



# ISPAPI Registrar Module

Domain Management using WHMCS & HEXONET

Version **1.0.53 (or later version)**

December 1, 2017



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### **ISPAPI Registrar Module**

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Version 1.0.53 (or later version)

December 1, 2017

The logo for HEXONET, featuring the word "HEXONET" in a bold, blue, sans-serif font. The "X" is stylized with a horizontal line through it.

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## Supported Features

The registrar module supports the following functions and features:

- Domain Registration
  - Additional domain fields
- Domain Transfer (with AuthInfo code support)
- Domain Management
  - Domain locking
  - Update Contact Information (with UTF-8 support)
  - Change Nameservers
  - Nameserver Registration (Add, Modify, Delete)
  - Explicit Deletions supported in Admin panel
- Domain Renewal
  - Special handling for registries without explicit renewals (many ccTLDs)
- DNS Management
  - Record-Types: A, AAAA, MX, MXE, CNAME, TXT
  - Allows user defined TTL values and MX priorities
  - DNS Zone created automatically when adding a DNS record if no DNS Zone existing
- Email forwarding
- URL forwarding
  - Redirect using HTTP
  - Forward using HTML Frame
- Optional TLS/SSL for API connection
  - Supports proxy server for accelerated API access
- Support for testing environment
- WHOIS Privacy management of .CA domain names
- Change of Registrant for .CA / .IT / .CH / .SE / .SG / .LI domain names
- Support for WHOIS Privacy / ID Protection
  - Uses privacy service WHOISTRUSTEE.com

- ID Protection toggle in Admin area gets synchronized
  - Client area WHOIS Privacy management
- Support for all bulk update operations
- Support for IDNs
  - automatically selects IDNA2008 if supported by TLD (e.g. .de)
  - uses API based IDN conversion by default
  - can be configured to use PHP method instead
- Support for new domain sync method (\_Sync)
  - Workaround for ccTLDs that need to get renewed before expiration
- Support for .SWISS registrations
- Support for SRV records
- Support for DNSSEC Management
- Supports our High Performance Domainchecker Module
- HEXONET as Lookup Provider
- High Performance availability checks using our fast API
- Suggestion Engine
- Aftermarket and Registry Premium Domains support.
- Fallback to WHOIS Lookup for non-supported TLDs

## Installation

Copy all files from the **install/** subdirectory to your WHMCS installation root directory (**\$YOUR\_WHMCS\_ROOT**), while keeping the folder structure intact.

E.g.

```
install/modules/registrars/ispapi/ispapi.php  
=> $YOUR_WHMCS_ROOT/modules/registrars/ispapi/ispapi.php
```

## Configuration


### Reseller Credentials

Within the WHMCS Admin area, go to

**Setup** => **Products/Services** => **Domain Registrars**

Activate the new registrar **ISPAPI (New HEXONET Module)**, and enter your Hexonet credentials. You can create your account here: <https://www.hexonet.net/sign-up>

If you want to use the "TestMode", you have to create your OTE account here: <https://www.hexonet.net/signup-ote>

 » ISPAPI v1.0.49 Activate Deactivate Configure

Username	<input type="text" value="test.user"/>	Enter your ISPAPI Login ID
Password	<input type="password" value="*****"/>	Enter your ISPAPI Password
UseSSL	<input checked="" type="checkbox"/> Use HTTPS for API Connections	
TestMode	<input checked="" type="checkbox"/> Connect to OT&E (Test Environment)	
ProxyServer	<input type="text"/>	Optional (HTTP(S) Proxy Server)
ConvertDNS	<input type="text" value="API"/>	Use API (PHP function Idn_to_ascii not available)
DNSSEC	<input type="checkbox"/> Display the DNSSEC Management functionality in the domain details	
Connection state: <b>Connected to OT&amp;E environment</b>		

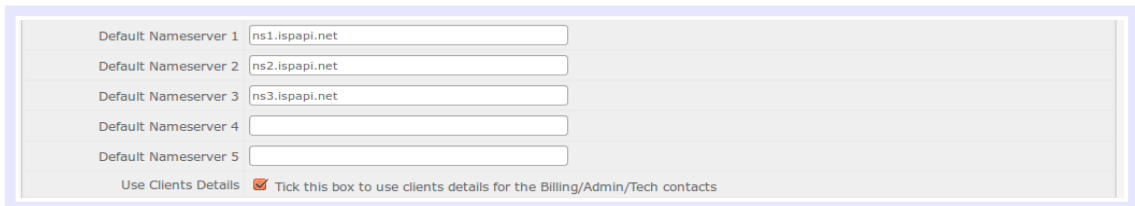
Save Changes

**Make sure that the account you are using is set to renewalmode AUTOEXPIRE in your Control Panel, otherwise domains might be renewed without being paid for by the customer**

## Nameservers

If you want to use DNS, URL or Emailforwarding, domains must resolve to the ISPAPI nameserver cluster (**ns1.ispapi.net**, **ns2.ispapi.net**, **ns3.ispapi.net**).

You might want to enter them in **Setup** => **General Settings** => **Domains** as **Default Nameservers** for your customers:



Default Nameserver 1	ns1.ispapi.net
Default Nameserver 2	ns2.ispapi.net
Default Nameserver 3	ns3.ispapi.net
Default Nameserver 4	
Default Nameserver 5	

Use Clients Details ☒ Tick this box to use clients details for the Billing/Admin/Tech contacts

You can also create your own nameserver hostnames and use them, as long as they are registered and resolve to the correct IP addresses.

## Cronjob configuration

In order to have your WHMCS always synchronized with our systems, you should make sure to run the WHMCS Domain Sync at least once per day:

```
php -q $YOUR_WHMCS_ROOT/crons/domainsync.php
```

More information about the Domain Sync can be found here:

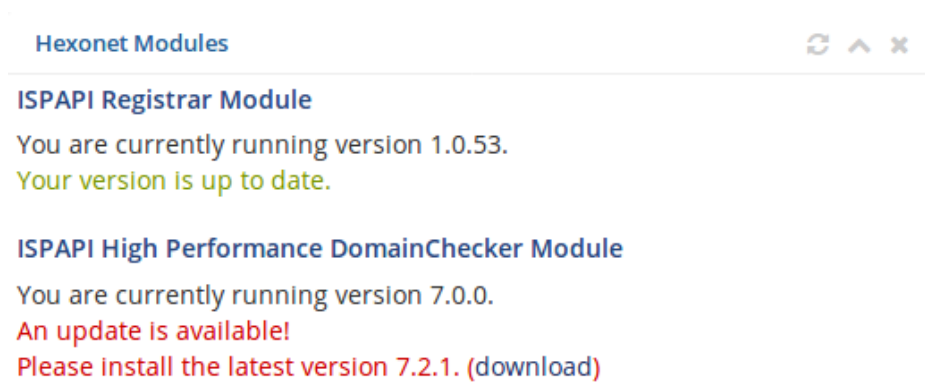
[http://docs.whmcs.com/Domains\\_Tab#Domain\\_Sync\\_Enabled](http://docs.whmcs.com/Domains_Tab#Domain_Sync_Enabled)



## Hexonet widget activation

If you would like to keep your WHMCS modules up to date, you should activate the Hexonet widget which will display a message with a download link as soon as a new version is available.

To activate it, go in **Setup** => **Staff Management** => **Administrator Roles** select your administrator role and activate the “Hexonet” widget.



## Additional domain fields

The registration of some extension requires sometimes additional domain fields. (e.g. Legal Type and CIRA Agreement for .CA domain)

In order to provide this additional fields on the registration page and map them with our module you have to extend the **\$additionaldomainfields** array.

Prior to WHMCS 7.0, this file was located at `/includes/additionaldomainfields.php`

From WHMCS 7.0 on, to add new additional domains fields, create a new file named `additionalfields.php` within the `/resources/domains/` directory.

Our module supports the following config fields: **Ispapi-Name**, **Ispapi-Options**, **Ispapi-Replacements**, **Ispapi-IgnoreForCountries** and **Ispapi-Eval**.

- **Ispapi-Name** (string): Name of the parameter in Ispapi
- **Ispapi-Options** (string): Comma-separated list of parameter values, the order must match the ones in **Options**. The mapping of values from **Options** to **Ispapi-Options** is stored in **Ispapi-Replacements**
- **Ispapi-Replacements** (array): If the parameter value is a valid key of this array, it gets replaced by the respective value. Indirect use via Ispapi-Options is preferred, direct use makes sense to map older values for backwards compatibility.
- **Ispapi-Eval** (string): PHP code to execute, the parameter value after all replacements is stored in \$value

In our module you will find a file named "additionaldomainfields\_sample.php" containing a lot of preconfigured extensions running with our systems. (updated on a regular basis) This file will assist you configuring the WHMCS additional domain fields.

Examples:

```
// Maps the "Application Purpose" value on the Ispapi parameter
// "X-US-NEXUS-APPPURPOSE".
// e.g. for "Government purposes": X-US-NEXUS-APPPURPOSE=P5
$additionaldomainfields[".us"][] = array(
    "Name" => "Application Purpose",
    "Type" => "dropdown",
    "Ispapi-Name" => "X-US-NEXUS-APPPURPOSE",
    "Ispapi-Options" => ",P1,P2,P3,P4,P5",
    "Options" => ",P1 - Business use for profit,P2 - Non-
profit business; club; association; religious organization; etc.,P3
- Personal Use,P4 - Educational purposes,P5 - Government purposes",
    "Default" => "",
    "Required" => true
```

```
);
```

```
// Maps the "Nexus Country" value on the Ispapi parameter
// "X-US-NEXUS-VALIDATOR", converting to uppercase.
// e.g. for "de": X-US-NEXUS-VALIDATOR=DE
$additionaldomainfields[".us"][] = array(
    "Name" => "Nexus Country",
    "Type" => "text",
    "Description" => "<div>Specify the two-letter country-code of
the registrant (if Nexus Category is either C31 or C32).</div>",
    "Size" => "2",
    "Default" => "",
    "Required" => false,
    "Ispapi-Name" => "X-US-NEXUS-VALIDATOR",
    "Ispapi-Eval" => '$value = strtoupper($value);'
);
```

```
// Custom local presence service for .it
$my_local_presence = array(
    "FIRSTNAME" => "John",
    "LASTNAME" => "Doe",
    "ORGANIZATION" => "Local Presence",
    "STREET" => "Via Presence 123",
    "CITY" => "Milano",
    "STATE" => "MI",
    "ZIP" => "12345",
    "COUNTRY" => "IT",
    "PHONE" => "+39.123456",
    "EMAIL" => 'info@localprecense.it'
);

$additionaldomainfields[".it"][] = array(
    "Name" => "Local Presence",
    "Type" => "dropdown",
    "Options" => ",Use Local Presence Service",
    "Default" => "",
    "Required" => false,
    "Ispapi-Options" => "0,1",
    "Ispapi-Eval" => 'if ( $value ) {
        $command["OWNERCONTACT0"] = $my_local_presence;
        $command["ADMINCONTACT0"] = $my_local_presence;
    }'
);
```

## UTF-8 Support

For **WHMCS < 5**, if the system charset for WHMCS is set to utf8, the ISPAPI module will enable some workarounds to support UTF-8 for domain registrations, transfers and contact updates.

For **WHMCS >= 5**, it uses the original unmodified parameters as provided by the system.

**WHMCS >= 6** decided to strip the umlauts in domain names and contacts. This module is able to fix this issue and will keep the umlauts.

In any case, the module should be able to handle umlauts and special characters in whois contacts, as long as the respective registry supports it.

For registries that don't support umlauts, some characters will be mapped automatically, e.g. é to e, ö to oe and so on.

## Domain Name WHOIS Privacy

The registrar module fully supports the WHOIS Privacy service WHOISTRUSTEE.com:



Support for WHOIS Privacy (aka ID Protection in WHMCS) been integrated in two ways:

### Support for the new WHMCS 'toggle ID protection' functionality

Whenever the ID protection flag gets enabled or disabled in the WHMCS Admin area, the module synchronizes the new protection status to the domain.

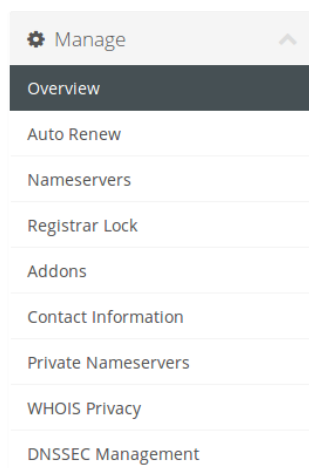
This functionality is compatible to the WHMCS API "domaintoggleidprotect" call.

**If the ID Protection flag gets disabled in the Admin area, clients will not be able to re-enable WHOIS Privacy themselves, but it can only be re-enabled by an admin!**

### Client area WHOIS Privacy management

The registrar module registers a new client area function, which will only be visible when using a template thats compatible to the new WHMCS 5 default one.

In the **Management Tools** section of a domain that got ID Protection enabled, there's a new item called **WHOIS Privacy**.



### Managing test.com

Portal Home / Client Area / My Domains / test.com

**Dev License:** This installation of WHMCS is running under a Development License to be used for production use. Please report any cases of abuse to abuse@hexonet.com

#### Overview

**Domain:**

test.com

**Registration Date:**

Wednesday, November 29th, 2017

**Next Due Date:**

Thursday, November 29th, 2018

**First Payment Amount:**

\$10.00 USD

**Recurring Amount:**

\$20.00 USD Every 1 Year/s

**Payment Method:**

Bank Transfer

Using that new function, a client can verify the current protection status, and enable or disable it automatically.

The new WHOIS Privacy page looks as follows (protection is enabled in example):

## WHOISTRUSTEE

### Why WHOIS Privacy is important

Domain name registrations requires contact information be provided for storage and display in the public WHOIS database. This means that anyone in the world can view the name, address, phone number and email without restriction. Publicly making this information available puts domain owners at a risk for spam and potential identity theft. Our WHOIS Privacy service securely replaces all of this information, and completely shields all WHOIS data from the outside world.

 <b>Unprotected Public WHOIS</b>	 <b>WHOISTRUSTEE Protected</b>
Example Org Ltd. John Doe 123 Main Street SmallTown, CA 95021 USA +1 (416) 000-0000 me@mydomain.com	Registrant of MYDOMAIN.COM c/o WHOISTrustee.com Limited Suite 3686, 24b Moorefield Road Johnsonville, Wellington 6037 NZ +64.0000 75d34d@mydomain.com.whoistrustee.com
<b>VISIBLE TO THE PUBLIC</b>	

### WHOIS Privacy Status:

Your WHOIS information is currently protected!

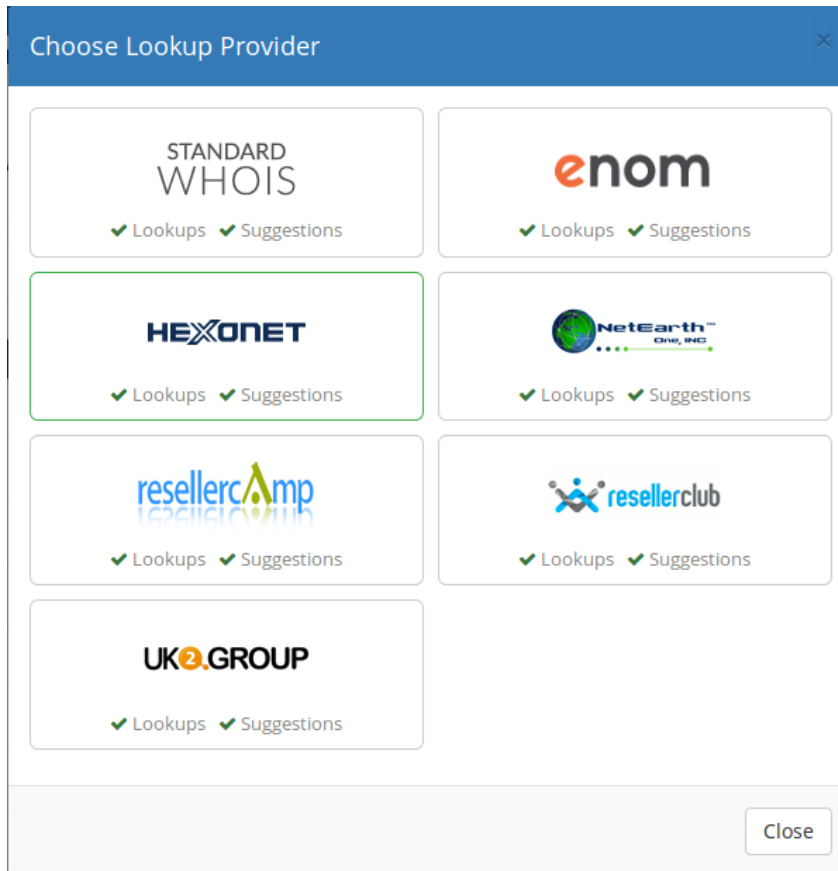
[Disable WHOIS Privacy](#)

Powered by [WHMCompleteSolution](#)

## HEXONET as Lookup Provider

The Hexonet lookup provider yields high performance availability checks of the domains using our fast API. For the domains that are not supported by Hexonet, the lookup fallbacks to WHOIS. In order to utilize this feature, you just have to choose 'HEXONET' in the lookup provider suggestions.

( [Setup](#) => [Products/Services](#) → [Domain Pricing](#) )



**This new lookup feature requires at least WHMCS version 7.3**

Configure the lookup provider by activating the suggestion engine for accurate and efficient search results.

Configure Lookup Provider

HEXONET

Don't have a HEXONET Account yet?  
Get one here: <https://www.hexonet.net/sign-up>

The HEXONET Lookup Provider provides the following features:

- High Performance availability checks using our fast API
- Suggestion Engine
- Aftermarket and Registry Premium Domains support
- Fallback to WHOIS Lookup for non-supported TLDs

Suggestion Engine based on search term:  
☒ Tick to activate (recommended)

Close

Save

Our Suggestion engine provides speed domain suggestions based on the searched domain or a keyword. Now the Hexonet provides support for Aftermarket and Registry premium domains as well.

In order to see premium domains suggestions in the search results, configure the 'Premium Domains' section on WHMCS.

Premium Domains

ON

Configure



### Configure Premium Domain Levels

Premium domain cost prices are fetched in real-time from domain registrar APIs. The price markups are applied as defined below. Markup percentages are based on bands, which can be defined as required

Price <	Markup %
>= 0	10 %
New Price <	New Markup % %

CloseSave

Example search results:

Search

**Congratulations! anthony.blog is available!**

**\$11825.00 USD** Add to Cart

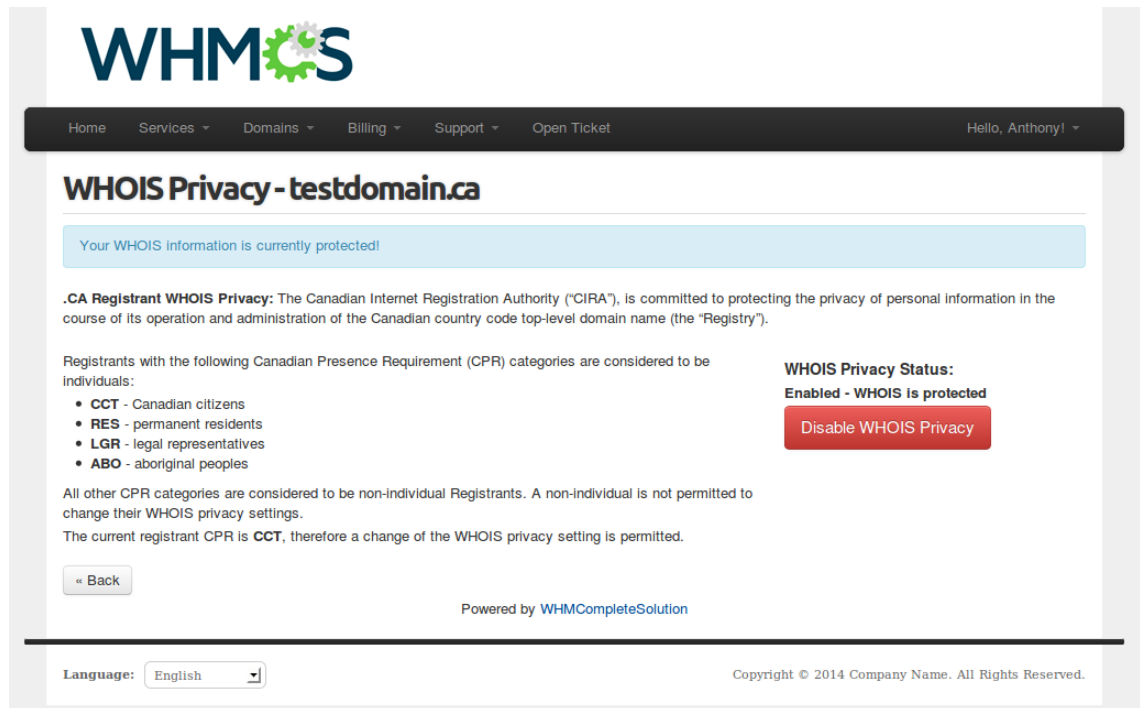
#### Suggested Domains

anthony.top	\$602.29 USD	<button>Add to Cart</button>
anthony.pizza	\$108.90 USD	<button>Add to Cart</button>
anthony.co	\$21998.90 USD	<button>Add to Cart</button>
fullgeneral.com	\$5498.90 USD	<button>Add to Cart</button>
marcusantonius.com	\$2524.50 USD	<button>Add to Cart</button>
markantony.com	\$1416.80 USD	<button>Add to Cart</button>

## Special features

### .CA Registrant WHOIS Privacy

The new WHOIS Privacy page for .CA domain names looks as follows (protection is enabled in example):



The screenshot shows the WHMCS interface for the WHOIS Privacy page of a .CA domain named 'testdomain.ca'. The page features a dark navigation bar with links for Home, Services, Domains, Billing, Support, and Open Ticket, along with a user greeting 'Hello, Anthony!'. The main heading is 'WHOIS Privacy - testdomain.ca'. A light blue banner states 'Your WHOIS information is currently protected!'. Below this, a paragraph explains that the Canadian Internet Registration Authority (CIRA) is committed to protecting personal information. A section titled 'Registrants with the following Canadian Presence Requirement (CPR) categories are considered to be Individuals:' lists four categories: CCT (Canadian citizens), RES (permanent residents), LGR (legal representatives), and ABO (aboriginal peoples). To the right, the 'WHOIS Privacy Status' is shown as 'Enabled - WHOIS is protected' with a red button to 'Disable WHOIS Privacy'. A note mentions that all other CPR categories are non-individual and cannot change their privacy settings. The current registrant CPR is 'CCT', and a change is permitted. A 'Back' button is at the bottom left. The footer includes a language selector set to 'English' and a copyright notice for 2014.

**WHOIS Privacy - testdomain.ca**

Your WHOIS information is currently protected!

**.CA Registrant WHOIS Privacy:** The Canadian Internet Registration Authority ("CIRA"), is committed to protecting the privacy of personal information in the course of its operation and administration of the Canadian country code top-level domain name (the "Registry").

Registrants with the following Canadian Presence Requirement (CPR) categories are considered to be Individuals:

- **CCT** - Canadian citizens
- **RES** - permanent residents
- **LGR** - legal representatives
- **ABO** - aboriginal peoples

All other CPR categories are considered to be non-individual Registrants. A non-individual is not permitted to change their WHOIS privacy settings.

The current registrant CPR is **CCT**, therefore a change of the WHOIS privacy setting is permitted.

**WHOIS Privacy Status:**  
**Enabled - WHOIS is protected**  
[Disable WHOIS Privacy](#)

[« Back](#)

Powered by [WHMCompleteSolution](#)

Language: [English](#)

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### .CA Change of Registrant

The Change of Registrant page for .CA domain names is available under the Management Tools of a .CA domain.

## .IT .CH .SE .SG .LI Change of Registrant

The change of Registrant of these TLDs requires a special procedure called TRADE. This function is available under the Management Tools of the domain.

## .SWISS Registrations

Our registrar module is now supporting .SWISS registrations. (This function requires WHMCS 6.x)

.SWISS domain names are different and cannot be registered with the normal **AddDomain** command.

In order to apply for a .SWISS domain name it is always required to request a domain application with the **AddDomainApplication** command and to provide the class 'GOLIVE'.

Moreover .SWISS registrations require 2 additional domain fields. Please add the following code at the end of the **includes/additionaldomainfields.php** file:

```
## .SWISS DOMAIN REQUIREMENTS ##
$additionaldomainfields[".swiss"] = array();
$additionaldomainfields[".swiss"][] = array(
    "Name" => "Enterprise ID",
    "Type" => "text",
    "Required" => true,
    "Description" => "(must be CHE followed by 9 digits)",
    "Ispapi-Name" => "X-SWISS-REGISTRANT-ENTERPRISE-ID",
);
$additionaldomainfields[".swiss"][] = array(
    "Name" => "Intended use",
    "Type" => "text",
    "Required" => true,
    "Ispapi-Name" => "X-CORE-INTENDED-USE",
);
```

This function uses HOOKS and in order to activate these hooks you have to go to:

**Setup** => **Products/Services** => **Domain registrars**, click the “Configure” button in the ISPAPI module line and finally click “Save Changes”.

### Example of a .SWISS registration:

- Customer register a .SWISS domain (like he will register a normal domain)
- Once the invoice paid, the domain application will be sent

- The domain will be set to **PENDING** until the application process has been completed
- A cron job is checking the application status once a day
  - If the application is **successful** the domain will be set to **ACTIVE** and the customer will be able to manage it.
  - If the application is **failed**, the domain will be set to **CANCELLED** and you will have to **refund the customer manually**.

In order to work automatically the WHMCS Cron job has to be configured properly. Please have a look at this page: <http://docs.whmcs.com/Crons>

Further information regarding .SWISS is available in our wiki:  
<https://wiki.hexonet.net/wiki/SWISS>

## SRV Records support

WHMCS doesn't allow SRV records. Our module makes it possible !

In order to activate that you have to update the clientareadomaindns.tpl file in your template directory.

In this file you will find 2 <select> tags. In the first you will have to add the following code:

```
<option value="SRV"{if $dnsrecord.type eq "SRV"}  
selected="selected"{/if}>SRV</option>
```

In the second you should add:

```
<option value="SRV">SRV</option>
```

Between the 2 tags there is an if statement, here you have to replace

```
{if $dnsrecord.type eq "MX"}
```

with

```
{if $dnsrecord.type eq "MX" || $dnsrecord.type eq "SRV"}
```

Now you are ready to support SRV records !

## DNSSEC Management support

Please be advised that HEXONET's nameserver cluster doesn't support DNSSEC yet, so you will need to setup your own DNSSEC enabled nameservers for now.

In order to activate this feature, within the WHMCS Admin area, go to

**Setup** => **Products/Services** => **Domain Registrars** => **ISPAPI**

and activate the **DNSSEC** checkbox.

In the domain details a new "DNSSEC Management" section will be displayed.

This feature allows your customers to add DS and KEY records and set the maxSigLife.

Manage

Overview

Auto Renew

Nameservers

Registrar Lock

Contact Information

Private Nameservers

DNS Management

Email Forwarding

WHOIS Privacy

DNSSEC Management

+ Actions

Renew

Register a New Domain

Transfer in a Domain

### Managing mytestdomain.com

Portal Home / Client Area / My Domains / anthony12345.com

#### DNSSEC Management

##### DS records

Key Tag	Algorithm	Digest Type	Digest
27919	5	1	19932EF844229C70F53CA6C94B60E44CBC76F874
27914	5	1	A8A465B52C115325367BB06B41C2A7C28252B273

##### KEY records

Flags	Protocol	Algorithm	Public Key
257	3	5	AwEAAcXwGatVRLkzRgV/sFSr0h4n+u/OVDuWI7bkAgXeEc3I/dSBfcG7/k5OvhYI
257	3	5	AwEAAcXwGatVRLkzRgV/sFSr0h4n+u/OVDuWI7bkAgXeEc3I/dSBfcG7/k5OvhYI

##### MaxSigLife (optional)

604800

Save Changes

Powered by WHMCompleteSolution

## Ispapi Domain Import Addon

This package includes an domain importer addon. You can use it to automatically import domain names from your Hexonet account into your WHMCS.

To activate it, go in **Setup** => **Addon Modules** and activate the **Ispapi Domain Import**.

Once done, you will find a new menu item called Ispapi Domain Import under **Addons**

### Addons

#### Ispapi Domain Import

Import Domains from ISPAPI Account

ISPAPI Test Account: **test.user** - **Connected!**

#### Query Domainlist

Domain:

Pull Domainlist

#### Import Domains

Payment Gateway	Bank Transfer
Currency	USD
Domains	<div></div>

Import Domains

Just enter the list of domains into the **Domains** field, or pull the list from your account, select a payment gateway, a default currency for new client accounts, and press **Import Domains**.

For each domain, the tool will create a new WHMCS client account using the selected currency and the registrant info, if there's no existing WHMCS client account using the same email address.

Also it will use the current renewal prices as the recurring amounts of imported domain names, using the respective client account currency.