



The IANA Function for ccTLDs

The US cedes stewardship of the IANA function and the world's attention turns to ICANN. What does this mean for the ccTLDs?

The 'IANA Functions' became a hot discussion topic after earlier this month the United States Government asked ICANN to prepare together with the Global stakeholders a proposal to take over the role United States play in the coordination of the key Internet functions, also called the IANA functions. Currently ICANN performs these key Internet functions through a contract with the United States Government. IANA stands for '*Internet Assigned Number Authority*'. The IANA functions consist of a set of coordinating tasks with regard to domain names, the IP-addresses and the Internet protocols.

IANA does not decide who operates a domain registry. This responsibility lies with the 'Local Internet community' in case of a ccTLD or by the ICANN Board in case of a gTLD. IANA is responsible for the management of the DNS root zone. This role means assigning the operators of top-level domains, such as .uk and .com, and maintaining their technical (e.g. name server records) and administrative details (e.g. administrative and technical contacts).

The name server data of the different TLD registries is one of the key pieces of information IANA has to keep up to date in the Root zone. The name servers of a TLD contain the information on the domains registered under that TLD and this information is necessary to find back the place on the Internet where for example the content of a webpage is stored. When a ccTLD registry changes its name servers, IANA will receive a request to update the information in the Root zone, it will examine the authenticity of the request, perform technical checks and implement the changes.

A name server change is usually a planned action for example as part of a registry's maintenance or upgrade programme but might also occur as an urgent action if a name server becomes dysfunctional. At this moment such requests pass via the US Department of Commerce before they are executed.

IANA maintains a collection of "IDN tables" which list all the characters a particular TLD registry supports for Internationalised Domain Name Registrations. For example all the Greek characters that can be used in a .eu domain name.

IANA is also the operator of the Key Signing Key for the DNS Root Zone. This responsibility includes, amongst other: 'issuing, managing, changing and distributing DNS keys'¹. DNS keys are important for ccTLD registries that provide DNSSEC to their domain holders. DNSSEC helps to secure the Internet by complicating the manipulation of the information that passes through the DNS. ccTLDs are not directly subject to the IANA roles regarding IP addresses and protocols.

At its meeting in Singapore, ICANN organised a first dialogue with the community to come to a proposal on how to take over the US stewardship when the current IANA contract terminates in September 2015. For ccTLDs IANA's responsiveness, stability and reliability in delivering its technical and administrative service at the highest standard are crucial. IANA must remain accountable to the community it serves.

To contribute to this process a CENTR ad hoc working group of ccTLD Registries will draft a position paper on the future of IANA

Further Reading

[CENTR background paper \(click below\)](#)
[CENTR statement](#)



U.S. Government announcement on the future of IANA

Background paper

March 2014

Introduction: The announcement of the United States Government of its intent to transition key Internet domain function has created a lot of commotion in the Internet Governance ecosystem. It is probably one of the most important events that will determine the current and future Internet Governance debates. This paper wants to take a step back to give the reader some basic insight to better understand the ongoing discussion and why this discussion is relevant for ccTLD registries.

CENTR Stockholm meeting: Internet Governance and Board Elections

The CENTR members joined in Stockholm for the 51st General Assembly and 2014 Annual General Meeting. Internet Governance was one of the overarching themes.

The ccTLDs exchanged views on the latest Internet Governance developments and upcoming global meetings with ICANN CEO and President Fadi Chehadé who joined over video conference. The members had an in depth discussion on the future of IANA. It is vital for the functioning of a ccTLD that IANA continues to deliver its technical and administrative services in a responsive, stable and reliable way.

The CENTR GA was also informed about the Global Multi-stakeholder meeting on the Future of Internet Governance in Brazil (23-24 April, Sao Paulo) and discussed plans for CENTR's contribution to the 2014 Internet Governance Forum in Istanbul on 2-5 September 2014.

On day two the CENTR AGM re-elected Lise Fuhr (.dk), Giovanni Seppia (.eu) and Richard Wein (.at) to the CENTR Board. The three Board members had come to the end of their term and were re-appointed for a second two-year term.

DomainWire Stat Report focuses on European ccTLDs

Each quarter, CENTR publishes its quarterly TLD report entitled the 'DomainWire Stat Report'. The report covers basic statistics on global Top Level Domains (TLDs) with a focus on European ccTLDs.

The recent report shows aggregate growth in European ccTLDs was 4.3% for the past 12 months and total registrations amount to just under 66 million. Growth in European ccTLDs has been trending downward like most other categories of TLDs however has experienced a reduction in the rate of decline over the past 6 months.

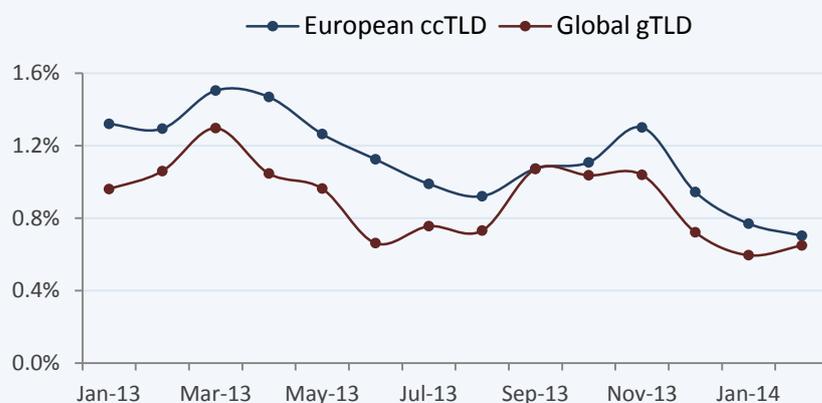
The report also shows that in relative terms (that is percentages), the highest growth over the past 12 months has been amongst ccTLDs with between 500K - 1 million registrations. These ccTLDs have a median 12 month growth of 7.1%.



Click left for the DomainWire Report which also includes the status of global domain names, top 20 ccTLDs (registrations) and other European ccTLD metrics.

European ccTLDs At a Glance

Total ccTLD registrations in Europe	65,996,604
Growth – Quarter/1 year	0.7%/4.3%
Average Renewal Rate (2013)	80.6%
Highest quarter growth	.by (Belarus) 5.7%
Largest Zone	.de (Germany) 15.7 million
DNSSEC Status	33 zones (65%)
No. Zones offering IDNs	25



To smooth the growth line, 3 month rates are used rather than 1 month

Michael Hausding is “Security Engineer” with SWITCH-CERT, the SWITCH Computer Emergency Response Team. This Team serves a very diverse constituency in Switzerland: The Swiss Higher Education Community, the ccTLD registry for .ch & .li as well as customers from the financial industry, the public sector, law enforcement and internet service providers. Michael’s main responsibility is the secure operation of the registry. This includes security incidents such as malicious domain registrations, phishing and drive-by infection via websites of .ch & .li second level domains.



Fighting Malware in Switzerland: What work is there still left for you to do?

Our team has been actively fighting malware for years, and I think this is one of the reasons why Switzerland has one of the lowest rates of infected computers. Four years ago we started a program to prevent computers from being infected with malware via drive-by infections through Swiss websites. When we see malicious code on .ch/.li websites distributing malware we inform the owner of the domain name and ask him to remove the malicious content. We support domain name owners and webhosters with information about the drive-by code. Most drive-by code is injected by criminals and is hidden to avoid detection and removal. Domain owners are not often able to cope with this situation without the support from the webhoster or webmaster.

In our daily work we cooperate closely with different partners. These organizations provide us information about security issues in Switzerland. They are mostly ISPs and webhosters that support customers with the cleanup of infected systems and websites. A large part of our time is spent analyzing and verifying infections and relaying information to the people who can act and fix the problem. But as the criminals are constantly moving and improving their techniques we also need to adopt tools and processes to new challenges.

From a legal perspective, SWITCH is empowered to block a domain when malicious code is found. What advice could you give to other ccTLDs in fighting malware?

The Swiss Office of Communications has given us a clear mandate. If a website in the .ch domain is abused for phishing or the distribution of malware we are allowed and in some cases even obliged to suspend the domain name. We have this power since time is critical in these two cases. But we can only do this for at most five days, after which we need the confirmation of a government-accredited organization. In our process we allow for one working day to clean up the infection or turn off the infected website before we suspend the domain name. Suspension is only needed in 20% of all cases.

It’s very important that domain owners trust us and don’t get the feeling we want to make their lives difficult. We thus accept a day of possible exposure, and in return get them to work with us, rather than against us. This works well as 80% of infected sites are cleaned by the owner or hoster within one day.

I think collaboration with all involved parties (registrars, domain owner, technical contact, hoster, webmaster/designer) is critical for improving the response. Our goal is to remove the drive-by code from the website so it’s no longer dangerous to visitors. The suspension is only a last resort in case no one is found who can solve the problem.

My advice for other ccTLDs who want to help get their country malware free:

1. Make clear what type of abuse is within your mandate and what isn’t.
2. Collaborate with your partners, the registrars, the hosting providers and the authorities in your country to fight cybercrime.
3. Have a transparent and documented process.
4. Underline that you are doing this to support a secure and stable internet.

Although we try, we’ll never get our country completely malware free. Like real life there will still be remaining risks in using the internet, but we need to keep it acceptably low for the internet user. A secure internet not associated with cybercrime will help everyone: internet users, the internet industry and our economy.

In your opinion, what are the biggest challenges ccTLDs will face in coming years?

Cybercrime is going to grow and domain names are a critical resource for the criminals. They can either register them themselves or, just use legitimate registered domain names or even complete websites by exploiting vulnerabilities. If ccTLDs want to contribute to an open and secure internet they should help fighting criminal abuse of domain name resources by actively establishing transparent processes that interrupt or prevent criminal abuse of domain names.

Q&A
with

Michael
Hausding

Security Engineer
SWITCH-CERT

GENTR

Q&A

ccTLD News Highlights

.ca Canadian small business lagging in online presence Three-quarters of Canadians research purchases online, but only 41% of small businesses have an online presence

.de New management team at DENIC DENIC's Supervisory Board appointed Dr. Jörg Schweiger, as new CEO effect from 1 March.

.eu Results Registrar Satisfaction Survey 2013 94% of .eu registrars feel they have a good relationship with EURid, according to the results of the 2013 Registrar Satisfaction Survey.

.it Quarter .it magazine available A year's data and issues closed in the last quarter of 2013 with this report from .it

.nl SIDN and SETAR sign cooperation agreement on .aw SIDN will provide registry services for .aw (Aruba). SETAR will use SIDN's systems for registering .aw domain names.

.ru Russian Internet Governance Forum - The 5th Russian Internet Governance Forum takes place April 7 (Moscow) along with celebrations of the 20th anniversary of .RU.

.pl NASK Q3 2013 Report available NASK has published a report summarizing Q4 of 2013 and whole year in .pl Registry.

.rs Fifth DIDS Conference, Belgrade - Over 260 visitors attended DIDS - an annual conference focusing on development of the Internet and Serbian .RS/.CPB domains.

.se She has a key to the Internet Anne-Marie Eklund Löwinder is one of 7 people in the world who has a key to the Internet. When she recently attended a ceremony for signing the root zone of the domain name system, the UK newspaper The Guardian teamed up in Los Angeles to document the occasion.

.uk Nominet to jointly host Commonwealth DNS forum The Commonwealth DNS Forum 2014 is designed to help representatives from across the Commonwealth examine the economics, governance, and social impact of the DNS.

13th CENTR Marketing Workshop

On 28 and 29 February DENIC (.de) hosted the 13th CENTR Marketing workshop in Frankfurt. The CENTR workshop is the opportunity for marketing teams from the European ccTLD registries to meet, exchange ideas and brainstorm. On the agenda: campaigns and strategies, trends in internet usage, zone analysis and of course new gTLDs. One of the highlights of the meeting was an open panel discussion with the new city and regional domain registries of .ruhr, .saarland and .hamburg.

43rd Legal and Regulatory Workshop

On the 6th March, IT-NIC hosted the Legal and Regulatory Workshop in Rome, Italy with topics around third party requests to take action on domains, a high profile court case involving a ccTLD, the .nl control (a Registry Lock) and more. The workshop was attended by 30 participants representing 19 ccTLD Registries.

Registrar Identification Workshop

On 10 March CENTR members held a ccTLD workshop on registrar identification. The aim of this ad hoc initiative was to brainstorm on better identification procedures for interactions between the Registrars and the Registry to enhance security. The participants also discussed how additional identification be imposed in a customer friendly way. Participants from 24 Registries attended the workshop hosted by .SE in Stockholm.



Source: CENTR stat database, gTLDs: Hosterstats.com

Note: 'CENTR' members represent more than 95% of European ccTLDs in terms of domain registrations

CENTR Total Registrations

68,695,634

CENTR Full Members

The CENTR membership month growth for February was 0.48% and 4.6% over the past 12 months.

The highest growth member for February was .ir (2.7%) and in absolute terms was .de (57,000 domains)