
        <lastDatabaseUpdateDateTime>2019-09-24T14:13:21</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
test-zzzzz.fr: redemptionPeriod [2019-09-24T14:13:21]
```

Example of response to a DAS query on an IDN domain name in its Unicode form

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="domain-name" entityName="xn--ceci-est-un-domaine-avec-un-accent--9dd.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="xn--ceci-est-un-domaine-avec-un-accent--9dd.fr">
        <domainName>xn--ceci-est-un-domaine-avec-un-accent--9dd.fr</domainName>
        <idn>ceci-est-un-domaine-avec-un-accent-é.fr</idn>
        <status>
          <inactive/>
        </status>
        <createdDateTime>2019-09-24T14:32:03</createdDateTime>
        <lastDatabaseUpdateDateTime>2019-09-24T14:32:03</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
xn--ceci-est-un-domaine-avec-un-accent--9dd.fr: inactive [2019-09-24T14:32:03]
```

Example of response to a DAS query on an IDN domain name in its ACE form

```
[Request beautified]
<?xml version="1.0" encoding="UTF-8"?>
<iris1:request xmlns:iris1="urn:ietf:params:xml:ns:iris1">
  <iris1:searchSet>
    <iris1:lookupEntity registryType="dchk1" entityClass="idn" entityName="ceci-est-un-domaine-avec-un-accent-é.fr"/>
  </iris1:searchSet>
</iris1:request>

[Response beautified]
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="idn" entityName="ceci-est-un-domaine-avec-un-accent-é.fr">
        <domainName>xn--ceci-est-un-domaine-avec-un-accent--9dd.fr</domainName>
        <idn>ceci-est-un-domaine-avec-un-accent-é.fr</idn>
        <status>
          <inactive/>
        </status>
        <createdDateTime>2019-09-24T14:32:03</createdDateTime>
        <lastDatabaseUpdateDateTime>2019-09-24T14:32:03</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
</iris:response>

[Result]
ceci-est-un-domaine-avec-un-accent-é.fr: inactive [2019-09-24T14:32:03]
```

Example of response to a DAS query on different domain names with different properties

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<iris:response xmlns:iris="urn:ietf:params:xml:ns:iris1">
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="test-zzzzz.fr">
        <domainName>test-zzzzz.fr</domainName>
        <status>
          <inactive/>
          <redemptionPeriod/>
        </status>
        <createdDateTime>2017-12-11T08:51:35</createdDateTime>
        <expirationDateTime>2019-10-24T14:13:21</expirationDateTime>
        <lastDatabaseUpdateDateTime>2019-09-24T14:13:21</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="afnic.fr">
        <domainName>afnic.fr</domainName>
        <status>
          <active/>
        </status>
        <createdDateTime>2001-12-10T23:00:00</createdDateTime>
        <lastDatabaseUpdateDateTime>2018-08-02T21:54:41</lastDatabaseUpdateDateTime>
      </domain>
    </iris:answer>
  </iris:resultSet>
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="nazi.fr">
        <domainName>nazi.fr</domainName>
        <status>
          <policyNoncompliant>
            <subStatus authority="fr">forbidden</subStatus>
            <description language="en">Legal issue</description>
          </policyNoncompliant>
        </status>
      </domain>
    </iris:answer>
  </iris:resultSet>
  <iris:resultSet>
    <iris:answer>
      <domain xmlns="urn:ietf:params:xml:ns:dchk1" authority="fr" registryType="dchk1" entityClass="domain-name" entityName="non-ouvert.asso.fr">
        <domainName>non-ouvert.asso.fr</domainName>
        <status>
          <policyNoncompliant>
            <subStatus authority="fr">zoneNotOpen</subStatus>
            <description language="en">Zone Not Open</description>
          </policyNoncompliant>
        </status>
      </domain>
    </iris:answer>
  </iris:resultSet>
  <iris:resultSet>
    <iris:answer/>
    <iris:nameNotFound/>
  </iris:resultSet>
</iris:response>

[Result]
test-zzzzz.fr: redemptionPeriod [2019-09-24T14:13:21]
afnic.fr: active [2018-08-02T21:54:41]
nazi.fr: policyNoncompliant
non-ouvert.asso.fr: policyNoncompliant
test-domaine-libre.re: free

```

List of the examples of EPP Frames

- Example of an error generating a penalty via EPP
- Example of an error received when disconnecting from the EPP servers
- Example of an error during an authentication attempt when access is blocked
- Example of <greeting> that can be sent by the AFNIC EPP server:
- Example of a <hello> request sent by the client
- Example of <login> command with password change sent by a client
- Exemple de commande <logout> envoyée par un client
- Example of connection in PHP language:
- Example of connection in JAVA language:
- Example of connection in PERL language:
- Example of creating a PP type contact with the minimum information required
- Example of creating a PP type contact with restricted publication enabled
- Example of creating a PM type contact with the minimum information required
- Example of creating a PM type contact with a SIREN number
- Example of creating a PM type contact with a DUNS number
- Example of creating a PM type contact with a trademark number
- Example of creating a PM type contact with an intra-Community VAT number
- Example of creating a PM type contact with a local identifier
- Example of creating a PM type contact with a WALDEC (associations only)
- Example of creating a PM type of contact with the reporting information to the prefecture and the OJ (associations only)
- Example of contact change with a change in the phone number and the email address
- Example of a change in contact with a change in the postal address and name of the organisation
- Example of a change in contact to remove the restricted publication
- Example of a change in contact to apply restricted publication
- Example contact:info on a contact of the "Legal Entity" type
- Example of server response for an "Individual" type contact
- Example of contact:info command for an individual with restricted publication
- Example of domain:check command
- Example of the creation of a domain name
- Example of the creation of a domain name with hosts and DS key
- Example of creating a domain name with authorisation code
- Example of a domain name update with the addition of authoritative hosts and a change in technical contact
- Example of a domain name update with a change in authoritative hosts
- Example of a domain name update with a change in holder
- Example of domain name update with the addition of a DS key
- Example of the domain:info command for a domain name belonging to the registrar's portfolio
- Example of the domain:info command for a domain name not belonging to the registrar's portfolio with the auth info
- Example of a transfer operation command
- Example of the approval of a transfer operation
- Example of the rejection of a transfer operation
- Example of the cancellation of a transfer operation
- Example of a forced transmission operation
- Example of an explicit renew operation
- Example of deleting a domain:
- The server response after deletion of a domain that is not in addPeriod
- The server response after deletion of a domain that is in addPeriod
- Example of a restore operation
- Example of a check command on 2 host objects
- Example of the creation of a host object
- Example of update of a host object
- Example of a host object info request
- Retrieve the first message from the queue
- Acknowledge receipt of the first message in the queue
- Example of notification following TRANSFER approved (incoming registrar)
- Example of notification following TRANSFER completed (incoming registrar)
- Example of notification following TRANSFER rejected (incoming registrar)
- Example of notification following TRANSFER aborted (incoming registrar)
- Example of notification following RESTORE completed
- Example of notification following TRANSFER requested (outgoing registrar)
- Example of notification following TRANSFER completed (outgoing registrar)
- Example of notification following TRANSFER aborted
- Example of notification following RECOVER completed (outgoing registrar)
- Example of notification of start of qualification procedure
- Example of notification of end of qualification process (case of reachability and eligibility successfully completed)
- Example of notification of switch to substantiation procedure: In the event of a complaint, or a report without being able to check the eligibility and reachability data, or in case of contact details that are implausible
- Example of notification of the suspension of a domain name: This notification is sent as many times as there are suspended domain names

- Example of notification of the blocking of a domain name: This notification is sent as many times as there are blocked domain names
 - Example of notification of the end of the substantiation procedure with deletion of the portfolio: The qualification process completed notification has already been presented earlier in this chapter. The notifications for deleted domain names are added to it. This notification is sent as many times as there are deleted domain names.
 - Example of notification of the positive outcome of the substantiation procedure with unblocking of the portfolio and updating of the WHOIS database:
 - Example of contact obsolete notification
 - Example of contact permanently deleted notification
 - Example of DAS query in verbose mode
 - Example of response to a DAS query on a domain name that does not exist and is not subject to any restrictions
 - Example of response to a DAS query on a domain name that does not exist and is subject to prior review
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- Example of response to a DAS query on an invalid domain name
 - Example of response to a DAS query on a domain name that exists and published in the DNS (which is not subject to any restrictions)
 - Example of response to a DAS query on a domain name that exists but not published in the DNS (which is not subject to any restrictions)
 - Example of response to a DAS query on a domain name that is deleted and is in redemption period
 - Example of response to a DAS query on an IDN domain name in its ACE form

Technical integration guide change record

- 24/11/2009 - V1.0
- 08/04/2010 - V1.1
- 08/06/2010 - V1.2 – Addition of missing EPP notifications.
- 31/08/2010 - V1.3 – Addition of EPP portfolio deletion notification.
- 19/11/2010 – V1.35 – lines 5b and 5c in § 5.3.1 Semantics of form 2.5.0: Optional instead of Mandatory.
- 04/02/2011 – V 1.5 - Addition of DNSSEC support for EPP in server version 1.1
- 03/03/2011 – V1.55 – Correction of the greeting example §4.3.1.
- 06/12/2011 – V2.0 – Deletion of email interface, upgrade of EPP interface following the opening to Europe and the French Overseas Territories - stop of identification - opening of qualification.
- 03/07/2012 – V2.5 – Addition of § about IDN and DAS.
- 17/12/2012 – V2.6 – Deletion of ZoneCheck.
- 25/02/2013 – V2.7 – Deletion of serverRestoreProhibited and update of address epp.sandbox.nic.fr.
- 27/02/2015 – V3.0 – Change of domain:create, addition of domain:renew, change of domain:info.
- 12/12/2016 – V4.0 – Complete revision of the technical guide, addition of documentation on frnic-1.4 extension, on certificate, on rate-limiting, on FR Rush Service, on domain:update.
- 31/03/2017 - V4.1 - Addition of some examples of connection in Java, perl and PHP. Changes to chapter on EPP server and Extranet limitations and on FR rush service.
- 04/10/2018 - V5.1 - Update of domain:info, domain:create, domain:update commands. Integration of Host objects.
- 30/09/2019 - V6.1 - Complete revision of the technical integration guide: corrections made to the entire document. No impact on existing infrastructure.