
ICANN85 Mumbai | CF – ccNSO: ccTLD News Session
Wednesday, March 11, 2026 – 10:30 to 12:00 IST

CLAUDIA RUIZ

Hello and welcome to the ccNSO-ccTLD News Session. My name is Claudia Ruiz and I, along with my colleague, Joke Braeken, are the participation managers for this session. Please note this session is being recorded and is governed by the ICANN Community Participant Code of Conduct, the ICANN Expected Standards of Behavior, and the ICANN Community Anti-Harassment Policy.

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Thank you, and with that, I will now hand the floor over to Ai-Chin, moderator for this session. Thank you.

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AI-CHIN LU

Hello, everyone. My name is Ai-Chin Lu, and I will be chairing this section. Welcome to all participants, both here in the room and joining us remotely from different time zones around the world. It's a wonderful time to our global ccTLD community together. With 180 members currently in the ccNSO, the ccTLD news section is particularly meaningful for our community. It provides a global platform where we can share experiences, exchange ideas, support one another, strengthen our sense of community, and build a stronger DNS ecosystem.

Today we have an excellent lineup of five speakers from different regions, exploring development in areas such as language in enablement evolving registration data service and the DNS and emerging technology operational continuity and the collaboration across ccTLDs. I sincerely thank all the speakers for sharing their insight and experience with us.

Before we begin, I think a few quick reminders. Live interpretation is a variable. Please speak slowly, clearly, and state your name and affiliation. And if you have a headset, we recommend using it to clearly hear the interpretation. There will be time for questions and after each presentation, and we will also take questions from the remote participant. With that, let's welcome our first speaker, Maria Kolesnikova from .ru who is joining us remotely and will share insight on expanding support for local language in IDN-ccTLDs. Maria, the floor is yours.

MARIA KOLESNIKOVA

Hello, everyone. Can you hear me clearly, right?

AI-CHIN LU

Yeah, very clearly.

MARIA KOLESNIKOVA

Okay. Thank you very much for having me here at this session. So, yes, I'm Maria Kolesnikova. I'm a chief analyst and leading the project Поддерживаю.РФ, which means Support.rf are devoted to Universal Acceptance within the local software in Russia. Next slide please.

So, our registry, the coordination center for .ru and .ref, as you mentioned, lead to ccTLDs. This year we are celebrating our 25th anniversary and we will have some jubilee activities during the summer. We have to ccTLDs. In .ru we have more than 6 million registered domain names and in Cyrillic .rf, we have about 800,000 registered domain names with about 16,000 new registrations per month. Most of these domain names are delegated and in real use. Next slide, please.

To cover this topic regarding the expanding of support of local languages, I want to make some short overview of the whole situation with local languages in Russia. You know that the main state language in our country is the Russian language, but we have about 200 nations that are living in the Russian Federation. And they use 277 languages and dialects in general.

By our linguistics experts, 155 languages are functional. It means that they are actively used across the education system, by governments, by mass media and in other areas. And also 134 languages have official status. Next slide, please.

So, since the last year for .rf domain name, we supported only Russian alphabet characters, numbers and hyphen. But as of last year, we are celebrating the 15th anniversary of our IDN ccTLD. We thought how to grow it and what we can do else for making it better. And we made some investigation and we decided to expand the support for more Cyrillic characters.

So, we added 26 letters that are used in alphabets of 18 local languages that are used in Russia. This language, you can see the list of letters on the screen and these languages have official status. They are state languages of the Republic of the Russian Federation. So, this is only the first stage of our project because we are going to add the support for more languages on next stages. Next slide, please.

So, the first result that we get so far, now we have about 2,000 registered IDN domain names with the usage of these new Cyrillic characters. We get the number of the most popular letters. You can see the five letters on the screen that are the most popular and we have leaders in languages. The Tatar and Bashkir languages, they are mostly used in the new domain names.

What usually users register? So, of course, they register brand names for brand protection and defense of some typosquatting

and malicious activities. Also, we see that users register the most common words on local languages, the most famous, well-known words, and the cultural names. It means the names of touristic areas, some local dishes, and et cetera. Next slide please.

So, one of the results that also we get, now we communicate with many language communities across the country, we see how they are enthusiastic about their languages and they're very active on digitalization of their languages. So, we feel this how to say, inspiring activities and we also get this feeling through this project.

You can see on the screen these are the pictures of well-known monuments of the Cyrillic characters. And these monuments exist in different regions across the country, and they are very popular, and tourists like to make pictures of them, as you see. Next slide, please.

So, also one result that we get, we become a part of, actually, the mosaic of local initiatives devoted to digitalization of local languages. So, first of all, actually, the last year was approved a new official document, State Policy on Languages of the Russian Federation. The importance of this document that it not only regulates the support of Russian language, and local languages of nations of the Russian Federation, but also includes terms regarding the support of these languages on the Internet.

So, this is very, how to say, inspiring again, and make us feel that we can get more governmental support in this area. Also, there was established a new state holiday, Day of Languages of nations of the

Russian Federation actually on 8th of September. We also celebrated this new holiday last year. We make a webinar with academical, governmental, and technical sectors. And of course, we will continue to provide some awareness campaigns on this holiday.

Also, what we see, actually, there are many local initiatives regarding the support of local languages made by, not only our registry, but other technical companies across the country. For example, we see that the support of local languages has expanded, for example, in online translators, in speech recognition systems and in general, in the famous in Russia artificial intelligence systems, for example, like ChatGPT or Gigachat.

We have a national wiki project. Now it supports 23 languages. We have a company that provides phones, Cyrillic phones, for almost all the local languages that are used in Russia. And, of course, some new services providing language keyboards. So, this is the huge amount of projects and now we also the part of it.

And in general, and to conclude, I want to say that our projects allow us not only to grow the ccTLD, but also it leverages our efforts in working on Universal Acceptance, awareness, and adoption in our country. And we hope that through this we will get more attention to these problems and more support from, not only the government, but also from the local community, from technical, academic and civil society organizations.

So, this is our insights so far from our IDN ccTLD. Thank you. If you have any questions, I'm here.

AI-CHIN LU

Thank you, Maria. I think we can clearly see your effort and the results are already visible. Are there any questions? Okay, please.

ROHAN SACHDEVA

Thank you, Maria. Wonderful presentation and great work. My name is Rohan Sachdeva and I'm an NextGen fellow. My question is, do you also get registrations from other countries that use Cyrillic characters like Bulgaria or Belarus? Thank you.

MARIA KOLESNIKOVA

Thank you for the question. Actually, our IDN is open for registration from different countries. You can do it. I have no actually the real statistics on exactly new domain names with these Cyrillic characters, but of course, we have I think about 20% of the whole registrations. They are made by users from different countries. Thank you.

AI-CHIN LU

Are there any other questions? Okay, please.

ROHAN SACHDEVA

This is Rohan again. I have one more question about the usability of IDNs in Russia. So, the number of registrations that you get, are

the people able to use these IDNs across like different systems like government systems? Are these operational in reality? Thank you.

MARIA KOLESNIKOVA

Yes, actually, IDNs are very popular in Russia. They are very highly used for governmental, for state projects. We have many national projects on the internet and they are with usage of IDNs.

Also, small and medium business also very highly use these domain names for their websites. And also, if you come to Russia, you can go through many cities and you see the IDNs on billboards along the streets. On, I don't know, online advertisements also, people use domain names also as the names of their projects. For example, offline shops or some for the names of some, I don't know, buildings. Sorry for my English. Yes, they are very popular and they are in real use. Thank you.

AI-CHIN LU

Thank you. Okay, are there any other questions? If not, I think we can move to the next speaker.

Next, we have Ana Eslendy Paez Bustillos from .ec and she will present on lessons learned from the .ec ccTLD implementation movie from Who is to Adapt. Ana, the floor is yours.

ANA
ESLENDY
BUSTILLOS

PAEZ Good morning, everyone. My name is Ana Paez Bustillos. I represent NIC.ec, the registry for the EC country called top level

domain of Ecuador today. My exposition is in Spanish language. Thank you for your opportunity.

Let's start with this summary statement. Technology itself does not mean anything. What you do with it is what really matters. This transition from... WHOIS to RDAP has not only been a technical upgrade, it was an institutional decision on how to manage information in a regulated environment.

It was necessary to understand the similarities and differences as well as its impact on regulation. Even though the evolution of WHOIS to RDAP is a technical upgrade, it has legal and operating implications. With .ec, we understood that before implementing RDAP, we had to carefully analyze both protocols.

As you may see, these are the similarities we have found. Both protocols identify domain holders, both make it possible to query internet resources, and both use registration data. The purpose does not change. What changes is the way in which you manage information.

The differences are structural. RDAP uses HTTP and HTTPS. WHOIS uses non-encrypted connections. RDAP gives you information in JSON format, whereas WHOIS gives you plain text, unstructured. RDAP accepts international characters while WHOIS uses ASCII mostly. Simply speaking, WHOIS was static. RDAP is flexible. For NIC.ec, the technical improvement was clear. From the legal point of view, it was a must.

In Ecuador, we have to follow the Organic Personal Data Protection Law, which has a legitimate purpose, with an authorization and with technical security and respecting the rights of the domain holder. In Ecuador, starting on May 26, 2021, the law requires that as of that date, NIC has registered the information that's published in WHOIS, but only public or non-personal data, the model, which is an open one, stopped being feasible. That was our first step towards the modernization following the legal regulations in Ecuador.

As we implemented our DAP, we found something key. The protocol itself made it easier to comply with the legislation. Gradual access control made it possible to limit or to redact personal data. The use of HTTPS would guarantee and does guarantee technical security when transmitting information.

This deployment of the technology made it possible to comply with the Act, but the decision was an institutional one. And in NIC.ec, we analyzed that the information may be published, but it must be protected anyway. It was a deliberate process, not an automated one.

Using this QR code, I invite you to visit our website on the right top corner. You may select your language and go into the search engine. You may ask about the domain name and check the new plan. I wasn't able to put the screenshot on the slide, but you can see it using this QR code.

We carried out some service looking at the experience of external users, and we decided RDAP was an improvement in usability, accessibility, visual design, functionality. It's easier to interpret the data. Response times are shorter than in WHOIS, and this facilitates a user-friendly transition.

Take into account the internal user experience based on national legislation, NIC.ec must give information to the judiciary, regulatory agents, and prosecutors. With RDAP, the information is supplied in a structured and easy-to-understand format. It improves the clarity for government officials who are not always familiar, who don't always have technical knowledge. The information is more useful for external customers, but it also improves our internal processes and makes it easier to comply with government requests.

In order to be able to measure the impact, we added another tool that is able to measure statistically when a person searches for a domain name. In January and February 2026, we had over 20,000 queries. Most of the surges have a concentration and this shows a growing trend. Integration of RDAP is an institutional portal which made it possible to have a natural and progressive adoption. This shows the trust in the system.

Based on our experience and as a team, we understood that technological evolution must go hand in hand with a legal analysis. Digital governance calls for a balance between transparency and privacy. Global interoperability must coexist with national

regulations and transparency must be balanced with the protection of rights at all times.

Before wrapping up, I'd like to complement with this statement. RDAP is not just a new protocol. It's a tool that facilitates alignment with domestic regulatory frameworks allowing public disclosure of data to be set up according to legal and risk-based criteria. Thank you very much.

AI-CHIN LU

Thank you, Ana. Are there any questions? Okay, Pablo.

PABLO RODRIGUEZ

I will be speaking in Spanish. Thank you, Ana, for your excellent presentation, could you tell us the fee to register a domain name in your country?

ANA ESLENDY
BUSTILLOS

PAEZ Yes. Currently, we define the fees based on the category. We have business, government, and professional domains, but the business domains with a VAT amount to about \$40.

PABLO RODRIGUEZ

Thank you very much, Ana.

AI-CHIN LU

Okay, please.

MELANIE ALDUNCE JEANMAIRE Hello, thank you for your presentation. My name is Melanie. I work in the .cl, that is the country code for Chile. So, I'm going to be speaking in Spanish too. This protocol change has had an impact on the information that investigative forces or investigators may use when there is a DNS abuse case.

Of course, it may have an impact because anybody may face an abuse case or an increase in attacks, but it's important that the law has decided that the personal data and sensitive data shall not be published, and that's why we have this kind of domestic protocol. And if somebody needs information, we as a regulatory agency are able to share the information provided. It is asked for by safe regulatory agencies and only for checking and verification purposes.

VADIM MIKHAYLOV Vadim Mikhaylov from .ru, .rf for the record. I'm curious, do you have internationalization on the second level maybe? Do you have IDNs in your domain zone?

ANA ESLENDY PAEZ That is a technical question. The lessons we have learned, well, it's more of an administrative issue, but we'll gladly share the contact information for our IT head so that he will answer your questions.

VADIM MIKHAYLOV

Thak you.

AI-CHIN LU

Okay, I think we need to move to our third speaker. And Thomas Barrett is from the .PW Chain Recent Experiments at the DNS Web3 Identity Boundary. Thomas, the floor is yours.

THOMAS BARETT

Thank you very much. Again, my name is Tom Barrett, and I'll talk about some projects we've had for integrating what we call Web2 and Web3. Next slide, please. If I need a remote? Thank you. There we go, all right.

So, Web3 names, what are? They are user-friendly identifiers that are mapped to digital wallets. And as you know, blockchain and cryptocurrency has been around for about 10 years now, and they all held as assets in these digital wallets. And so, the industry created names that are not in the IANA root, right? So, they do not resolve across the global Internet. They don't work natively in browsers, and they've served a function for the cryptocurrency community.

However, they have struggled to gain widespread adoption because they don't work natively across the Internet. And they also have failed to implement rights protection mechanisms. So, when there's abusive behavior, such as impersonation of people or trademarks, there is no takedown mechanism. And so, that's one

of the main reasons why they have not gained widespread adoption.

So, what we set out to do was to understand how we could integrate the DNS into some of these Web3 technologies in a more responsible manner to, again, gain consumer trust of using cryptocurrency and be able to mitigate the abusive behavior that is common.

So, the way we look at this is the key components. Obviously, it starts with DNS. So Web3 does not replace DNS. It's simply an overlay on top of the DNS so that's the foundational layer. But then we wanted to look at decentralized content, which is the idea that you can have a peer-to-peer storage. So, if your main node goes down, there are copies of it around, so it's very resilient.

Decentralized finance, which is truly the ability to do peer-to-peer payments in a very low-friction manner without having to go through a bank or some sort of exchange. And then finally, we looked at decentralized trading.

Now, you may remember the stories of NFTs like board apes or pieces of art being sold for a lot of money. What they're doing now is something called tokenization, which is basically taking a real-world asset, it could be an office building, it could be a bottle of wine and they create a digital twin, also an NFT. And now that digital twin, it can be traded online representing a real-world asset.

So, in our case, we're talking about domain names. And so, the aftermarket for domain names is a very substantial industry. And so, the idea is if you can trade those domain names in a more decentralized manner, you again do peer-to-peer trading and become much more liquidity and low friction.

So, here's an example of the outcome of that experiment, you can bring it up on your own browser at chrissschaub.pw. So, obviously it runs on the DNS, in this case .pw, and we have mapped that domain name to a digital wallet. And so, if you need to send money to that wallet, all you need to do is bring up your browser, be it MetaMask or Coinbase, and you can type in chrissschaub.pw and you can send currency to that address. So, you don't need to know the wallet address itself.

This page itself is hosted on something called IPFS which is a decentralized content network and it gives you the ability to, not only store that content, but if there's various tabs there from links to wallets to NFTs, you can also display tokenized domain names from any TLD as well as Web3 via this simple one-page website.

So, I want to give you an idea of how the peer-to-peer payments work. By the way, by a show of hands, how many of you own some sort of cryptocurrency? Can we just have a show of hands? Just a handful. All right, and there's a reason for that. It's a very cumbersome, intimidating process. You need to connect the wallet to your bank account, upload fiat or regular funds, and then buy Bitcoin or Ether or whatever you're interested in. If you install the

wallet on your device, you have to remember a seed phrase, which is 20 words. If you lose that seed phrase, you've lost control of the assets.

So, it's a very intimidating process. And there have been horror stories of people losing access to their wallet and losing literally millions of dollars. And so, this is more of our approach with our project, which is to do something called a custodial wallet, which is essentially hosted by someone else. You don't need a seed phrase. You don't need to add crypto to it. You simply can log in with your email address and connect that wallet to your domain name.

And what we're showing here is the ability in that wallet to say, look, I would like to receive crypto. I'm not going to send it to anybody. But I might be an accountant, I might be a plumber and I want my customers to pay me in their currency of choice.

In this case, we believe stablecoin is going to become the standard. You're not going to accept Bitcoin or any other currency because stablecoin is paying to, in most cases, a US dollar or yen or euro. And so, if you want to be paid \$100, you're assured of getting \$100 in this stablecoin currency. And so, the wallet address is shown here, abbreviated for convenience, but if they go into their browser, they can say, I'm paying chrisschaub.pw. They've done some services for me. They fixed some pipes in my house. I want to pay them \$100 in USDC. And this is very simple.

They can, as I've indicated, chrisschaub said, I want to receive payment in stablecoin. And if you send it to me in stablecoin, it's

really a two or three step process. There are no gas fees or transaction fees since it's simply wallet to wallet. So very seamless peer-to-peer frictionless payments. It doesn't matter what country in the world you're in, you can pay everyone this common currency.

CLAUDIA RUIZ Tom, apologies for interrupting. Could you please slow down a little bit?

THOMAS BARETT Oh, I'm sorry for that.

CLAUDIA RUIZ Thank you so much.

THOMAS BARETT Yeah, and just the last thought was the idea of, if you have domain names you want to offer for sale, you can tokenize these domain names. And there are aftermarkets now being created on the blockchain world where you can offer your domain names for sale and again, you do this wallet-to-wallet transfer for payment. There's no escrow required and you're assured through the transfer process that once you receive your price for the domain, it automatically transfers to the buyer.

So, what we've found with this approach is that just about every open or generic TLD in the IANA root works on this sort of tech stat. The only ones that are excluded for now are those that have

perhaps eligibility requirements. So, if you have a .cpa or .pharmacy, for example, and you want to tokenize that and sell it, of course, you want to make sure the buyer is eligible for that TLD.

And of course, there are many country codes similarly that have nexus requirements. They might say you need to be a resident or a citizen of that country to buy a name. And so, we've identified roughly over 500 TLDs, 446 generic, 57 ccTLDs that don't have any sort of restrictions. And so, it's somewhat safe to allow those to be tokenized and be traded freely in a marketplace.

The wallet naming, again, works with all web browsers natively. There's no plugins required. There's no special browser. It supports all the cryptocurrencies and all the digital wallets. And, of course, as I mentioned earlier, the idea of decentralized content means that if you have a peer-to-peer network of storage, they can go down in one part of the world, but your presence will be maintained because it has a copy somewhere else.

So, what we've discovered is that Web3 isn't a parallel universe. It's simply an add-on to the DNS. And by marrying those two together, you ensure that there's accountability for abuse, bad actors, trademark cybersquatting. And it's done by ensuring that the Web3 asset follows the lifecycle of traditional DNS domain name. And it also turns out that whoever is a custodian of that Web2 asset, in this case, a domain name, becomes a custodian of the digital twin for that asset as well.

So again, there's accountability because you know who the registrar is. So again, if there's a court order or some sort of abusive behavior, you know who to go to take down that asset. And that's my talk for today. Thank you very much.

AI-CHIN LU

Yes, thanks, Thomas, for your insight. Are there any questions? Yeah, I think the APTLD has one working group called Research DNS in Next Generation. I think Gihan is the key person for this working group. Gihan, do you want to share some experience and progress?

GIHAN DIAS

Well, we haven't looked at this thing, but I do have a couple of questions for Thomas. First is, you had -- okay ThomasBarrett.pw or whatever as the name of your profile --

THOMAS BARETT

Chrisschaub, chrisschaub.

GIHAN DIAS

What was it, whatever you showed me.

THOMAS BARETT

Yeah.

GIHAN DIAS

Now, how do I know that is actually you and not someone else? Because it says here that .pw doesn't really require documentation to register a domain. So, can I just register as you and say, so send me lots of stablecoin?

THOMAS BARETT

So, the PW registry in this case follows the ICANN accountability framework. And so, it allows you to file a UDRP or URS against any name in the PW zone. So that because you have that accountability mechanism, bad actors are taken down.

GIHAN DIAS

Right, eventually, but I mean, what happens if I just pretend to be you for a few days and then manage to grab a lot of your bitcoin or whatever. I'm just wondering, if you just go back to your first slide, you see one of the main things is using a legacy type of registrar. Okay, if you take this, Christopher Schaub, okay, whatever it was, right?

THOMAS BARETT

Yeah.

GIHAN DIAS

So, this is Christopher Schaub, who is -- okay, I can't see the exact URL, but something.pw, right?

THOMAS BARETT

Chrisschaub.pw, I'll put it back. Yup.

GIHAN DIAS

Yes, right. Well, right now, of course, it's all registered, but let's assume it wasn't, what stops me from registering the exact same domain and then pretend to be this guy, put his picture in and so on?

THOMAS BARETT

Well, obviously, if you are doing business with Chris Schaub --

GIHAN DIAS

No, I mean, I don't like Chris Schaub. I just want to steal his money.

THOMAS BARETT

Well, you can't. By registering the domain name, you don't get access to his wallet, right? So, you're not going to take his money. You're not going to take his Bitcoin.

GIHAN DIAS

I was thinking of something else. I pretend to be Chris Schaub and then if Chris Schaub is doing something, I say, well, give me money. Okay, what I'm trying to get at is --

THOMAS BARETT Well, so to your example, let's say I decide to design a website for you. My name is Tom Barrett, but I tell you my name is Chris Schaub.

GIHAN DIAS Exactly.

THOMAS BARETT All right? So, I put up a page, chrisschaub.pw. I deliver the service to you and I say, go to that address and pay me \$100.

GIHAN DIAS Right.

THOMAS BARETT You're paying Tom Barrett. That could be a brand name. That could be donuts.pw. And I say, go to donuts and pay me \$100, right? I've set that up to receive your payment.

GIHAN DIAS Right. I think I'm looking at it from a different point of view. Let me speak to you offline, but I think it's a very good idea. And I guess, of course, you're talking from -- I am looking at it from the point of view of, I mean you're looking at the point of a crypto, but I guess this could be even normal bank transfers, right? I mean there could be a button saying, okay, click on this and transfer money to my bank account. In India it will be the UPI address.

THOMAS BARETT If you go to that URL and hit the Pay Me button, it's going to give you an option of --

GIHAN DIAS It doesn't have to be crypto, it can be a standard [CROSSTALK] process.

THOMAS BARETT It says it has PayPal as another option, yeah.

GIHAN DIAS Exactly, right. So, that's what I see is, I mean, crypto is fine, but if you look at the more legacy stuff, that will also work with this model, right?

THOMAS BARETT That's right. If you want to pay with normal PayPal, we actually put that option in there as well because not everyone wants to pay except crypto, right? So, it shouldn't be required in order to reuse this technology.

GIHAN DIAS And here in India, it would be UPI, which is really common here.

THOMAS BARETT

That's right. Absolutely. Thank you. Thank you for that.

AI-CHIN LU

Okay. I think, Gihan, after the presentation, I think you can discuss with Thomas. Yeah, okay. Are there any other questions? No? Okay, I think --

BENOIT AMPEAU

There's one.

AI-CHIN LU

Okay.

BENOIT AMPEAU

Hello, everyone. Benoit Ampeau from AFNIC for the record. I would like to ask you a question about something I may be misunderstood. Can you just elaborate a bit on the role about the website, mypublicwallet.com? because I see it like a single point of, not a failure, but of the one major platform that is also redirecting to all the web-free identities.

THOMAS BARETT

So, the idea of my public wallet is a service where you can basically do the mapping of a domain name to a custodial wallet. And really quickly, the way wallets work is you can have a custodial wallet, which is hosted by someone else. But again, this platform, if you want to, you can make it a non-custodial wallet. So, you could

export all your keys and your assets and simply move it to another wallet.

It also allows you to associate multiple wallets with this public wallet. So, I think the way we envision the world is when you promote, you want to receive payment, you're not going to give them a wallet address that contains all of your cryptocurrency. You might want to not disclose that. So instead, you give them a wallet that is simply for incoming payments, simply for displaying your personal persona, and you can then attach multiple wallets to it rather than have everything contained in a single wallet.

BENOIT AMPEAU

Okay, thank you.

AI-CHIN LU

Thank you, Thomas. Now next, we have Dr. Raft Razafindrakoto from .ng. As he will join us remotely, and he will discuss continuity for a small ccTLD in the event of severe unrest. Dr. Raft, the floor is yours.

RAFT RAZAFINDRAKOTO

Hi everybody, I present here in French, so please use your head speaker. Hello, my name is Raft and I represent NIC.mg, a very small registry that is active in Madagascar. I would like to underscore the fact that I currently chair the International College within ACNIC4.fr.

Now, going back to the previous presentations, what I'm going to do is share something quite basic, but it's something that was lived in real life six months ago, when we were in the middle of a national crisis. So, there's nothing really technical about my presentation, but I would like to share my experience and it was very difficult for us to work in the context of such crisis. Next slide, please.

In September 2025, Madagascar has undergone major civil unrest and our headquarters was completely vandalized so there were many damages. So, it was very urgent to act at our level. How can we guarantee the continuity of the .mg domain under such circumstances? Next slide.

To us, the main priority was the human factor. As I said, there was nothing really technical, so we decided to reach out to our trusted partners, partners with which we had had years of collaboration and trust, and this was a game changer. Next slide.

We got announced within 24 hours. We had to do everything in 24 hours. We had an operational primary DNS server. At hour zero, as I said, the headquarters were vandalized. Hour two, we had to contact a telecom operator. It was an emergency call. Then eight hours after the problem, an agreement was reached and then the service resumed.

All this to say that the telecom partnership provided us a secure space, reliable power supply, redundant network connectivity, and

the most important is that there was no administrative delay simply because there was trust already. Next slide.

And now regarding the technical implementation, fortunately, we managed to migrate the server. We worked on the network, and we were able to move on to production with a simple architecture which enabled us to act swiftly. And I would like to underscore one thing here. It is true that there were several secondary servers at your level. That is true. There were already those servers. Next slide.

So, what are the key lessons learned? There are five key lessons. First of all, we realized that human resources were more important than technology and of course, it's really important to act swiftly, but not to lose trust in ourselves. So, we thought that a partnership was worth more than a contract and technical simplicity makes it possible to act really quickly. Next slide.

What are our recommendations for small ccTLDs? We think it's important to work on our relationship upstream. It's important to identify backup hosting options to have a technical architecture that is simple, portable, to document energy emergency procedures also. Right now, we are currently thinking about a cloud server outside this type of solution.

So, we think that the .mg domain which is also a critical national infrastructure needs to have continuity. And during the crisis, it was a national interest for the community, the citizens, public

services, and this intersectoral cooperation helped us at infrastructure level. Next slide.

As a conclusion, what can I say? Well, simply that in times of crisis human relationships and goodwill are much more valuable than any type of technology or any contract. Trust is the key to resume activities today. Thank you very much for your attention. I remain available to answer any questions you may have.

AI-CHIN LU

Thank you. I'm Rohan from the .au Domain Administration and a NextGen fellow. My question is, first of all, it was really insightful to hear what happened and it's really unfortunate, but I was wondering were there any lessons that you learned from this experience? And what did you change in your disaster recovery plan? Thank you.

RAFT RAZAFINDRAKOTO

Yes, thank you for the question. So, as I just mentioned, currently, we are thinking about a solution that is inescapable because we cannot simply have a local primary server, so we need something else. And the next stage will be to have something extra on the server. Thank you.

AI-CHIN LU

Are there any other questions? Okay, please.

KROOPA SHAH

Thank you. My name is Kroopa. I'm with Identity Digital. We're a cloud registry operator and registry and DNS infrastructure provider. Is the .mg ccTLD now operated solely on DNS infrastructure in-country, or is it now supported by secondary infrastructure using providers like ours or others who support small ccTLDs?

RAFT RAZAFINDRAKOTO

Well, we don't yet have a solution, so we welcome any solution. The .mg registry has secondary servers and the primary server. This is how we've always worked, but when we were in this situation, we had to start focusing on what you just mentioned. So, you are very welcome if you can come up with a service that would be of any help. Thank you.

AI-CHIN LU

Okay are there any questions? Okay, please.

SERGE SANOU

My name is Serge Sanou from .df. I will ask my question in French. Thank you, Raft, for this very interesting presentation of the crisis that struck Madagascar. During the process, could you tell us what was the reaction of the community, especially of the registries and some users? Thank you.

RAFT RAZAFINDRAKOTO

Well, yes. When we are in such a situation, the first reaction is always to try and fetch a local solution. So, we didn't think about looking for anything outside and as I said, within 24 hours, we had to solve the problem. And even now, six months down the road, we are still going back to what was done and what should be put in place.

So, as I said, yes, we had to work very swiftly. Some friend registries contacted us. They wanted to give us a hand and complement the emergency equipment we had so that we could work properly with PCs, et cetera. So, all this to say that they are always registries ready to help and they did reach out to us when we said that we were experiencing a crisis. This is what I can share with you.

AI-CHIN LU

Thank you, Raft. Any other questions? Okay, please.

PIERRE BONIS

Thank you very much. I'll do as my colleague did search, I'm going to ask my question in French. Perre Bonis, .fr. Thank you very much for sharing what you shared. Now, so that things are clear, could you tell us if -- well, I understood there was a problem because of the recording system, but not the resolution.

We usually have a redundancy on resolution and thanks to this the offices that are vandalized are not such a big problem. Thank you very much, Raft. See you soon, and we're very proud at AFNIC to have you as chair of the international college and we're very proud

that you were able to answer very swiftly some of our demands.
Thank you very much.

RAFT RAZAFINDRAKOTO Terribly sorry not to be able to be with you, but for different reasons I was not able to travel. But all this to say that from a technical point of view, as I said, we really wanted to focus on a local solution.

PIERRE BONIS I just want to know if the .mg resolution was interrupted or not.

RAFT RAZAFINDRAKOTO Answer, no. No interruption.

AI-CHIN LU Okay, if no questions, I think finally we will hear from the Pim Pastoors from .na speaking about .ca and stronger together and ready for a changing world, focusing on the collaboration across ccTLDs.

PIM PASTOORS Thanks. My name is Pim Pastoors of SDN, and we're going to share you a journey we made together with CIRA over the last two years.
Oh, seems like -- oh, thanks. It's a bit --

So why did we start our partnership? It actually started with SDN needed a new system. So, our current system, or actually our old system, was built back in 2010, and that was a while ago and we

were faced by rising maintenance costs, but also rising security risks. But at the end of the day, it meant we had to spend more and more time keeping the system running smoothly, but also had less time to spend on innovation and new things.

We were also faced by high inflations and what you might have heard yesterday from Hulof, we had inflations from around 10%, which for the Netherlands is pretty high. We're also faced with stagnating domain growth. So, our zone was not growing and even declining for a while and luckily, it's growing back again.

We also saw some increase in oversight and compliance in the Netherlands, which might us consider building a new system. We had some experience in the past doing that and it was a hassle to get it running. Often took us more time, more money, more resources. We did get it running, of course, but it was not something we would like to do again.

And you might have seen this picture before, but at the Hamburg meeting, we announced a partnership with CIRA. And why did we do that? We do that because we did it actually, we face the same challenges as country codes. We all try to deliver a great critical service to our local countries. We all have similar stakeholders, local governments, registrars, ISPs. We try to serve the best way we can and we also share a lot of common things, like people. We all want to run a technical backend system.

And we all face, at least we do, challenges with getting the right IT staff, but by working together, we can combine forces and be

stronger together, but also lowering our TCO. Because luckily, the inflation levels are a bit back on normal levels, but still they're increasing year over year. And we do not want to increase our domain name prices higher than the inflation.

So, when you sign a contract, there comes the next step. And this is actually the first meeting we had in Arnhem, our office at SDN, where they discussed how do we want to work together and we made some guidelines for that. So, one of those was we will have one development team. Although people of SDN will still work in Arnhem for SDN and the people of CIRA will still work for CIRA in Ottawa, we'll become virtually one team. We also have one development platform with one set of codes and that code will not only be used by WL, it will also be used by IE, NZ, and others. And we also have one set of tools.

And while one set of tools might sound logical on a PowerPoint slide, you have to have a discussion which tools will you be using and which tools we don't. And also, a very important one, we will have joint meetings. So, no daily stand-ups with SDN separately from CIRA, but joint meetings together so the team really is working together as one team.

And what have we learned? So, what you see over here is not a picture of us working together, and this is the Dublin meeting where we had a summit together to go in depth about things we needed to discuss for the DLNL migration. And what we learned is that, and it may sound logical being in a hybrid room, but you can

do a lot of things remote. But it really helps to come together sometimes physically and to share knowledge and to go in depth about topics you want to discuss.

And that's why we often, during an ICANN meeting or other international events, we have a two-day meeting where we go and discuss the things we need to discuss which are difficult to do online. We also learned that migrating to the cloud and implementing a new system, doing it together sounds logical, but also creates a lot of complexity which you need to do a lot of planning to do it right, but it does take a lot of planning.

We also learned that while dodo has literally an ocean between [inaudible - 01:05:03] CIRA, the development teams work kind of the same way. They all use Scrum, they all used a tool like Jira. So, while combining them was relatively easy and it was a good learn, which we faced while we're doing it.

What we also learned is we needed a brand, both internally and externally. So, the system now co-owned by SDN and Jira was often referred as the CIRA system or the SDN system, but it's our joint system. And by recreating a brand, we internally and externally made the communication a lot easier. It's Hello Registry. And why did we choose the name Hello Registry? It's because hello, it means hello in a lot of countries and they're open for like-minded TLDs to have a discussion or to have a chat.

And what you see over here is the picture of the booth we had in the Dublin meeting, where we had a lot of discussions with, I think,

a lot of people here, but also others at the ICANN meeting. We also learned that when you migrate your TLD to a new system, it's a great opportunity to review all your policies.

So, our old system was from 2010, and assumptions made back then will not always be relevant today. And since the platform is being used by a lot of TLDs, we had the advantage of looking how do others do it, and how can we make changes. And Rulof yesterday shared it already, but one of the changes we are making is that we had monthly billing, quarterly billing, and annual billing, and we're going to move to annual billing only, but we also keep a lot of specific Dutch things.

We also learned that time zones can be really an advantage. So, when my day ends, CIRA day starts. So, when we have a meeting at the end of my day and we discuss a specific task that needs to be done, so at first, I was really surprised when I came back the next day because I opened my inbox and often the tasks were already done because during my evening, it was their workday. So, when you make use of time zones, it can be really an advantage.

So, what you see over here is a picture of our development teams visiting Ottawa while it was roughly around minus 20, and it's pretty cold for a Dutch guy, but they did. They had a fun time. And again, it's really made us aware that physical meetings are important because that really allowed the development people to get to know each other.

And during an online meeting, you can discuss work, you can discuss tasks, but it's really difficult to really get to know your colleagues on the other side of the ocean, but when you're there, that's much easier. So, yeah, they had a lot of fun, but also processed a lot of work.

What we also want to do in this partnership was increase innovation. And one of the things that's a major shift, at least for us at the end, is that we now have other people on the platform. We always built the .nl system for the .nl situation, but now we're getting feedback of others, which allows us also to do a better job in the Netherlands because when something good is decided or built for Canada, it might also be relevant for us. So that really helps us to continuously innovate our platform and prevent us also becoming in a situation we are with the old system.

We also saw some increase in speed. So, I mentioned two things on the slide deck. Our goal was to create a cloud native platform, a cloud agnostic platform, so it could also run in other clouds. And by combining the teams, we were really able to speed up that innovation. Another thing we saw was that SDN had a small competent center for front-end development, and there was a plan on the roadmap to renew the technical framework for the front-end. It was kind of pushback. And by adding our resources, we were able to speed that up and again to increase innovation and to make it better for us and everyone using the platform.

So where are we at today? So, this is a picture of Roelof and Byron during actually our TNAS anniversary because we're a little ahead of that and it's been a great journey for us so far. We learned a lot, had some fun, made some new friends, but we're also really focusing on a major milestone for us and that is the migration September 1st this year. Then .nl will migrate to the joint platform and will also be running on the Hello Registry. Any questions?

AI-CHIN LU

Okay, thank you, Pim. I think it's great to see the benefit of collaboration across the ccTLDs. Are there any questions? Okay, please.

ROHAN SACHDEVA

Thank you for the presentation. I'm Rohan, I'm a NextGen fellow. My question is, when this partnership was being implemented, what impact did it have on the teams? For example, I'm not sure what teams you have in both the ccTLDs. For example, more operational what challenges they faced during the collaboration, yeah, maybe a comment on that. Thank you.

PIM PASTOORS

Thanks for the question. So, we actually work together on two main teams. So, one is what we internally call the business team, it's more the team that works outside, there we created a virtual team who has bi-weekly meetings and discuss topics at hand and we just combined the teams. If you go to the IT teams, when we

started, we first spread them across the different development teams to really get them up to speed of the code. And then they were closely together. So, practically we just merged the teams. We did not create a separate SDN team or separate CIRA team.

When you would look at the development team at hand, you would see it's kind of 50-50 staff by SDN, staff by CIRA. And also, when you go to the product manager, so the persons who decides the roadmap and things like that, we're also really working closely together. So, the goal was to split it 50-50. I hope that answers your question.

ROHAN SACHDEVA

Thank you.

AI-CHIN LU

Are there any questions? Okay, if no question -- okay.

UNKNOWN SPEAKER

There's a question in the chat. I can read it. Did you encounter any regulatory challenges in creating a joint system between two countries? It's by David McAuley from Verisign.

PIM PASTOORS

Okay, thanks. Yeah, so Canada is not an AU That means we really have to look at everything we work together. And when we make contracts, I think we have a picture of Hulof signing things like 27 contracts. Yeah, so it's a lot of work to make it happen and it's

possible, but you really have to go in depth. And even when you want to share code, you have to look at things like privacy laws.

So, yeah, it took a lot of lawyers to make up contracts so that we can work on a day-to-day basis together without having the difficulties of the regulations, but they are there and they have to be accounted for.

AI-CHIN LU

Please.

İDİL KULA

Thank you. It is İdil. I'm from Turkey for the reference. You said that we are going cloud native and how do you go cloud native? And how do you feel about the resiliency of your operations when you go cloud native? While we are having more harsher disasters due to climate change, do you have any doomsday strategy for any potential harsh disasters for your cloud-native features? Thanks.

PIM PASTOORS

Yeah, so thanks for the question. So, when you look at where our platform will be run, it will be run in two separate locations in Europe, but also two separate countries. So, we hope it will not be struck same, together. We also had some discussion with the Dutch government so for them sovereignty is very important. So, the signing of our zone, the creating and publishing of the zone will be done locally in a Dutch instance. So that will be not part of the

cloud platform itself. If we do locally in what we call the sovereignty solution to make sure it's always safe.

So, we added a lot of things to make sure that the worst-case scenario you're referring to will never happen, but yes, sorry, the Netherlands is below sea level so there is always a risk. And the other thing is that we also try to look at our beauty footprint and try to lower it, but it's more like, yeah, things we can do. So, I hope that answers your question.

İDİL KULA

Yeah, thank you.

AI-CHIN LU

Look, are there any questions from the chat?

CLAUDIA RUIZ

No Ai-Chin, no questions.

AI-CHIN LU

Okay. Does anyone have any questions? Oh, okay, please.

KROOPA SHAH

Hi, this is Kroopa with Identity Edition again. So just from, is .nl then migrating to a completely new platform in September that has been now built over the past couple of years? Or is it an existing platform that was enhanced to support the requirements for .nl?

PIM PASTOORS

Thanks for the good questions. So, when you go back in basis, it was what we maybe some of you know as the old Fiori platform. So, there was existing platform used by CIRA. We looked at it and validated which was the best one, and their system was better than ours. And we actually spent a lot of work and contracts to make the partnership work. Before you can start, it's a lot of lawyer stuff.

So, we then added features, but why are we not live yet? We have over a thousand registers, so at the moment there is a test system actually running. You could say we're technically ready, but we're giving all those registers the time to really test it before we go. And also, we couldn't really go during summer, but we got the feedback from our register association to not do that. So that's why it took a while, but it's mainly because we really want to accommodate all those thousand registrars to have the time to really test and migrate.

AI-CHIN LU

Okay. Thanks, Pim. Okay, I think we need to move to the red app. Once again, thank you to our speakers, Maria, Ana, Thomas, Raft and Pim, for your valuable insight today. We heard about the language inclusion in IDNs, the transition from WHOIS to RDAP, and the experiment at the intersection of DNS emergence technology and operational continuity and the collaboration across the ccTLD.

I think together this discussion highlighted the innovation, resilience, and the collaboration from our global ccTLD. I think they're all essential for a stronger and forward-looking future is encouraged to see our collective efforts for a better internet.

Yeah, I think before we close, please take a moment to complete the survey and the Menti poll and thank you all for being part of this section and enjoy the rest of the meeting. I think this session is now concluded. Thank you.

ALEJANDRA REYNOSO

Hi, everyone. This is Alejandra Reynoso, the ccNSO council Chair. I just want to make a little announcement. While I have you all here in the room, I want to let you know, if you didn't already, that this meeting is Ai-Chin's last meeting as councilor.

And she has been instrumental in the council. She has been a very strong bond between the Asia-Pacific region and the ccNSO. And she has endured the very odd hours where we have our council meetings. And I would like to recognize her on that. So, please join me in thanking Ai-Chin for her hard work.

[END OF TRANSCRIPTION]