.be

Registration Guidelines

for .be

Part I:

General

6 december 2018

Change log

18/10/2018

Removal of transaction fee for online payments

1/8/2018

Bug fixes
Change in maintenance window
Info-domain and info-contact with authcode
Cleanup unused contact data

19/3/2018

Addition of SEPA payments

Version 15.2, 22/1/2018

Removal of visible flag for Registrar profile
Change of from address for CPS mails

Version 15.2, 1/12/2017

Removal of unique IP restriction for EPP

Version 15.2, 1/11/2017

Removal of monthly renewal email
Addition of mobile number to registrar profile

Version 15.2, 1/10/2017

New quota check in effect

Version 15.2, 15/10/2016

Adaptation to quota check

Version 15.2, 15/7/2016

Adaptation to abuse tool

Version 15.2, 18/3/2016

Removal of Staging System

Version 15.2, 9/12/2015

Added algorithms 13 and 14 for DNSSEC
Minor adjustments

Version 15.2

Renewed version of dynamic zone update
Removal of DNSSEC key check
Update of the xsd files

Version 15.1

Registrar list
Mails regarding abuse

Version 15.0

Domain Guard
change to EPP settings permissions
security updates
confirmation screen for reset of user 2-step verification

Version 13.0

2-step verification
removed search option for insecure keys
security updates

Version 12.0, 22/1/2014

Online payments
Domain name variants
DS records are published immediately

Version 11.1, 18/9/2013

CPS message concerning revoke
EPP poll message concerning revoke
My registrations: On-demand DNS check
DNS quality check DS records

Version 11.0, 11/6/2013

IDN availability for .be
Registrar web and EPP are updated to provide IDN
Registrar web and EPP contain more information about transfer prohibited
URL validity check for website in Registrar Profile
Registrar can add 10 IP addresses to connect to EPP
Domain names can be entered with or without the trailing .be
Added IPv6 support to DNS Quality
Domain name added to the body of the e-mail with TAC
Fax is no longer mandatory for contacts
New report for transfer portfolio
No more reminder e-mails will be sent for unvisited invoices

Version 10.1, 22/1/2013

EPP reachable over Ipv6
Watermarks added to Tryout and Staging documents
Registrar can add a specific e-mail address for information on abuse
Change to allowed domain names to prepare for IDN

Version 10.0, 6/11/2012

New layout and improved features to the web interface
Improved monitoring of login attempts

Version 9.1, 8/5/2012

account status overview added
WHOIS certificate for registrant

Version 9.0, 10/4/2012

Removed transfer search
Quota check for Registrar agreement 5.0 online
New implementation of native DAS/WHOIS
Changes to layout of invoices
Integration of service pages (forms) in public website
Added warning about the pollution/abuse of .be database

Version 8.0.3, 30/10/2011

Changes to the date field of CPS mails
Implementation of EPP poll
Addition of notification profile
Added permission for users
Registrant can request a transfer authorisation code

Version 7.0.0, 14/6/2011

New transfer procedure

Version 6.6.0, 22/2/2011

Password hashing
Limit on transferdate

Version 6.0.0, 1/10/2010

DNSSEC implementation

Version 5.12.0, 13/7/2010

Replies concerning transfers/trade go to automated e-mail and include a CPS section
Extended revoke procedure for phishing/fast flux
Undo transfer/trade in case of fraude

Version 5.11.0, 15/4/2010

Full revision of and new layout for the registrar web site
Addition of undo monitored update
Users can change their own password
Access to official address
Downloadable faxes now tamper proof
DNS quality project
Extra user profile permissions
Promo credit system

Version 5.6.0

Hidden registrant for auto-transfer
Status of transfer/trade
Cancel transfer and trade via EPP
Resend transfer confirmation e-mail
Correct end-of-quarantine date in WHOIS
Monitored update for web and EPP
Return codes in CPS
domain-info return status change when domain not in portfolio
Enhanced contact-info command
Self-unblocking capability
Additional info on completed transfers and trades
Stronger date validation for transfer/trade/delete
Increased maximum length for security credentials
Direct URLs for e-invoices
Registrar data visible on web-based WHOIS for quarantined domains
More operations allowed on domain when status 'ON HOLD'
Hit point limit proportional to registrar portfolio size
Transfer authorisation code
Rate limiting on EPP info-domain and check-domain
EPP command to help decide transfer or trade
EPP command to retrieve registrar object
Transfer and trade fax templates
Multiple communication channels
Lock domain for transfer and trade
Allow IDN in name server names
forced deletes

Version 5.1.1, 18/10/2007

Added monitored update for contact in CPS for all 3 languages

Version 5.1.0, 20/9/2007

Introducing EPP info-domain, check-domain and info-contact 2.0
A word about maximum number of connections with EPP
History added to the web registration system

Version 5.0.0, 8/12/2006

Removal of e-mail interface
Slightly changed EPP schemas
Examples added to EPP interface
New screen shots of the web interface
Added CPS in all the 3 languages
Added many registrar related topics to the general part

Version 4.7.2, 12/10/2005

Minor corrections

Version 4.7.1, 19/1/2005

Minor corrections
EPP transaction TRANSFER-QUARANTINE was wrong

Version 4.7.0, 20/10/2004

All transactions updated to 2.0 (LOCATION split into POSTCODE, CITY and STATE)
Use of ISO Country Codes and E164 format for phone/fax numbers
New transaction TRANSFER-QUARANTINE
Introduction of the option #AUTO# for transfers and trade
New layout

Version 4.6.0, 14/4/2004

Search/List transactions
History Domain
History Contacts
History name servergroups
Search box

Version 4.5.2, 24/2/2004

Description of new transactions in EPP
<trade> domain
<update> agent
<info> agent
Updated EPP example of leading 4 bytes
Updated EPP examples to remove duplicate attributes.

Version 4.5.1, 6/1/2004

Minor corrections in EPP examples

Version 4.5.0, 30/12/2003

New build 20031112 of EPP server on port 33123
Rewrite of schemas (simplification)
Extra transactions for <domain:undelete>
Extra transactions for <domain:reactivate>
New transaction DEL-DOMAIN2.0
Phasing out of immediate deletes
New transaction UPD-AGENT2.0
Updated DB layout for better searching capabilities

Version 4.4.0, 14/11/2003

Changed quota check
Restriction on name server groups removed
Different registrars can choose the same name
New build 20030710 of EPP server on port 33122
Extra 4 bytes prepended to all messages
<domain:info> now returns also expiration date

Version 4.3.1, 4/6/2003

Minor corrections

Version 4.3.0, 26/5/2003

MD5 example was wrong
EPP updates:

- "Authentication" updated
- Name server handling updated
- "Versioning" updated
- Update domain implemented
- Session handling updated (greeting upon connection)
- Contact city, sp, pc handling updated
- Trade domain not implemented in this release
- Agent Activation screen (added EPP password)

Version 4.2.1, 21/3/2003

Adding levels of security at log on
Additional information about changing the profile of a user

Version 4.2.0, 5/3/2003

Users with profile added in web interface
Introduction of a reference on the invoice

Introduction of an additional e-mail address for receiving the answers of the automated registration process

Version 4.1.0, 21/11/2002

Quota check added

Version 4.0.2, 15/10/2002

Addition of a complete new section: the XML interface (this part is still beta and only available on a test system)
TRADE-DOMAIN: added
NEW QUERIES: TRADEPENDING
TRADEOVERVIEW

Version 3.0.0, 8/7/2002

General review to adapt the guidelines to the current version of the software, which has been rewritten completely. Although the system should work as before some minor modifications have been introduced and some new transactions have been added.

UPD-AGENT: now 1.2; agent-language added
NEW-NSGROUP: added
UPD-NSGROUP: added
DEL-NSGROUP: added
NEW-DOMAIN: now 1.1; adapted to accept name server groups
UPD-DOMAIN: now 1.1; adapted to allow name server groups
UPD-DOMAINNS: added
TRANSFER-DOMAIN: now 1.1; adapted to allow name server groups
REACTIVATE-DOMAIN: added
Feature changes:
Quarantine explained
Query in background
Invoice layout changed

Obsolescence policy explained

Version 2.1.0, 11/12/2001

New transaction UNDO-DELDOM1.0

Version 2.0.1, 28/11/2001

Description of 'overview of invoices' (new web function) added
Clarification in the NEW-DOMAIN and UPD-DOMAIN <DNS BLOCK> about the valid number of name servers
Screenshots have been updated to reflect the current status (additional field in the top menu concerning the account status)

Version 2.00, 24/10/2001

Addition of the web based registration
3 new queries: transferpending, transferoverview and deletepending are added
review of all sections – however, there have been no changes to the content

Version 1.03, 15/2/2001

Slightly adapted transfer procedure

Version 1.02, 29/1/2001

Added version history
Description of new Query transaction added
Update link to add signature tool
Update with correct “activate agent” screen
New UPD-AGENT1.1 template which replaces UPD-AGENT1.0
Technical contact concept explained more correct
How to get the form templates
Added important note regarding DEL-DOMAIN
Added important note regarding TRANSFER-DOMAIN
Added an example transfer-confirmation fax

Version 1.01, 7/12/2000

Correction of some inconsistencies – first official version

Version 1.00, 1/12/2000

First release

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INTRODUCTION

This document gives an overview of the registration procedure.

As a registrar you will be responsible for the data you bring into the DNS Belgium system. DNS Belgium provides the infrastructure but does not act upon the registration data. DNS Belgium will not be responsible for the consequences of the instructions the registrar enters into the automatic DNS Belgium system. The DNS Belgium system will only execute the given instructions.

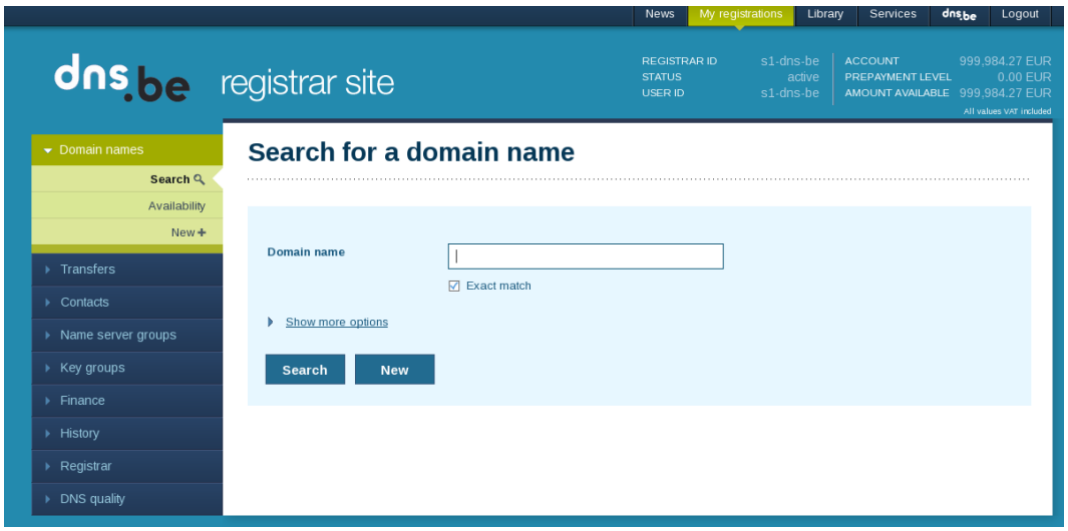
A registrar has full control over its own data (registrar information) and over the data of the domain names it has registered. You will of course not have access to the data registered by another registrar, as another registrar will not have access to your own data nor that of your clients.

WEB-BASED OR EPP?

There are 2 systems that are more or less equivalent:

1. A Web Interface
2. A synchronous (EPP-based) Interface

1. **In the Web Interface**, you will enter into an interactive application in which you are requested to enter all required data for the transaction into the corresponding data fields. Hitting the submit button will send your request to the DNS Belgium system, where it will be handled and the result will be presented to you on screen.



2. **The EPP-based synchronous interface** offers an XML-based request/response interface that is suited for automatisation. This way a registrar can build a web interface that directly communicates with the EPP interface of DNS Belgium and offer an immediate registration facility for his customers.

Although we have tried to offer the same functions in both interfaces, due to the specific nature of each interface, one may have some more and/or different features than the other.

Throughout this document some terms may be used that are different in wording but actually refer to identical concepts. In that perspective we have used 'agent' and 'registrar' as synonyms for the organisation that, as an intermediate, registers names for its customers. We (DNS Belgium) are often referred to as being the 'registry', the customer who registers a domain name through a registrar is called the 'registrant', 'licensee' or 'domain name holder'. In future editions we will only use the terminology “registrant - registrar – registry”.

STARTING AS A REGISTRAR

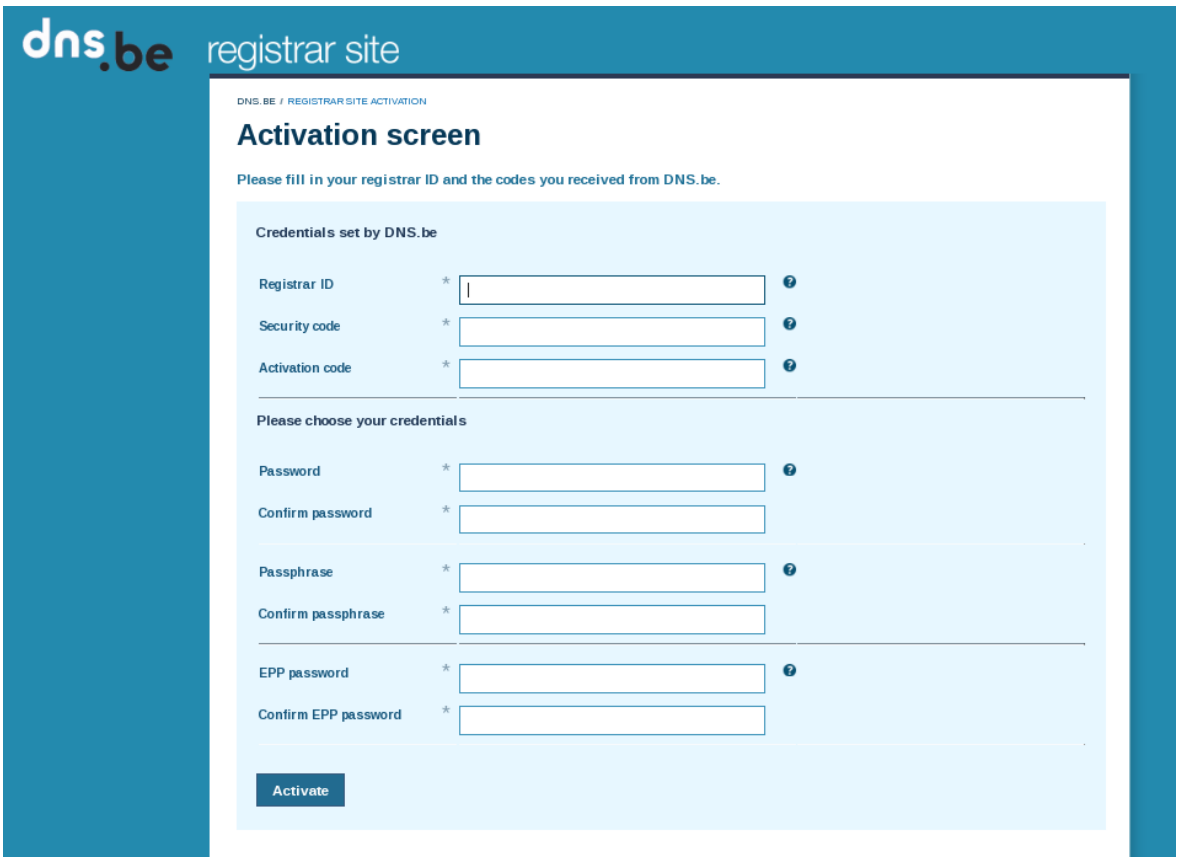
Upon becoming a registrar you receive the following information:

- **A Registrar ID**: a unique code that will identify you as a registrar.
- **A Security Code**: a sequence of numbers you need to enter into the secured password transaction. It consists of 12 digits in 3 groups, e.g.: 1234-5678-4321. (This information is sent to you by regular mail)
- **An Activation Code**: a sequence of characters that complements the security code, it consists of 8 characters in 2 groups, e.g. abc1-23de. (This part is sent by e-mail)

The first thing you need to do as a registrar is to create your own password, passphrase and EPP password. You can do this by activating your account on our website.

- Password: this will be used to let you enter the secured website.
- Passphrase: a sequence of words that will be used to calculate the signature of your web transaction.
- EPP password: this is used to authenticate to the EPP server.

When you enter the registrar website (http://www.registry.be), you are prompted for a registrar ID, user ID and password. Below you find the link 'Activate registrar account' which will bring you to the ACTIVATION screen.



Once you have entered your security code and your activation code together with your registrar ID, the activation code becomes obsolete and you will not be able to re-execute this transaction.

Now you can log in to the registrar website using 2-step verification. More information about setting up 2-step verification can be found here:

http://www.dnsbelgium.be/en/help-page-2-step-verification

After your first login, you should update your registrar profile. More information about how to do this can be found in part III of these Registration Guidelines.

WHAT SHOULD I DO IF I FORGET MY PASSWORD OR PASSPHRASE?

You should create a new password and passphrase using the activation screen. Therefore, you will need your registrar ID, your security code (which was sent to you via regular mail) and a new activation code.

You can get a new activation code from DNS Belgium upon simple request (by mail e.g.). The new activation code will be sent to your official e-mail address. Please note that you will also need to generate a new phone key after re-activating your account.

At any time, you can change your passwords on the registrar Web Interface. More information about how to do this can be found in part III of these Registration Guidelines.

WHAT SHOULD I DO IF I LOSE MY PHONE?

If the administrator user (registrar ID = user ID) loses his phone, he should contact DNS Belgium to reset his phone key. If a user loses his phone, the administrator user can reset the user's phone key. More information about how to do this can be found in part III of these Registration Guidelines.

THE TRYOUT SYSTEM

The aim of the Tryout System is to provide all facets of the registration system as part of a test set-up. As a registrar, you may create 2 test accounts. Please contact our support staff to set up your test accounts.

When a next release is pending, the Tryout System may contain new features not (yet) available on the Live System.

The reduced public website (http://www.tryout.dnsbelgium.be/) is your starting point.

The available interfaces are

- Registrar Web Interface
- EPP interface
- WHOIS & DAS
- Name server

E-mails sent out from the Tryout System will have from-address no-reply@tryout.dnsbelgium.be.

Up to date information on the Tryout System can be found under 'Services' at the registrar website.

TEST DATA

Unused contacts are removed faster in the Tryout System:

- all contacts that have never been used and have been in the system for at least one week, will be removed.
- all contacts which have been used in the past but were not linked to an active registration in the last 2 weeks, will also be removed.

If you want to test online payments on our test systems, these data can be used:

- **Visa**:

Credit card nr: 4111 1111 1111 1111

Expiry date: any date in the future

Card verification code: any 3 digit number

- **Mastercard**:

Credit card nr: 5399 9999 9999 9999

Expiry date: any date in the future

Card verification code: any 3 digit number

IMPORTANT

Please don't use real client data in the Tryout System, this might result in unwanted e-mails going to your client which might confuse him/her.

TEST EPP INTERFACE

DNS Belgium provides an EPP GUI to test EPP transactions. This can be found in the Documents section of the public website along with a manual on how to use it. You should have a minimal comprehension of EPP and SSL before using the EPP GUI.

MAINTENANCE

DNS Belgium aims to do frequent and small releases. In most cases, we don't have to interrupt our services by doing a release. We plan to do releases in the morning between 8:00 and 14:00 CE(S)T. We will send a notification before all releases where downtime is expected.

For releases with a major impact for the Registrar, we will make an announcement at least 2 weeks before the release.

Please make sure your contact e-mail addresses are up to date and follow us on Twitter.

Although we aim to announce changes to the registration system and hardware configuration with sufficient notice, it is possible under certain circumstances, this may occur without warning or after a brief message. Please take account of this in your planning.

POLLUTION OF THE .BE DATABASE AND ABUSE OF THE REGISTRATION SYSTEM

DNS Belgium monitors its registration system constantly. If we notice any behaviour which causes pollution of the .be database or hinders the services provided by DNS Belgium, we will take measures to mitigate this behaviour. In the first instance we will contact the registrar for an explanation when there's no evidence the behaviour is intentional. If we don't receive a reply within an appropriate time, DNS Belgium reserves the right to temporarily block the registrar until the situation is resolved.

Examples of pollution and/or abuse are:

- Unnecessary creation of contacts.
- Unnecessary updates of domain names.
- Unusual repetitive transactions.

DNS Belgium will also clean up unused contacts regularly. This is to keep our database clean as well as to comply with GDPR regulations. The following contacts are cleaned up:

- all contacts that have never been used and have been in the system for at least one year, will be removed.
- all contacts which have been used in the past but were not linked to an active registration in the last 10 years, will also be removed.

Every time one of your contacts is removed, you will be notified via EPP poll or CPS e-mail (depending on your settings).

CONTACT TYPES

CONTACT TYPES

As soon as you have become a registrar, you will have to create some contacts.

There are 4 types of contacts:

- Billing: the billing contact is required when you want to register a domain name. It is the person/department to whom the invoices are sent. The language of the invoices is in the language of the billing contact's choice. Exactly 1 billing contact can be created per registrar.
- Technical or onsite: at least 1 technical contact must be associated to each domain name. This is the person to contact in case of a technical problem.
    - You should choose the type **'onsite'** when the technical contact is from the organisation of the registrant or from a third party (like an intermediate website builder). Maximum 5 contacts of type 'onsite' can be associated with a domain name.
    - In case the registrant does not have any technical knowledge, then you should link a technical contact of your own organisation (the registrar) to the domain name. To define such a contact, you need to specify **'tech'** as the type. Maximum 10 contacts of type 'tech' can be registered in total per registrar. Maximum 5 contacts of type 'tech' can be associated with a domain name.
- Registrant: .be domain names are allowed to be registered by everyone. This means the registrant can be a private person or an organisation. It is very important this distinction is made, because it has a certain legal consequence. Furthermore, there is a restriction to updating registrants, because the identity has to remain the same.
    - Private person: The 'Organisation' field must be left empty. The 'Name' field should contain the 'lastname firstname' of the private person. Domain names registered for this registrant are personal domain names, therefore it is not possible to change the name of the registrant by means of an update!
    - *Organisation*: The 'Organisation' field must be filled in with the correct company/organisation name. The 'Name' field can be left empty, but it is advisable to fill in the name of the responsible person within the organisation. Feel free to use terms as 'Department …', 'Director', 'Chairman', etc.… Similar to personal domain names, it is not possible to change the organisation field by means of an update. Although it is possible to change the 'name' field, because responsible persons tend to change within certain organisations or companies.

In general, the registrant is responsible for the domain name. In case of a conflict this is the person/organisation who will be contacted. All address information and the e-mail address of the registrant should be correct and accurate and should belong to your client. If this contact cannot be reached the domain name can be revoked!

If you want to change the identity of the registrant, you need to initiate a transfer transaction. If there is an error in the identity of the registrant, it could be resolved by using the monitored update transaction as will be explained further. However, small changes are allowed, for instance changing upper to lower case and vice versa and changing the word order.

All contacts have to be created upfront. You will only need to enter the 'ALIAS' (=unique identifier) for this person in the transaction form. All new contact aliases start with a 'c', followed by a unique numeric id. All contacts created before 1 December 2006 have an alias starting with the first letters of each word of the contact name, followed by a numeric id. Every alias is unique over the whole system, i.e. they can't be used by different registrars.

IMPORTANT !

One contact person should have one alias! Don't create aliases you don't use/need!

Please don't pollute the DNS Belgium database unnecessarily by creating several aliases for the same contact person. This will also make it harder for you to group domain names per customer. We also explicitly ask that you don't create contact aliases that you don't use. This is not only polluting our database but - if done in large or even excessive numbers - can have a negative impact on the database

performance.

If DNS Belgium notices abusive behaviour by a registrar creating a lot of unnecessary contact aliases, it can decide to block that registrar's account in order to protect the integrity of its database and the overall performance of the database.

MONITORED UPDATE

In some cases, you might wish to make changes to the identity of the registrant, even though there is no change of ownership. In that case, a transfer transaction would not be opportune.

Which cases are we talking about?

- A company changes its name (the company registration number doesn't change)
- There is a typo or omission in the name of a private person or company
- Any change which does not involve a legal change of ownership

For these cases, DNS Belgium provides the 'Monitored Update' transaction.

What is the procedure for a 'Monitored Update'?

- The registrar sends an e-mail to rfu@dnsbelgium.be indicating:
  - The contact alias and changes involved
  - request for authorisation of a monitored update
  - any evidence/supporting documents to back up the update, such as a PDF file of the extract from the 'Belgisch staatsblad (Moniteur Belge)' or the 'Kruispuntbank (Banque-Carrefour des Entreprises)', or an URL link to the online publication in the 'Belgisch staatsblad' or other sources.
- The legal department of DNS Belgium checks the request. If the justifications are sufficient, the contact person in question (registrant) is flagged in the internal application so that a "Monitored Update" can be implemented. The registrar is notified by an automated message which can be retrieved via EPP Poll or he will receive a CPS e-mail (See Part IV of these Registration Guidelines).
- The registrar has to implement the required update **within 7 calendar days**.
- DNS Belgium verifies the update. If there are no problems (i.e. the update complies with what has been requested by the registrar and permitted in accordance with the supporting documents provided), the update is confirmed and the modifications implemented. When that happens, the changes also become visible via WHOIS and the registrar receives an e-mail via the internal application, confirming the "Monitored Update" has been carried out. However, if there is a problem, the registrar receives a message to say the requested "Monitored Update" cannot be carried out. In which case the "initial" data remains visible via WHOIS.

Note: The update that should be carried out is an update of the contact. For explanations about update contacts see the web and EPP part of these registration guidelines.

COUNTRY CODES

When creating a contact, you need to specify its country code.

The codes used are specified in the ISO 3166-1 list with a few additional codes from the ISO 3166 reserved codes list. The list we support can be viewed on our registrar website under the topic 'Library'.

DOMAIN NAMES

VALID DOMAIN NAMES

Before registering domain names, you should take these points into account:

- Domain names you register for your clients should be registered in your client's name and not in your name!
- Please make sure your clients accept our 'Terms & Conditions' before they can proceed with the registration of a domain name. This is also the case for a transfer.

Domain names must meet with a number of technical requirements:

- Valid non-IDN names are:
  - minimum 2 characters among the letters 'a to z', the numbers '0 to 9' and the hyphen '-';
  - maximum 63 characters;
  - must not begin or end with a hyphen;
  - must not contain a hyphen '-' on the 3rd AND 4th position.
- Valid IDN names are:
  - The U-label is minimum 2 characters and the A-label and/or U-label is maximum 63 characters.
  - The U-label can't begin or end with a hyphen.
  - The U-label must not contain a hyphen on the 3rd AND 4th position.
  - The U-label may only contain characters for the list of allowed characters.

Examples:

valid:

- mydomain.be
- my-domain.be
- myd-omain.be
- België.be
- xn--belgi-rsa.be

invalid:

- my--domain.be
- -mydomain.be

IDN

IDN stands for Internationalised Domain Names. The purpose of IDN is to allow the usage of non-ASCII characters in domain names.

Reference documents

The implementation of IDN at DNS Belgium is based on the IDNA 2008 standard and the following reference documents:

- **RFC-5890**: Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework
- **RFC-5891**: Internationalized Domain Names in Applications (IDNA): Protocol
- **RFC-5892**: The Unicode Code Points and Internationalized Domain Names for Applications (IDNA)
- **RFC-5894**: Internationalized Domain Names for Applications (IDNA): Background, Explanation, and Rationale

- **RFC-3492**: Punycode: A Bootstring encoding of Unicode for Internationalized Domain Names in Applications (IDNA)

DNS Belgium will implement IDNA 2008, which is a later development of the IDNA 2003 standard. For the character set offered by DNS Belgium, there is no difference between both versions, except for the **German ß**. In IDNA 2003 this character is converted to 'ss', which means that browsers that don't yet support IDNA 2008 will not convert domain names with an ß to an ASCII form, but the ß will simply be replaced by 'ss'. So, if for example you want to visit www.dnß.be, most browsers will send you to www.dnss.be, meaning you would come to a **different website**. At present, only the Opera browser supports IDNA 2008.

If a party other than you has registered the 'ss' variant of a domain name with an ß, visitors may arrive at your website or find themselves at a different website, depending on the browser they are using. **Which is why registrants wanting to register a domain name with an ß are also recommended to register a version with 'ss'.**

Also, we allow the registration of domain names with capitals for backward compatibility, but their lower-case equivalent will be taken into account by the system.

Terms and definitions

- **Unicode**: a computing industry standard for the consistent encoding, representation and handling of text expressed in most of the world's writing systems.
- **LDH**: "Letter-Digit-Hyphen", the only characters authorised for the composition of a domain name.
- **ASCII**: "American Standard Code for Information Interchange", is a character-encoding scheme originally based on the English alphabet. It can only encode 128 characters.
- **A-label**: the encoded version of a domain name in its LDH form. The A-label always begins with "xn--".
- **U-label**: an IDNA valid string of unicode characters, including at least one non-ASCII character.
- **Code point**: unique index associated with every character in the Unicode standard.
- **Punycode**: algorithm used to uniquely and reversibly transform a U-label into an A-label.

Allowed characters

There are different character sets that can be used for an IDN implementation. DNS Belgium decided to use a set that includes, at the very least, all accented letters used in Dutch, French and German. This particular set also includes accented letters used in other European languages, such as Swedish, Danish and Finnish.

The list of allowed characters can be found in the annex of this document.

Valid name servers

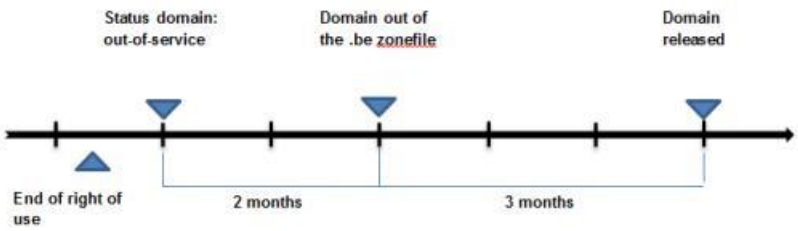
We also accept IDN for name servers. In the name server name, the same characters are allowed as in domain names.

DOMAIN STATUS

A domain name can have one of following statuses:

- **AVAILABLE:** Domain name is available for registration.
- **REGISTERED:** Domain name is in use, therefore not available for registration; the registrar manages the domain.
- **QUARANTINE:** When a domain is deleted, the domain name will go into a quarantine period of 40 days. A domain in quarantine is not available for registration. It can only be reactivated or '*transferred from quarantine*' within these 40 days. For more information look at the chapter: 'DELETE, QUARANTINE AND REACTIVATE'.
- **OUT OF SERVICE:** This is an exception of REGISTERED. It means the domain name's registrar stopped (due to failure or termination of its contract) and the domain name's due date has

passed. The right of use of these names can only be renewed through a new registrar. Such domain names have the following lifecycle:



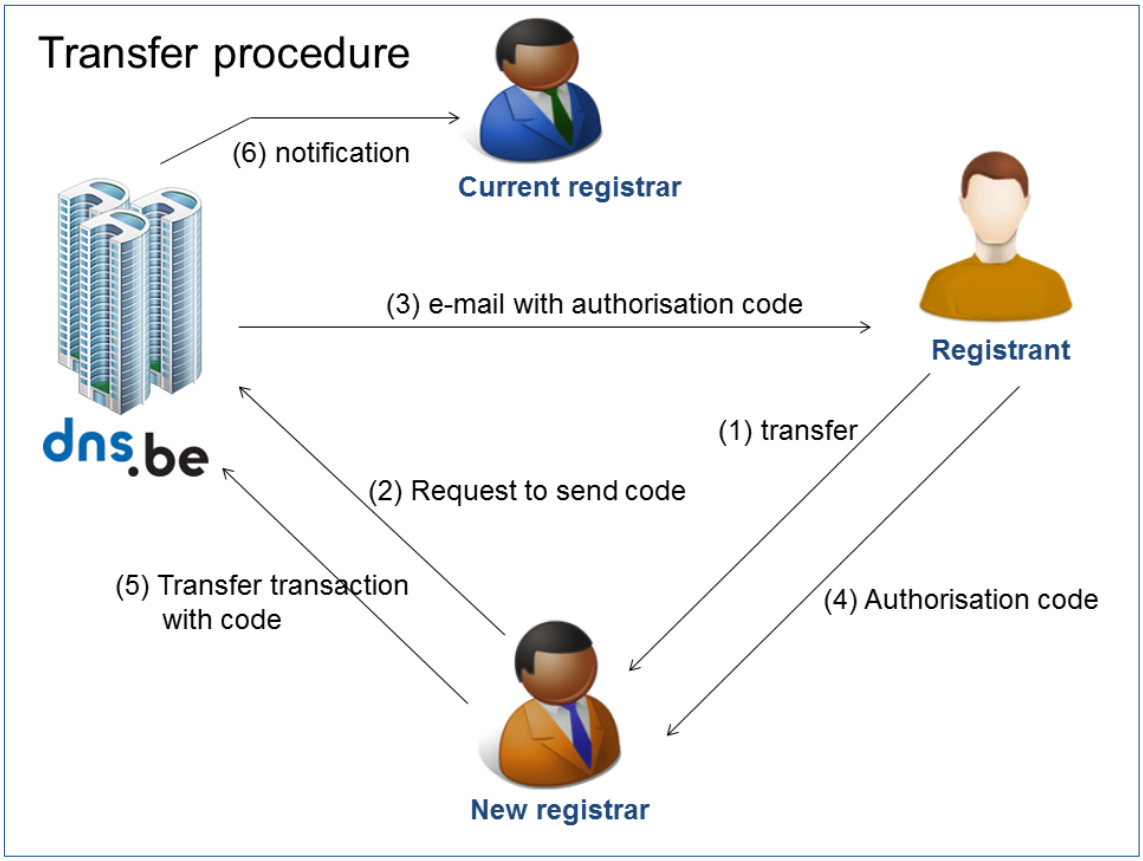
- **ON HOLD:** This is an exception of REGISTERED, this means an ADR (Alternative Dispute Resolution, i.e., in Cepina) procedure or lawsuit is pending. This has no implication to the outside world because the domain stays active. However, only the commands 'delete-domain', 'undo-delete-domain', 'update-domain' (no registrant update), 'reactivate-domain' will be usable. This allows the registrar to handle the domain according to its needs. If a domain name is deleted, the quarantine period of 40 days starts running from the moment the 'ON HOLD' flag is removed.
- **NOT VALID:** The domain name does not meet the requirements as specified in our End Terms and Conditions, e.g. the domain name requested is longer than 63 characters.

TRANSFER PROCEDURE

STANDARD PROCEDURE

A transfer is used to change the ownership of a domain name and/or to change registrar. There's no distinction in the request form as DNS Belgium only requires confirmation from the current registrant in both cases. When the domain name is in quarantine, the registrar has to specify an extra option to the transfer transaction. Note: it is more expensive to transfer a domain name from quarantine.

An overview of the transfer procedure can be seen in this picture:



The scenario for a transfer is as follows:

1. the registrant contacts a new registrar to transfer his/her domain name
2. the registrar/registrant asks DNS Belgium to send an authorisation code (i.e. transfer code)
3. DNS Belgium sends the authorisation code to the registrant's e-mail address
4. the registrant gives the authorisation code to the new registrar or to the new registrant
5. the new registrar executes the transfer transaction using the authorisation code
6. when the authorisation code is valid, DNS Belgium executes the transaction immediately and the current registrar is notified

STEP BY STEP

1. CLIENT: your client contacts you

   Your client contacts you with the request to transfer a domain name.

2. NEW REGISTRAR or CLIENT: request authorisation code

The first thing to do is request an authorisation code from DNS Belgium. This can be done using the Web or the EPP interface. Information on how to enter these forms can be found in the respective part of these guidelines. The client can also request an authorisation code directly from DNS Belgium. This can be done by looking up the WHOIS information of the domain name on the DNS Belgium website.

The following e-mail will be sent to the current registrant:

```
TO: domainowner@myplace.be
Subject: Transfer code for the domain name domain-to-transfer.be

Dear registrant,

DNS Belgium is the official registration body for all .be domain names. You are
the registrant of a .be domain name, which is why you receive our message.
You can find more information about our working on http://www.dnsbelgium.be

You receive this email because DNS Belgium got the request to send you
the transfer code of your domain.

Your transfer code for werchter3.be is 365-837-953-787-879
This code is valid till 1 August 2018 10:02 CEST


This transfer code can be used to transfer your domain name to a new registrar
of your choice and/or to transfer it to a new registrant. Using
the transfer code to transfer your domain name to a new registrar means that
you explicitly accept the terms and conditions for .be domain name
registrations operated by DNS
Belgium. https://www.dnsbelgium.be/en/documents/enduser-terms-and-conditions-be

What should you do?

1) To transfer your domain name to a new registrar, please give
this transfer code to your new registrar. The new registrar can use
this transfer code to initiate a transfer with DNS Belgium.

2) To transfer your domain name to a new registrant, please give
this transfer code to this new registrant. The new registrant gives
the transfer code to a registrar of his choice, who initiates the transfer with
DNS Belgium.

3) If you do not wish to transfer your domain name to a new registrar or to a
new registrant, you can invalidate the transfer code by using following link:
https://www.dnsbelgium.be/whois/invalidate-transfercode?lang=en&domain=domain-
2-transfer&code=365837953787879

More information about the transfer procedure can be found on our
website: https://www.dnsbelgium.be/en/domain_name/maintenance


Kind regards,
DNS Belgium team
```

Upon the first request, the authorisation code will be valid for 7 days. Within this validity period, the code can be resent three times. Each time the code is resent, the code will be valid for the next 7 days.

Further requests will result in an error message, you will have to wait until the end of the (last) validity period before a new authorisation code can be requested. There is one exception: when the registrant changes his e-mail address with his current registrar, one extra request for an authorisation code can be done.

3. CLIENT: pass on the authorisation code

   Your client has to pass on the authorisation code to you. When you have it, you can request the transfer.

4. NEW REGISTRAR: setting up name servers

   Before sending the transfer request to us, it is best to set up the name servers for your new client. As you can read in the section 'zone file generation', the .be zone file will be updated with the new information immediately. If you set up the name servers beforehand, the domain will keep working properly.

5. NEW REGISTRAR: submitting the request

   The new registrar should initiate the transfer by submitting the transfer form to DNS Belgium. This can be done using the Web or the EPP interface. The form should contain the same information as a completely new registration. The registrant is the person to whom the domain name is transferred. It's mandatory to pass the authorisation code. Information on how to enter these forms can be found in the respective part of these guidelines.

6. DNS Belgium: processing the transfer

   When the authorisation code is valid, the transfer is executed straight away. The registrar gets the result of the transfer immediately via either EPP or the Web Interface (no notifications are sent). An automated message (CPS e-mail or EPP Poll) will still be sent to the 'former' registrar to inform him that the domain name is transferred away.

   The DNS Belgium database will be updated accordingly. WHOIS and name servers will show the new data immediately.

7. FORMER REGISTRAR: updating name server

   After a transition period, the 'former' registrar should remove all information about this domain name from his name servers, in case he was providing such a service, and the registrant doesn't need the provided service anymore.

   This is a fully automated procedure.

   The advantage of this scenario is that the new registrar retains better control over

   - the status of a transaction
   - when that transaction actually takes place.

IMPORTANCE OF REGISTRANT'S E-MAIL ADDRESS

It is clear from the above procedure that it is very important to have a correct e-mail address for the registrant. It is the responsibility of the registrar to keep the database up to date. If we receive a complaint concerning a registrar who is apparently refusing to update the registrant’s e-mail address (or at least completely ignoring such a request from the registrant), DNS Belgium will:

1. Investigate the complaint and contact the registrar to find out about his motives for not updating the e-mail address of the registrant;
2. If the motives of the registrar are not convincing (or not communicated at all), DNS Belgium will instruct the registrar to proceed with the requested update within the next 48 hours;
3. If the registrar does not comply within this timeframe, DNS Belgium will update the e-mail address directly and will charge the registrar the costs of the entire operation.

DNS Belgium keeps a record of the complaints we receive about the refusal of updating important data. If we notice that we are receiving regular complaints about a particular registrar, DNS Belgium can hold that registrar in breach of contract.

REGISTRAR'S URL

When a registrar requests a transfer authorisation code, it's possible to add a url to direct the registrant to the appropriate page on the registrar's website. This url will be added to the e-mail sent to the registrant. DNS Belgium will never combine the url and the authorisation code because we want to avoid that registrants confirm a transfer inadvertently by clicking the url by accident.

TRANSFER PROHIBITED – DOMAIN NAME LOCKING

It is possible to lock a domain name so a transfer is no longer possible. We decided to provide this feature because many (mainly large) companies were regularly receiving unsolicited transfer requests in their mailbox. As long as these requests are not approved, nothing happens, but they can still be extremely annoying. By 'locking' a particular domain name, the client doesn't receive any unnecessary requests, as well as having the additional assurance that his domain name is still in good hands.

The flip side to the coin is that it is possible for registrars to lock all of the domain names in their portfolio as a standard practice, so their clients would be forced to stay with them. Transferring just before the expiry date of the domain name then becomes very difficult, so the registrars would be able to send out a new invoice to their client.

What safety measures have we built in to prevent abuse?

- Any registrar can 'lock' a domain name in his portfolio. But locking can only take place at the explicit request of the client. Hence applying it as standard to all domain names is not the aim.
- If there is an argument as to whether a domain name needs to be locked or not, it is up to the registrar to demonstrate this is the case. So be sure to keep the e-mail or fax in which your client requests you to do so.
- If there is any abuse of the system, we will not hesitate to take the necessary steps.
- Under normal circumstances, DNS Belgium does not communicate with the registrant. However, if the registrant contacts us with a legitimate request (e.g. because a registrar refuses to unlock the domain name), we will not refuse to investigate that request.

We hope the locking feature will be used for positive purposes. In the end, it is an additional service (which you may or may not want to charge for) you can offer your clients. If a registrant asks you to lock his domain name, he will probably want to stay in business with you.

Unlike .com domain names, .be's may only be locked by registrars at the formal request of the registrant. By no means should you systematically lock all domain names in your portfolio, or the domain names of customers with whom you are involved in a dispute.

DNS Belgium will not allow abuse of the lock function by registrars or their resellers.

When we receive a complaint about the wrongful use of the lock function, DNS Belgium will:

1. In the first instance ask the registrar to demonstrate that the locking has been carried out at the request of the registrant.
2. Require the locking to be reversed within 48 hours if the registrar is unable to present this request from the registrant.
3. If the registrar does not comply within this timeframe, DNS Belgium will unlock the domain name itself.

DNS Belgium also keeps each registrar updated about how many complaints we receive about the improper locking of domain names. If we notice that we are receiving regular complaints about a particular registrar, DNS Belgium can remove the lock function for that registrar.

We also wish to stress it makes **no difference to DNS Belgium whether the domain name was locked by a registrar's reseller or by the registrar itself**. DNS Belgium's agreement is with its registrars and not with resellers. As a registrar you are responsible for any errors your resellers may make.

There are two flags which determine if a domain name can be transferred: 'clientTransferProhibited' and 'serverTransferProhibited'. The 'clientTransferProhibited' flag can be set by the registrar. The 'serverTransferProhibited' flag is set by the registry. Both flags are shown to the registrar, otherwise it can be confusing for the registrar to decide if a domain name can be transferred or not. DNS Belgium can disable the 'clientTransferProhibited' flag in some circumstances, e.g. abuse by the registrar.

UNDO TRANSFER

In the past, DNS Belgium has had to deal with fraudulent transfers. In that case the transfer had to be undone, which required a manual intervention in the database. As it is not appropriate to make manual changes to the database, a procedure has been implemented to automate this action.

The current registrar (who initiated the transfer) will receive a message (EPP poll or CPS e-mail) concerning the undoing of the transfer. The cost for the transfer will be refunded, if it is proven the registrar was not at fault.

If another transfer has been initiated since the execution of the fraudulent transfer, then this transfer will be failed.

RENEWALS

Every first day of the month, all domain names with an expiration date in the previous month (i.e. the anniversary date of the registration of that domain name), are automatically renewed and invoiced to the registrar.

Domain names are not renewed on their exact expiration date, but at the end of that month.

This renewal is automatic, so if you don't want to renew the domain name, be sure to delete it before the end of the month.

Please note that above time indications are in CEST. Times in EPP are returned in UTC, so you have to convert to CEST to know when a domain name will be renewed.

DELETE, QUARANTINE AND REACTIVATE

DELETIONS

In order to delete a domain name, you always have to enter a ‘delete date’. The domain name will be deleted on this day at a randomised time. Deletions are scheduled every hour. The effective deletion of a domain name over the day is randomised to balance the load. When you schedule a deletion for a date in the past or for the current date, the time will be randomly spread over the remaining hours of the current day.

Every first day of the month, all domain names with an expiration date in the previous month (i.e. the anniversary date of the registration of that domain name), are automatically renewed and invoiced to the registrar. If you don't want to pay for a domain name your customer does not want you to renew, you'd better delete it from the database. However, it is the responsibility of the registrar to verify it is indeed the intention of the registrant not to continue the right of use of that domain name.

Unless you have an explicit request from the registrant to delete his domain name, it is best practice to wait with the deletion until the end of the right of use period in order to keep the domain name alive as long as the client expects it to be. As your customer has a one-year contract for the use of the domain name, deleting it before the expiration date might breach the contract. Also, you should keep in mind it is possible the domain name will be transferred to another registrar by the end of the right of use period. The renewal period can be found via the Web interface or EPP.

On the day of the deletion, the domain name is put into a quarantine period of 40 days. After the quarantine period the domain name is released and available for registration. You can always reactivate the domain name during the quarantine period as explained below.

QUARANTINE

A domain which is deleted at the specified ‘delete date’, will be put 'in quarantine'. While a domain name is in quarantine, it will not be available for registration. This was set up to protect the registrant against an unwanted deletion, e.g. because he forgot to pay the renewal fee.

A domain name in quarantine cannot be updated. There are only 2 transactions which can be executed for a domain name in quarantine. This is the 'reactivate domain' and the 'transfer from quarantine'. However, it is still possible to update the contacts associated with the domain name.

As long as a domain name is in quarantine, the DNSSEC data will be remembered. In case the domain name is reactivated (see below), it will be added to the .be zone with the same DNSSEC data as before. When the domain name is freed, the DNSSEC data will be lost.

REACTIVATE

A domain name in quarantine can be reactivated by the registrar who has executed the delete transaction, as long as the 40-day quarantine period has not expired. See the 'reactivate domain' transaction on how to do this.

The reactivate transaction will restore the domain name as it existed before it was deleted. However, a new one-year right of use period will start at the moment of reactivation. This means the domain name can have a different ‘invoice month’ than before.

DOMAIN GUARD

Some domain names are so important and/or valuable that the registrant wants to protect them from being updated unintendedly (either malicious changes or human errors). Domain Guard is a service offered by DNS Belgium which enables .be registrants to secure the details of their domain names.

RESTRICTIONS UNDER DOMAIN GUARD

When a domain name is protected by Domain Guard, no updates, transfers or deletes can be carried out. The registrant of the domain name can't be updated either.

TERMINOLOGY

Requestor

The requestor can be:

(a) The registrant if he is a natural person.
(b) If the registrant is a legal person (company, association, government institution): someone authorized to represent the legal person. Proof of authorisation has to be added to the request. Possible justifying documents:
- Articles of association.
- Registration in a companies' register.
- Other form of proof that demonstrates the requestor's authorised status.

(c) Someone who is granted a mandate by (a) or (b).

Authorised person

The authorised person is the only one who can give consent to temporarily disable Domain Guard.

The registrar can be an authorised person.

PROCEDURE

All necessary forms can be found in the Knowledge base of our public website:

- Domain Guard request form
- Domain Guard cancellation form
- Domain Guard authorised person modification form

The e-mail address used for DNS Belgium is support@dnsbelgium.be.

Request Domain Guard

Domain Guard can only be requested through the registrar hosting the domain name.

The requestor fills in the form and sends it to his registrar together with the required documents:

- The request form:
  - A requestor can add maximum 3 authorised persons to the form: they will act on the registrant's behalf. It is possible for the registrar to be the registrant's authorised person.
  - The registrant details must correspond to the WHOIS details.
  - The e-mail address for the authorised person(s) must be a personal e-mail address.
  - When receiving an update request, DNS Belgium will contact the authorised person only on the telephone number mentioned here.
  - The form needs to be signed.
- Documentary evidence:
  - Copy of a valid identity document, if the registrant is a natural person.
  - Articles of association, registration in a companies' register, or other form of proof that demonstrates the requestor's authorised status, if the registrant is not a natural person.

- Copy of a valid identity document for the requestor, if the registrant and requestor are different.

The registrar sends the form and all documentary evidence to DNS Belgium via e-mail.

DNS Belgium checks the request. In case the authorised person is not reachable by phone because of time zone differences, a date and time can be agreed on by e-mail to have a phone call. DNS Belgium guarantees feedback to the registrar within 2 working days.

If everything is OK:

- The support officer enables Domain Guard for the requested domain name(s).
- The registrar is notified automatically by the registration system.
- The registrant is notified automatically by the registration system.
- The activation cost is deducted from the registrar account.
- The form and attached documents are stored for future reference.

If there is a problem, the support officer will contact the registrar (e.g. missing documents).

Temporarily disable Domain guard

An update to a domain name protected by Domain Guard can only be carried out by temporarily disabling Domain Guard.

The registrar sends a request to temporarily disable Domain Guard for one of more domain names via e-mail.

DNS Belgium will examine the request and take action before the end of the next business day:

- The support officer calls the authorised person(s) using the phone number from the original request form and asks for confirmation to temporarily disable Domain Guard.
  In case the authorised person is not reachable by phone because of time zone differences, a date and time can be agreed on by e-mail to have a phone call.
- If at least one authorised person confirms this request, Domain Guard is immediately disabled:
  - The registrar is notified automatically by the registration system.
  - The registrant is notified automatically by the registration system.
  - The support officer will send an e-mail to the registrar informing them the domain name is ready for the update.
  - The registration system now allows updates to the domain name except transfers and deletes.
  - The registrar can now do the required update(s).
  - After 48h the registration system will automatically re-enable Domain Guard and send a notification to the registrar and registrant.
- During office hours, the support officer can re-enable Domain Guard directly after the update if the registrar asks so (via the same e-mail in which the update was requested). In this case all automatic notifications will be sent as well.

Stop Domain guard

To be able to disable Domain Guard forever, the requestor needs to fill in a cancellation form and send it to his registrar who will submit it to DNS Belgium.

The requestor needs to fill in a cancellation form and send it to his registrar, together with the required documents:

- The cancellation form:
  - The requestor is not necessarily the same as the initial requestor.
  - The registrant details must correspond to the WHOIS details.
  - The form needs to be signed.
- Documentary evidence:
  - Copy of a valid identity document, if the registrant is a natural person.
  - Articles of association, registration in a companies' register, or other form of proof that demonstrates the requestor's authorised status, if the registrant is not a natural person.

- Copy of a valid identity document for the requestor, if the registrant and requestor are different.

The registrar sends the form and documentary evidence to DNS Belgium via e-mail.

DNS Belgium examines the request. The support officer retrieves the telephone number mentioned on the request to call the requestor for confirmation. DNS Belgium guarantees feedback to the registrar within 2 working days.

If everything is OK:

- The support officer disables Domain Guard permanently for the requested domain name(s).
- The registrar is notified automatically by the registration system.
- The registrant is notified automatically by the registration system.
- Invoicing for Domain Guard for this domain name is stopped.
- The support officer sends an e-mail to the requestor to inform him that Domain Guard has been permanently disabled for this domain name.
- The registration system will now allow all updates to the domain name.

To be able to transfer or delete a domain name, Domain Guard must be disabled permanently. If Domain Guard is wanted after transfer, it should be requested again.

Change authorised person(s)

To change the (data of) authorised person(s), the requestor needs to fill in the modification form and send it to his registrar, together with the required documents.

The registrar sends the form and documentary evidence to DNS Belgium via e-mail. The evidence is checked in the same way as a new request.

.BE NAME SERVERS AND ZONEFILE GENERATION

The main objective of DNS Belgium is to manage the .be zone file. This zone-file is hosted on our primary name server. To secure the working of the dns service and for load balancing reasons DNS Belgium has set up several secondary name servers. For an accurate list of these servers we refer to the 'Services' section on our registrar website.

Our name servers have been using dynamic updates since 24 August 2005. On 1 December 2006 the use of dynamic updates was extended further with the inclusion of transfers. This means all new domains will be in the Master Name Server Zone File almost immediately after their registration. All other name server modifications waiting for a Zone File update will also be processed immediately.

The serial number of the SOA record for the .be zone is incremented by 1 each time we update one or more records.

VALID IPV6 ADDRESSES

You can use IPv6 addresses as glue for your name servers. DNS Belgium validates IPv6 addresses according to IPv6 address types as defined by RIPE.

Only one eighth of the total address space is currently allocated for use on the Internet: 2000::/3. These are the only IPv6 addresses accepted by us. More information about the allocation of IPv6 address space can be found on the ICANN website:

http://www.iana.org/assignments/ipv6-address-space/ipv6-address-space.xhtml

WHOIS AND DAS

Domain interrogation services are available via command line tools or via our website.

The WHOIS service provides the necessary information for people seeking to contact the registrant of a .be domain (or registrar contact) for problem solving etc. But it is limited to prevent abuse of the DNS Belgium database information.

As the WHOIS service limits the number of queries in a given time frame, it is not suitable for websites or automated systems to get the status of a domain. For this reason, DNS Belgium has put in place the DAS service (Domain Availability Service) which has less limitations. The DAS only gives out the status of a domain name.

NATIVE DAS AND WHOIS SERVICES

The native DAS and WHOIS are available via command-line tools.

Native DAS

The DAS service is available on das.dns.be at TCP port 4343. The service reacts as described below.

The protocol for DAS is: the domain name being queried with the trailing ".be".

The result will come back in strict format:

- **RC**: gives the return code of the query:
  - **0**: query successful
  - **-1**: Internal system error
  - **-2**: Excessive querying
  - **-3**: IP address blocked
- **Domain**: the domain name being queried, containing the U-label in case of an IDN name
- **A-label**: only if it concerns an IDN name
- **Status**: returns the status of the domain name (only if RC=0):
  - **AVAILABLE**: the domain name is free to be registered
  - **NOT AVAILABLE**: the domain name is already registered
  - **NOT ALLOWED**: not a valid domain name (e.g. ".be" omitted, invalid characters, invalid length, ...)

There are limits to the use of our DAS service:

- Maximum 50 queries per minute per IP.
- When the limit is reached, your IP will be blocked for the remaining time in the minute.
- Over this limit, you will receive return code -2.

When your IP address is blocked by DNS Belgium due to abusive behaviour, you will receive return code -3.

Upon connecting to DAS, it will wait for a query command (without sending a header, prompt, ...). Upon completion of the query, DAS will close the connection.

Native WHOIS

The native WHOIS service is available on whois.dns.be on TCP port 43. The information provided is limited. The service reacts as described below.

The protocol for WHOIS is: the domain name being queried with the trailing ".be".

Available information:

- If the status is AVAILABLE or NOT ALLOWED, only the status is returned

    - Domain name, containing the U-label in case of an IDN name
    - A-label, only if it concerns an IDN name
    - Domain status
  - If the domain status is NOT AVAILABLE, information about the domain name is returned:
    - Domain name, containing the U-label in case of an IDN name
    - A-label, only if it concerns an IDN name
    - Domain status
    - Registration date
    - Technical contacts
    - Registrar
    - Name servers
    - DNSSEC keys
    - Flags

If the WHOIS query was unsuccessful, you can receive one of these return codes:

- **-1**: Internal server error
- **-2**: Excessive querying
- **-3**: IP address blocked

Limitations:

- No registrant information.
- No information about onsite contacts.
- Limited information for technical contact.
- Maximum 100 queries per hour per IP address.
- Over this limit, you will receive return code -2.
- Over this limit doubled, your IP will be blocked for 1 hour (return code -3)

When your IP address is blocked by DNS Belgium due to abusive behaviour, you will receive return code -3.

To only check the availability of a domain (e.g. in a web application), you can use our DAS service.

Examples

DAS and WHOIS can be interrogated in the same way, entering the appropriate host and port. Below are example requests for DAS:

- Unix/Linux users can use the regular whois script with the following parameters:

```
whois -h das.dns.be -p 4343 domainname.be
```

- h to specify the WHOIS server to use
- p the port to use (standard WHOIS port is 43)
- Others can contact our services via telnet:

```
telnet das.dns.be 4343
Trying 193.109.126.141...
Connected to das.dns.be.
Escape character is '^]'.
domain.be
% .be Domain Availability Server 4.0
%
%% RC=0
Domain: domain.be
Status: REGISTERED

Connection closed by foreign host.
```

Once the telnet connection is made you have a limited time to write the domain name.

This is the output of a successful DAS query:

```
% .be Domain Availability Server 4.0
%
%% RC=0
```

```
Domain: dñs.be
A-label:        xn--ds-zja.be
Status: AVAILABLE
```

This is the output of an unsuccessful DAS query:

```
% .be Domain Availability Server 4.0
%
%% RC=-2
% Excessive querying
Domain: name.be
```

This is the output of an unsuccessful WHOIS query (without disclaimer):

```
% .be Whois Server 6.1
% -2: Excessive querying
Domain:       test.be
```

If an error occurred an extra line will appear with the description of the error.

In the below table, you see the different output possibilities for IDN and non-IDN names:

Input	Output
belgie.be	Domain: belgie.be
België.be	Domain: België.be A-label: xn--belgi-rsa.be
xn--belgi-rsa.be	Domain: België.be A-label: xn--belgi-rsa.be
xn--belgi-fsxxa.be	Domain: xn--belgi-fsxxa.be Status: NOT ALLOWED Message: Invalid A-label.
xn--belgi-rsa	Domain: België A-label: xn--belgi-rsa Status: NOT ALLOWED Message: Please add correct .be extension.

It is also possible to retrieve domain name information using the EPP interface. This interface allows for more detail and controlled information. We encourage registrars to use this interface to retrieve information on domain name status and other information. Please refer to the EPP guidelines (part 2) of this documentation.

Possible error messages

When an invalid domain name is entered, a specific error message will be shown. Currently, these are the error messages given for invalid domain names:

- This domain name is too short.
- This domain name is too long.
- Invalid A-label.
- Use only approved characters.
- Do not use a hyphen at the start of the domain name.
- Do not use a hyphen at the end of the domain name.
- Do not use hyphens on the 3rd and 4th position in a domain name.
- Please add correct .be extension.

Please note this list is subject to change.

WEB-BASED DAS AND WHOIS SERVICES

On the DNS Belgium website it is possible to check the availability of a domain name and view domain name details. An on-screen keyboard is available for IDN characters.

Web-based DAS

The web based DAS is available on the top of every page of our public website. The user fills in the domain name and clicks the "check" button.

Possible actions

When a domain name is available, the end user can look for a registrar to register the domain name. The search for registrars is done according to country and/or tld.

When registrars are searched, the result list is ordered alphabetically.

When a domain name is registered, the end user can request more information about the domain name. By choosing this option, he will be directed to the WHOIS.

Web-based WHOIS

The web based WHOIS is available on our public website under the title 'WHOIS'. The user fills in the domain name and clicks the button. On the next screen, one can see the details of the domain name.

Available information:

- Domain name (non-IDN) or U-label and A-label (IDN)
- Domain Status
- Registrant Contact
- Onsite Contacts
- Registrar Technical Contacts
- Registrar
- Name servers
- DNSSEC keys
- Transfer status

Limitations:

- The contact details of private registrants/onsite contacts are not displayed, instead a contact form is available.
- Maximum 100 queries per IP address per day.

Possible actions

If you have a complaint regarding the WHOIS details of the domain name, you can file a complaint via this page.

The registrant of the domain name can request a transfer code for his domain name. The mail containing the transfer code is sent to the registrant and contains the U-label of the domain name.

The registrant of the domain name can request a certificate from DNS Belgium here. The WHOIS registration details certificate provides the details of the private individual or organisation who/which is registered as the registrant of the .be domain name, as stated in DNS Belgium's registration system, at the time the document is requested. The certificate, containing the U-label of the domain name in lower case, is sent to the e-mail address of the registrant.

The registrant of the domain name can request a list of variants, i.e. domain names similar to his own domain name. To demonstrate the level of similarity, DNS Belgium uses an algorithm based on the 'Levenshtein Distance'. This algorithm generates a list of domain names that are given a score based on

their similarity.
To ensure that this list is not too long, we restrict it to the 50 closest variants. Because this process involves a mathematical algorithm, there is always the possibility that the results may differ widely. The list is sent to the e-mail address of the registrant.

Possible error messages

The error messages are identical to the native DAS/WHOIS (see above).

DNS Belgium reserves the right to change the limits for DAS/WHOIS if we feel that the services are being abused/attacked.

IP WHITELISTING FOR DAS AND WHOIS

DNS Belgium doesn't offer IP whitelisting for DAS or WHOIS. We feel the limits to our services are sufficient for the needs of all parties.

NAME SERVER GROUPS

To register a domain name and make it available for the outside world, you need to enter name servers. This can be done in the 'new domain'' transaction. Registrars who have registered a lot of domains specifying individual name servers will have a hard time when one of these name servers must be replaced. In that case, they will have to update each domain name that uses that name server. Working with name server groups will make this operation much easier.

The name server group mapping is a DNS Belgium specific extension. It allows a registrar to group several name servers in one object, to facilitate the mapping between a domain and a list of name servers.

A name server group is a list of name servers that can be managed separately in the system. A name server group can be linked with a domain name, which has the same effect as linking each individual name server from the group to that domain name. When the zone file is generated, the name server group is replaced by the name servers it contains. The advantage of using a name server group is that you only have to do 1 single update of the name server group in case you need to change, add or delete a name server. This update however will then impact all domains using that name server group.

A name server group can be linked to a domain, the same way a single name server can. It is also possible to mix a name server group with one or more single name servers.

Remark:

IP addresses cannot be specified. Therefore, name server groups cannot contain name servers in the same domain as the domain name they will be used for.

Name servers that are in the same domain as the one they are linked to, need an IP address (glue record). E.g. if you register a domain name xyz.be and you want to use the name server ns.xyz.be, you need to add the IP address, otherwise the resolver will not be able to find that name server.

Name server groups however, are created independently from the domain name they will be used for. It is therefore not excluded that one of these domains will be linked to a name server in the same domain. As you cannot add glue records to name servers in a name server group, this will not work and that specific name server will be discarded when the zone file is generated.

E.g. registrar 'mycompany' creates a group 'my-nameservers', containing the name servers he is using: ns1.mycompany.be, ns2.mycompany.be and ns3.mycompany.be. Afterwards he replaces the existing individual name servers linked with the domains he is managing with the group (including his own domain name: mycompany.be). After the next generation of the zone file, his own domain name will no longer work as the needed glue records are not provided.

CONCLUSION

If you need to add a name server to a domain that is in the same domain, use individual name servers where you can add the IP address. Use name server groups in all other cases.

A name server group cannot be deleted if it is still linked to one or more domains.

DNSSEC IMPLEMENTATION

DNSSEC is an updated version of the DNS protocol. It works by signing (not encrypting) all entries in a zone file using private/public-key cryptography. The public part of the keys is then published in the zone above you, creating a "chain of trust" leading back to the root zone.

This makes it impossible to forge DNS information unless you have access to the private key used to sign the DNS records.

We have implemented DNSSEC according to the relevant DNSSEC RFC's. Here is a list:

- RFC 4033: DNSSEC, Introduction and Requirements.
- RFC 4034: DNSSEC, Resource records.
- RFC 4035: DNSSEC, Protocol modifications.
- RFC 4641: DNSSEC, Operational best practices.
- RFC 5155: DNSSEC, NSEC3.
- RFC 5702: DNSSEC, SHA2.
- RFC 5910: DNSSEC & EPP.

The implementation of DNSSEC for .be domain names is optional. If you choose not to implement DNSSEC, you will not have to adapt your systems in any way.

If you do choose to implement DNSSEC, you only have to upload the domain names' public part of the key signing key. DNS Belgium will create the key digests and upload them to the .be zone file.

DNSSEC KEYS

As you can read in the RFC's, a DNSSEC key consists of several parts:

- **Keytag**: contains the keyID, generated when signing your zone file.
- **Flag**: indicates the key type, DNS Belgium only supports the uploading of Key Signing Keys (KSK).
- **Protocol**: indicates the protocol used, which is default 3 (meaning DNSSEC).
- **Algorithm**: DNS Belgium supports 8 algorithms to generate keys: (3) DSA-SHA1, (5) RSA-SHA1, (6) DSA-SHA1-NSEC3, (7) RSA-SHA1-NSEC3, (8) RSA-SHA256, (10) RSA-SHA512, (13) ECDSA Curve P-256 with SHA-256 and (14) ECDSA Curve P-384 with SHA-384.
- **Public key**: contains the value of the public key itself. This is generated when signing your zone file.

DS records will be published in the .be zone immediately. DNS Belgium won't perform any validation on the DNSSEC information of your domain names. It is up to you, as the registrar, to ensure that the chain of trust isn't broken. You can also check the security of the domain name with the on-demand DNS check on the Registrar Web Interface, please look at part III of these Registration Guidelines.

DNSSEC KEYGROUPS

Analogous to name server groups, DNS Belgium allows registrars to create keygroups. It allows a registrar to group several keys in one object, to facilitate the mapping between a domain and a list of keys. Linking a domain name to a keygroup has the same effect as individually linking all the keys in that keygroup to the domain name when the zone file is generated or updated.

Since one keygroup can be linked to any number of domain names, the number of keys to be created or replaced is drastically reduced. For instance, consider a keygroup linked to 100 domain names. Changing a single key in that keygroup will require 1 update instead of 100 individual domain name updates (if keygroups were not used).

Requirements for keygroups are:

- Each keygroup must have a unique name within your account.
- A keygroup can hold at most 4 keys.

- A keygroup can be linked to any number of domain names.
- Only 1 keygroup can be linked to each domain name.
- A domain name with a keygroup can't have individual keys and vice versa.

FINANCIAL AND ACCOUNT INFORMATION

FEES

These are the fees for the different transactions charged to the registrars in case of a .be domain name:

- € 4,00 (excl. VAT) for:
  - the registration of a new name.
  - the yearly rental fee for continued use of a domain name.
  - the transfer to another registrar.
  - the transfer to another registrant.
- A 'Monitored Update' is without charge.
- For the reactivation of a domain name in quarantine, registrars are charged € 10,00 (excl. VAT).
- The transfer of a domain name in quarantine is charged € 40,00 (excl. VAT).
- The activation of the Domain Guard service amounts to € 80,00 VAT excl. per year. This fee includes 4 temporary deactivations of Domain Guard per year.
- Domain name renewal and Domain Guard will not necessarily be mentioned on the same invoice. For a domain name registered in February, and protected by Domain Guard from August, the renewal will be invoiced yearly at the end of February and Domain Guard on the August invoice.

CLARIFICATIONS ABOUT THE PAYMENT TERMS

Here are some clarifications about the payment system used by DNS Belgium (see Registrar Contract, art 3.2):

1. At the signing of the registrar agreement DNS Belgium asks the registrar to indicate the amount allowing registrations for about a month. (This was decided upon request of most registrars who find it difficult to make payments without having received an invoice). A minimum of 2500 € (excl. VAT) was defined. This amount can be used to register domain names.
2. Every month, DNS Belgium generates an electronic invoice for the paying transactions during the previous month and for the domain names that passed the one-year right of use period (and were automatically renewed) during that month.
   The agreement further mentions: "The monthly invoices will be set off against the remaining credit of the registrar's advance". This means the renewal fees are deducted from the remaining balance in the registrar's account at the moment of invoicing (the new registrations were already taken into account at the moment of registration).
   This does not mean (as is often interpreted) the invoice will be reduced with the remaining balance of the pre-payment amount!
3. Invoices are payable within 30 days.

Paying the invoice will bring your DNS Belgium account back to the level of the chosen pre-payment amount. This again allows you, if you have selected the appropriate pre-payment amount, to register for another month at your normal volume of registrations.

Account status

You can check your account status and prepayment level easily on our Registrar Web Interface. The information is shown in the top right corner. As explained above, a registrar starts with 0 EUR on its account. This account can lower till the 'negative' prepayment level is reached, in this case: - 3025 EUR. After registering some domain names and paying your first invoice, your account status could be something like this:

AUTOMATIC PAYMENTS

It is possible to pay your invoices using SEPA Direct Debit (European accounts). To activate it, you can send a mail to our Support staff. DNS Belgium will request some details in order to send you a mandate that you can sign electronically. When the mandate is signed, SEPA is activated and payment for your future invoices will be transferred from your bank account to DNS Belgium automatically.

You can revoke the SEPA mandate at any time with a mail to our Support staff. The mandate will be withdrawn, and no more automatic payments will be deducted from your bank account. You will have to do manual payments instead.

WATERMARKS

When the available money of a registrar passes under certain watermark levels, a message (EPP poll or CPS e-mail) is sent to the automated e-mail address of the registrar. A mail is also sent to the billing contact e-mail address, informing the registrar of this situation. The available money is the sum of the account status and the prepayment. Current watermark levels are: 10.000, 7.500, 5000, 2501, 1250, 625 and 250 EUR. At those times, it is probably advisable to check if all your invoices have been paid.

Note: Via 'My Registrations', the registrar can check her/his current account status level at all times.

QUOTA CHECK

As explained in our 'Registrar Contract, art 3.1', the registrar is required to reach its annual turnover threshold (quota) between 1 January and 31 December. Registrars who start up, won't have their quota checked in the first incomplete period before 1 January. The total units you have on your account is represented by the 'virtual counter'. The virtual domain counter is increased:

- +1 for every new registration, every reactivation and every incoming transfer carried out;
- + number of renewals, for every monthly invoicing,
- + number of domains in portfolio, for a take-over of a portfolio.

At the end of the one-year-term, the registrar will receive a service invoice if he does not achieve the quota. The service invoice will amount to the remainder of the yearly quota fee owed to DNS Belgium.

E.g. Our yearly required quota is currently 250. If your virtual counter is 150 at the end of the year, you will receive an invoice corresponding to 100 units at the current price of a new domain name. In 2016 that would be 100*4=400 euro (excl. vat).

If you want to avoid this service invoice, please check your virtual counter and take appropriate action in time!

Via the Registrar Web Interface there is a page where the registrar can check his quota. More information can be found in part III of these Registration Guidelines.

E-INVOICES

When the e-invoice is made available via the website, an e-mail is sent to the registrar billing contact. To allow easy access to the specific document a direct link to the e-invoice is also available. This means that for a first access, the billing contact does not need to provide credentials.

Example: Invoice mail (en)

```
From: accounting@dns.be
Subject: Invoice DNS BE ready for download

Dear

We want to inform you that we have generated the invoice of the previous
```

```
month.

The pdf can be downloaded directly on the following link:
https://www.registry.be/agent/i/0123456ffffdddd643.htm

If more information is needed or for any other question please do not
hesitate to contact us:
- e-mail accounting@dns.be,
- 016 28 49 70 for general information
- 016 28 49 72 for technical assistance

Best regards,

DNS Belgium
```

Example: Invoice mail (nl)

```
From: accounting@dns.be
Subject: Factuur DNS BE nu downloadbaar

Beste

Via deze mail willen we u laten weten dat de factuur van de vorige maand
gegenereerd werd.

U kan de pdf-versie rechtstreeks downloaden via de volgende link:
https://www.registry.be/agent/i/0123456ffffdddd643.htm

Indien u meer informatie wenst of indien u andere vragen heeft, aarzel
dan niet ons te contacteren:
- per mail naar accounting@dns.be,
- 016 28 49 70 voor inlichtingen van algemene aard
- 016 28 49 72 voor technische assistentie

Met vriendelijke groeten

DNS Belgium
```

Example: Invoice mail (fr)

```
From: accounting@dns.be
Subject: Facture DNS BE prête pour être téléchargée

Bonjour,

Par ce message nous vous informons que la facture du mois précédent a
été générée.

La version pdf peut être téléchargée directement en utilisant le lien suivant:
https://www.registry.be/agent/i/0123456ffffdddd643.htm

Si vous avez besoin de plus d'information ou pour toute autre question,
n'hésitez pas à nous contacter:
- soit par e-mail à accounting@dns.be,
- soit au 016 28 49 70 pour tout renseignement d'ordre général
- soit au 016 28 49 72 pour une assistance technique

Bien à vous

DNS Belgium
```

INVOICES

More information about your payments and invoices can be found on the Registrar Web Interface, please look at part III of these Registration Guidelines.

HITPOINT SYSTEM

In the WHOIS you can find the release date for domain names in quarantine. DNS Belgium noted a number of registrars were using this list to register 'popular' or 'interesting' domain names as they became available, whether for their own use or at the request of their customers.
We have also noticed some registrars were devoting considerable resources to this activity, we received literally hundreds of identical requests. For these applications the same answer is always sent back ('Error code 101', 'Invalid status of domain name'). In other words, the domain name is still in use, and in this case, it is in quarantine.
Some registrars were even starting to send a continuous deluge of applications during the whole day.
It goes without saying we cannot accept this 'approach', for a number of reasons:

- it overloads the registration system unnecessarily; although the registration system can easily cope with this influx of registration transactions, the response time of the system will be slower;
- this type of action contaminates the database as each registration attempt is being logged.

Via the EPP server it is possible to check when a domain name will become available for registration. With a simple script the registration request can also be sent automatically at that time.

Although DAS and EPP are available for all registrars to use, and DNS Belgium made a recall via Newsletters and mailings to the registrars, we still noticed a lot of registrars preferred the dumb instead of the smart approach.

As a consequence, on 14 January 2004, we found ourselves compelled to take measures and we introduced the DNS Belgium 'Hitpoint System'. Any registrar who does not abide by the rules will automatically be blocked (status: BLOCKED). Furthermore, the hit point system is a safeguard against runaway processes sending thousands of faulty transactions per hour, thereby consuming valuable bandwidth, CPU power, and more importantly, database storage. Also, since it is a policy to log all incoming messages in the database together with the corresponding reply, the hit point system reduces the number of unnecessary transactions recorded in the log history.

How does the system work?

1 hit point is allocated when any of the following transactions return an error code:

- create-contact
- update-contact
- delete-contact
- create-domain
- update-domain
- delete-domain
- transfer-domain
- undelete-domain
- reactivate-domain
- create-nsgroup
- update-nsgroup
- delete-nsgroup
- create-keygroup
- update-keygroup
- delete-keygroup

10 hit points are allocated on a new-domain transaction with error code 2302 (OBJECT EXISTS).

All error codes except for new-domain transactions result in the allocation of a single hit point. Ten hit points are allocated to registrars who attempt to register a domain name that is not available for registration (for instance, the domain name is in quarantine or is presently registered or “on hold”).

Exceptions are:

- No hitpoints will be allocated when a new-domain transaction is performed within 10 seconds of the name being registered by another registrar.
- No hitpoint will be allocated when a transfer-domain transaction is performed on a domain name where the name servers have been removed due to the revoke procedure (see next chapter).

The number of hitpoints a registrar can take before the account is blocked, is proportional to the number of domains in your portfolio. It is calculated as the number of domain names divided by ten with an absolute minimum of 100 and an absolute maximum of 1000. Hitpoints are counted over a period of 24 hours. When your hitpoint counter reaches your maximum in a 24-hour-period, your account will be 'Blocked' for the next 24 hours. We will ignore all transactions you send to us during these 24 hours. Once 24 hours are past, you are again able to fully use our registration system.

It is possible to unblock yourself once every calender month. More on this in Part III of these Registration Guidelines under the Registrar Profile.

REVOKING OF DOMAIN NAMES

The registrants are expected to respect the general Terms and Conditions of DNS Belgium. One of the essential obligations concerns the notification of correct data during the registration of a domain name.

Third parties should always be able to execute their rights regarding a certain domain name. In this case, they should always be able to contact the registrant concerned. Therefore, it is essential for both registrars and DNS Belgium that potential disputes between concerned parties can be settled.

DNS Belgium handles this in several ways:

- When we receive a complaint from a third party about a registrant that cannot be contacted, this will be checked by us. When we encounter wrong data, both the registrant and the registrar are asked by e-mail to correct these data within a period of 14 days. If these data haven't been adjusted in that period, the domain name will be revoked.
- In addition, DNS Belgium has begun to check the historical database since 1st April 2006. Random checks will continue to be done on a monthly basis. When we encounter wrong data, both the registrant and the registrar are asked by e-mail to correct these data within a period of 14 days. If these data haven't been adjusted, the domain name will be revoked.
- If DNS Belgium receives information about a phishing domain name or fast flux networks, the revoke procedure will also be started. In addition to contacting the registrant and registrar, the nameservers connected to the domain name will immediately be removed. If DNS Belgium receives no update of the registrant information within 14 days, the domain name will be revoked.

In case of breach of other obligations of the terms and conditions, DNS Belgium will need to follow a different approach. In first instance, DNS Belgium needs to verify whether it is competent or not to determine that a breach occurred.

Example: somebody complains about the illegal content of a website linked with a domain and asks DNS Belgium to intervene and to revoke the domain. Indeed, being responsible for illegal web content could also mean an infringement on the terms and conditions. However, DNS Belgium is not competent to determine whether the content of a website is of illegal nature or not. This is reserved for competent judicial bodies (police and justice). When DNS Belgium is informed a competent legal body has ruled the content of a site linked with a .be domain is of illegal nature, then DNS Belgium could start the infringement procedure against the registrant and possibly revoke the domain.

In cases where DNS Belgium has no direct competence, it can only intervene in second place, once competent bodies have ruled over any prejudicial matters.

ABUSE TOOL

DNS Belgium monitors a number of abuse lists/sites and sends notifications if a domain name is affected. The notifications are sent to the registrant, onsite and technical contact of the affected domain name. Notifications are sent for our 3 products: .be, .vlaanderen and .brussels.

An incident will trigger an e-mail with a link to our website safebrowsing.be. On this website, you will find all incidents for your domain name. Every day an incident occurs, a new e-mail will be sent. The page concerning your website will also be updated for each new incident occurring for the next 21 days. If an incident is still present after five days, the e-mail will be resent.

It is the responsibility of the registrant to follow up on these notifications. If your website has been hacked, it is best to proceed as follows:

- Contact the administrator of your website, who is best placed to help you track and remove the identified files. It is important to remove all infected files.
- Change all the passwords of your hosting account, so that criminals cannot enter using the old data.
- Make sure that the last updates of the CMS you use have been installed.

DOMAIN QUALITY

To maintain a good and functional .be zone it is essential to start with good quality data. DNS Belgium has no control over the name server records entered by the registrars. To chart the information and give feedback to the registrars the domain quality project was brought to life.

Check on NS tree and name servers

To begin with, the whole name server tree is broken down from the top (root servers) down to the level of the domain name. We check to see whether the correct redirection has happened, or whether the right glue is in place, or whether any additional servers have been added in and whether the tree itself is complete and consistent. The response times are also shown. We then examine the availability of the name servers over the various channels (UDP and TCP). An indicative investigation is also carried out into the software used. Next, we check to see whether the name server results match up and meet the general guidelines through a check on the SOA records.

At the moment, IPv4 and IPv6 settings are investigated. We also check DS records, if present. We continually try to improve DNS quality and implement new checks.

All the information is grouped per name server or per domain and you can get a picture of your overall score and compare it to the overall score of the entire .be zone.

We hope that giving this information out to our registrars will show them it is important to continuously investigate the quality and status of their name servers and the name servers of their customers to make the .be into a fast, efficient and high quality top level domain.

More information about DNS quality can be found in part III of these Registration Guidelines

Error messages

On demand, DNS Belgium can provide you with an overview of the DNS Quality of your portfolio. In this overview, a short error message is shown. In the table below, you can find more information about these error messages. This information is also visible when you look up the domain name via 'My registrations' or when you do a real-time check of the domain name.

MessageType	Message	Meaning	Type
MissingNameserver	Nameserver <ns> is missing	Query did not return an expected nameserver	Error
NoAuthority	Nameserver claims no authority	Nameserver claims no authority	Error
QueryFailed (1)	Nameserver <ns> was unable to interpret the query.	Nameserver <ns> was unable to interpret the query.	Error
QueryFailed (2)	Nameserver <ns> reports a server failure.	Nameserver <ns> reports a server failure.	Error
QueryFailed (3)	Nameserver <ns> reports that domain name doesn't exist.	Nameserver <ns> reports that domain name doesn't exist.	Error
QueryFailed (4)	Nameserver <ns> does not support the requested query.	Nameserver <ns> does not support the requested query.	Error
QueryFailed (5)	Nameserver <ns> refused the query for policy reasons.	Nameserver <ns> refused the query for policy reasons.	Error
QueryFailed (6)	Nameserver <ns> replied with returnCode = <code>	Nameserver <ns> replied with returnCode = <code>	Error
UnexpectedError	Unexpected error when querying <ns>	Probably connect timeout to nameserver	Error

MessageType	Message	Meaning	Type
UnknownNameserver	Could not resolve nameserver <ns>	Nameserver does not resolve	Error
IpMismatch (1)	IP address does not match for <ns>.	Nameserver returned different A record than was expected.	Error
IpMismatch (2)	IP address <ip> does not match for <ns>.	Nameserver returned different A record than was expected.	Error
PublicCachingNameserver	<ns> seems to be a public caching nameserver.	Caching nameserver.	Error
TimeOut	Querying server <ns> has timed out.	Query timed out.	Error
NoNameservers	This domain has no nameservers attached to it. It will not be usable on the internet.	No nameservers attached to domain name, unusable on the internet.	Error
NameserverUnreachable	Nameserver <ns> unreachable.	Nameserver resolves, but nothing answers on port 53.	Error
DSForNonExistentDNSKEYError	No corresponding DNSKEY records found for DS with keytag: <keytag>.	DS in .be zone but no corresponding DNSKEY on registrars nameserver, no other DNSKEYs available.	Error
InvalidSignature (1)	DNSKEY with keytag: <keytag>, RRSIG expired on: <date>.	RRSIG returned for a DNSKEY is invalid.	Error
InvalidSignature (2)	DNSKEY with keytag: <keytag>, The inception date of the RRSIG lies in the future: <date>.	RRSIG returned for a DNSKEY is invalid.	Error
InvalidSignature (3)	DNSKEY with keytag: <keytag>, Signature invalid.	RRSIG returned for a DNSKEY is invalid.	Error
InvalidSignature (4)	DNSKEY with keytag: <keytag>, Failed to verify signature.	RRSIG returned for a DNSKEY is invalid.	Error
DNSKEYWithoutSignatureError	DNSKEY with keytag: <keytag>, No RRSIG found.	No RRSIG record was returned for a DNSKEY.	Error
PrivateIPAddress	Nameserver <ns> is a private ip address.	Nameserver has private range ip address (should not happen).	Error
MissingIp	IP address <ip> is missing for <ns>.	the nameserver did not return an expected A record.	Warning
TooSlow	Server is too slow: response time of <millis> ms.	Nameserver response took over 2 seconds.	Warning
DSForNonExistentDNSKEYWarning	No corresponding DNSKEY records found for DS with keytag: <keytag>.	DS in .be zone but no corresponding DNSKEY on registrars nameserver, but there is another DS that has a validated DNSKEY on the registrars nameservers.	Warning
NoDSInParentZone	No corresponding DS records found for DNSKEY with keytag: <keytag>.	DNSKEY returned from registrars nameserver, while no DS in .be zone (should not happen anymore).	Warning
StealthNameserver (1)	Stealth nameserver: <ns>.	Nameserver is a stealth nameserver.	Notice
StealthNameserver (2)	Stealth nameserver: <ns> on <ip>.	Nameserver is a stealth nameserver.	Notice
Slow	Server is rather slow: response time of <millis> ms.	Nameserver response took between 1 and 2 seconds.	Notice
DNSKEYWithoutSignatureNotice	DNSKEY with keytag: <keytag>, No RRSIG found.	DNSKEY without RRSIG, but another DNSKEY has RRSIG.	Notice

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.be

ANNEX: ALLOWED IDN CHARACTERS

In general, DNS Belgium supports all lower case code points (characters) from ISO-8859-1 supplemented with U+0153 (Latin Small Ligature œ), for an exact list of the allowed characters always check the table below:

nr	unicode	glyph	description
1	U+002D	-	HYPHEN-MINUS
2	U+0030	0	DIGIT ZERO
3	U+0031	1	DIGIT ONE
4	U+0032	2	DIGIT TWO
5	U+0033	3	DIGIT THREE
6	U+0034	4	DIGIT FOUR
7	U+0035	5	DIGIT FIVE
8	U+0036	6	DIGIT SIX
9	U+0037	7	DIGIT SEVEN
10	U+0038	8	DIGIT EIGHT
11	U+0039	9	DIGIT NINE
12	U+0061	a	LATIN SMALL LETTER A
13	U+0062	b	LATIN SMALL LETTER B
14	U+0063	c	LATIN SMALL LETTER C
15	U+0064	d	LATIN SMALL LETTER D
16	U+0065	e	LATIN SMALL LETTER E
17	U+0066	f	LATIN SMALL LETTER F
18	U+0067	g	LATIN SMALL LETTER G
19	U+0068	h	LATIN SMALL LETTER H
20	U+0069	i	LATIN SMALL LETTER I
21	U+006A	j	LATIN SMALL LETTER J
22	U+006B	k	LATIN SMALL LETTER K
23	U+006C	l	LATIN SMALL LETTER L
24	U+006D	m	LATIN SMALL LETTER M
25	U+006E	n	LATIN SMALL LETTER N
26	U+006F	o	LATIN SMALL LETTER O
27	U+0070	p	LATIN SMALL LETTER P
28	U+0071	q	LATIN SMALL LETTER Q
29	U+0072	r	LATIN SMALL LETTER R
30	U+0073	s	LATIN SMALL LETTER S
31	U+0074	t	LATIN SMALL LETTER T
32	U+0075	u	LATIN SMALL LETTER U

nr	unicode	glyph	description
33	U+0076	v	LATIN SMALL LETTER V
34	U+0077	w	LATIN SMALL LETTER W
35	U+0078	x	LATIN SMALL LETTER X
36	U+0079	y	LATIN SMALL LETTER Y
37	U+007A	z	LATIN SMALL LETTER Z
38	U+00DF	ß	LATIN SMALL LETTER SHARP S
39	U+00E0	à	LATIN SMALL LETTER A WITH GRAVE
40	U+00E1	á	LATIN SMALL LETTER A WITH ACUTE
41	U+00E2	â	LATIN SMALL LETTER A WITH CIRCUMFLEX
42	U+00E3	ã	LATIN SMALL LETTER A WITH TILDE
43	U+00E4	ä	LATIN SMALL LETTER A WITH DIAERESIS
44	U+00E5	å	LATIN SMALL LETTER A WITH RING ABOVE
45	U+00E6	æ	LATIN SMALL LETTER AE
46	U+00E7	ç	LATIN SMALL LETTER C WITH CEDILLA
47	U+00E8	è	LATIN SMALL LETTER E WITH GRAVE
48	U+00E9	é	LATIN SMALL LETTER E WITH ACUTE
49	U+00EA	ê	LATIN SMALL LETTER E WITH CIRCUMFLEX
50	U+00EB	ë	LATIN SMALL LETTER E WITH DIAERESIS
51	U+00EC	ì	LATIN SMALL LETTER I WITH GRAVE
52	U+00ED	í	LATIN SMALL LETTER I WITH ACUTE
53	U+00EE	î	LATIN SMALL LETTER I WITH CIRCUMFLEX
54	U+00EF	ï	LATIN SMALL LETTER I WITH DIAERESIS
55	U+00F0	ð	LATIN SMALL LETTER ETH
56	U+00F1	ñ	LATIN SMALL LETTER N WITH TILDE
57	U+00F2	ò	LATIN SMALL LETTER O WITH GRAVE
58	U+00F3	ó	LATIN SMALL LETTER O WITH ACUTE
59	U+00F4	ô	LATIN SMALL LETTER O WITH CIRCUMFLEX
60	U+00F5	õ	LATIN SMALL LETTER O WITH TILDE
61	U+00F6	ö	LATIN SMALL LETTER O WITH DIAERESIS
62	U+00F8	ø	LATIN SMALL LETTER O WITH STROKE
63	U+00F9	ù	LATIN SMALL LETTER U WITH GRAVE
64	U+00FA	ú	LATIN SMALL LETTER U WITH ACUTE
65	U+00FB	û	LATIN SMALL LETTER U WITH CIRCUMFLEX
66	U+00FC	ü	LATIN SMALL LETTER U WITH DIAERESIS
67	U+00FD	ý	LATIN SMALL LETTER Y WITH ACUTE
68	U+00FE	þ	LATIN SMALL LETTER THORN
69	U+00FF	ÿ	LATIN SMALL LETTER Y WITH DIAERESIS

nr	unicode	glyph	description
70	U+0153	oe	LATIN SMALL LIGATURE OE