

NETNOD

NEWS

NETNOD NEWS – ISSUE 5 – 2015



NO FREAKING PAPER,
I WANT IT ON MY SMARTPHONE.

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Who is Stefan?

In a changing and growing organisation, Stefan Lindeberg has come in as an interim CEO. He will be helping Netnod through this time of change as we are looking to define the future leadership at Netnod. But who is Stefan and what makes him "tick"?

So tell us a little bit about yourself. Who are you and what is your background?

I first made contact with a computer in the mid-seventies, and it was "love at first sight". So that put me on an almost inevitable path of completing a Master of Science in computer science, at the University of Linköping in 1985. I did my final thesis on compiler design and code generation, and later dabbled with scheduling algorithms. Somehow I got stuck at the white board, and I've spent most of my career bringing new technologies and products to the market.

I started at IBM after university and became part of a market development

group, where I focused on data communication. There I had the opportunity to work with a wide range of organisations. We had everything from very conservative customers such as banks, to innovative research, academic and commercial organisations. Consequently, I acquired a broad understanding of both established and new mechanisms for data communication.

To cut a long story short, after five years with IBM and a few years with Network Systems, I joined Cisco in 1994 and started out as the European expert on SNA/IP integration, then I moved to management as the Technical Director for the Nordics, major opportunity management and then finally business development for high-end routing. From 2000 until present day I have been engaged in start-ups, primarily as a board member and advisor, but I have also assumed operational roles to strengthen management teams during transition periods.

What are you passionate about?

Bringing new services and products to the market. I've had the opportunity to be part of several projects from the first napkin sketches to commercial deployment of products, both in large and small companies. And I must say it's a very enjoyable and satisfying feeling!

What attracted you to Netnod?

Netnod has an excellent reputation. It provides high-level complex services to very demanding customers and has an excellent team to support this. It is a team with very high professional competence, just the kind of team I enjoy working with!

What is your first impression of Netnod?

I had the great pleasure of getting acquainted with the team on an already planned offsite, which gave me a "crash course" on both our organisation and our services. It was also a great opportunity to interact with individuals both professionally and more informally. It's clearly a very dedicated and passionate team!

What do you hope to achieve during your time at Netnod?

The primary short-term objective is to make sure we maintain the high quality delivery of services to our customers, that they have grown to expect. We will continue to develop our existing partnerships, as well as establishing new ones. As with all organisations operating in a changing environment, we must keep an ear to the ground and make sure we maintain our position as the leading and most relevant provider of our current services, as well as proactively investigate new opportunities.

So we hear you're a gaming geek, what's your favourite game?

I love games where you play together with, and against other players. Let's just say I spent a classified number of hours online on several different games. Currently "World Of Tanks" works with my schedule, a short intensive multiplayer game with 15 vs. 15 players. And I expect to spend some hours with the upcoming

Vermintide game developed by Fats-hark AB, although I am not unbiased in this case, since I'm on the board of the company.

... and your favourite gadget?

Although smart phones and tablets used to be my favourite gadgets, they have

What do you like to do outside of work?

Besides my games, I love snow and downhill skiing, as well as experiencing the Stockholm archipelago in any kind of floating vessel. And of course I shouldn't forget; taking my Renault Spider out for a spin, almost always with my youngest son as co-driver, while we talk about

"Netnod has an excellent reputation. It provides high-level complex services to very demanding customers and has an excellent team to support this."

since been reduced to tools for work and entertainment for me. In my mind smart watches are still in their infancy and really haven't yet made it to the "favourite gadget level". So I clearly need a new gadget! Any suggestions?

everything from history to life, enjoying the small winding roads north of Stockholm.

And finally, tell us, do you have a secret talent, and if so, what is it?

Not a secret talent as such, but I've always enjoyed cooking and enjoying good food with friends.

New IXP networks MAY 2015 – SEPTEMBER 2015

Swedish Armed Forces (AS9201)

Försvarsmakten (Swedish Armed Forces) is the Swedish authority responsible for Sweden's military defence. AS9201 (SWAF) is operated by Swedish Armed Forces to provide robust Internet connection for the agency.

Contact: fntm-peering@mil.se

Phoenix IT Services (AS8613)

Phoenix is a provider of hosting, cloud and managed IT services. It is a complete end-to-end services provider. The company has 28 regional sites including 18 business continuity centres across the UK and a network of local engineers. It employs around 2,400 people and more than 1,300 of those are technology specialists.

Contact: peering@phoenix.co.uk

FlexOptix (AS199121)

For information about FlexOptix (AS199121) go to <http://flexoptix.net>

Contact: peering@flexoptix.net

Facebook (AS32934)

Facebook is a content provider network with global scope.

Contact: peering@fb.com

Avelacom (AS31059)

Avelacom delivers a comprehensive portfolio of

business data, Internet and voice services to business customers as well as carriers in Russia and the CIS

Contact: peers@avelacom.ru

One.com A/S (AS51468)

One.com is one of the leading companies in Europe within the provision of domain names and sales of web hosting services.

Contact: peering@one.com

Riot Games (AS6507)

Riot Games is an American video game publisher.

Contact: peering@riotgames.com

DK Hostmaster (AS39839)

DK Hostmaster administrates all the domain names, which ends on .dk, and to secure that Danish domain names can be localized in the DK zone in the internet's address system DNS. Besides this, DK Hostmaster takes care of a variety of duties in relation to security and data.

Contact: net@dk-hostmaster.dk

Cloudflare (AS13335)

CloudFlare makes websites faster and more secure. Cloudflare's network is a global anycast network. Cloudflare determines the scope of routes to send you based upon your network's scope and footprint

in relation to point of interconnect.

Contact: peering@cloudflare.com

Apple (AS714)

For more information about Apple please visit apple.com

Contact: renster@apple.com

IXP member upgrades

MAY 2015 – SEPTEMBER 2015

Microsoft* (AS8075)

peering@microsoft.com

Telenor (AS2119)

peering@telenor.net

Facebook* (AS342934)

peering@fb.com

* multiple upgrades

Netnod welcomes two new team members

Since our last edition of Netnod News, two new team members have joined us.

Meet Carina

Carina Christiansen joins Netnod as a **Strategic Marketing Manager**. She brings a broad experience from roles across multiple marketing disciplines that will bring value to this new role at Netnod.

Carina, what's your first impression of Netnod?

Super friendly and a welcoming team! I felt like part of the family on my first day. Then of course it's all the deep Internet knowledge that the team possesses. Very impressive! I have learnt so much during my first few weeks.

So we hear that you have had an exciting career over the past couple of years outside of Scandinavia?

I was born in Oslo (Norway), moved to the UK to study, and never quite made it back to Scandinavia until now. After completing my degree I spent a few years working in finance. For the last 10 years I have worked in various marketing roles at Microsoft in the UK and US. I moved to Stockholm with my family last year.

When you have lived so many years abroad – you must have experience from various working cultures?

What's the difference between working in the UK and in Sweden?

I guess the UK could do with more 'fika' and longer holidays. I do love working in Sweden for that as it gives you more of a balanced life. I don't yet have the answer to whether British or Swedish companies get more done.



How come you are so interested in the tech industry?

I am fascinated by how technology helps improve our lives, and how quickly the new generations take it for granted. I guess I have turned into a bit of a geek as I once changed the memory chip in a netbook just to prove I could do it and that it could run Windows Ultimate. It still works.

What do you like to do outside of work?

As I am still new to the Stockholm area, I'm enjoying exploring new areas and in particular the easy access to outdoor activities. I do hope that this winter will have more snow and opportunities to ski. Growing up in Norway it was pretty much a compulsory activity from birth.

This question has become obligatory in Netnod News: What's your favourite gadget?

It's a close call between my smartphone and my coffee machine. I think I could do without the phone, as it can't yet make coffee.

Favourite drink?

A nice Bandol rose to pretend it's summer all year round.

Meet Daniel

Daniel is our new **Software Engineer**, working with maintaining and developing software.

What's your first impression of Netnod?

Mostly working at large offices earlier in my career – coming to Netnod office is so different. Here it's more the feeling



that we are a family. It's a well-structured organisation with such competent staff. These things were also the initial attraction for me to start working here at Netnod.

How come you are so interested in computers and software?

It all started when my big brother got an Amiga 500 and I started to use it more than him. So he couldn't use it himself. So eventually I got a computer of my own – I was around nine years old then and my "career" started! I learnt to do programming in Basic and moved on to C. So it was not so difficult for me to choose what to study at university!

What do you like to do outside work?

My big interests in life are programming and motorcycles and in my free time I combine both. Currently I have a Yamaha YZF-R1, a little bit old, but charming. The plan is to expand the collection soon. I have mounted a Raspberry Pi on it; with software I programmed and developed myself! It can log everything I do and present it the way I want.

Great, so that automatically also answers our next question about your favourite gadget! But what's your favourite drink then?

Just a simple and ordinary Espresso, of course! The coffee machines here at Netnod are perfect for me!



Alexander Borodin
Communications Officer

NETNOD SUMMER DRINKS 2015



This time we were at the trendy hotspot Josefina – a summer oasis at Djurgården Island in Stockholm. Considered to be the top-place to be when it's summer in Stockholm. It's easy to understand why. We enjoyed a beautiful summer evening with wonderful views of our capital.

Over 100 of our customers and friends enjoyed amazing drinks and nice food. Not to forget all the great conversations and catch-up on the latest industry buzz.



Also want to join the fun?

Want to be added to the announcement list of upcoming Netnod meetings and drinks? Send an email to:

meeting@netnod.se with the subject line "Keep me in the loop" and we'll add you to our list. :)



COLLABORATIVE SECURITY

– 5 PRINCIPLES FOR A MORE SECURE INTERNET

People need to trust their environment, to feel safe and trust that no harm will be done to them. And people will avoid places when they don't feel secure, whether those places are in cyberspace or the real world.

That sense of safety may be under threat: News about monitoring, phishing, hacks, viruses, and more deteriorates trust in the Internet and many people call for increased cybersecurity in response. It's a complex topic that needs to be approached with some nuance.

Let's first separate security of the Internet as a system from security in a highly interconnected world. The latter is about risk management and one's own resources: keeping software up-to-date, deploying firewalls, encrypting credit card numbers while they are stored, and so on.

In contrast, when thinking about the security of the Internet, the fundamental question is: How do we do risk management at Internet scale?

The Internet brought us permissionless innovation, global reach, and the ability to connect everything with everybody. Its open properties brought us prosperity: economic and social opportunity. The tradeoff that we must manage is that draconian security measures may stifle opportunities, but too little security will make people lose trust in the system as a whole. In either case, some opportunities may be lost, so managing risk becomes a balancing act – one that is not easy in an open environment.

The Internet, with its high degree of interconnection and interdependency, requires that you manage the risks to

yourself and your assets, but also, importantly, that you manage the risks you (by your action or inaction) present to the Internet ecosystem – the “outward” risks.

Additionally, some risks need to be managed by more than one actor.

We believe that Internet security can only

be achieved through an approach that we call “collaborative security”.

Collaborative security is not a solution; it is a set of guiding principles that helps us to keep sufficient trust. These principles are probably not unexpected, as they are rooted in the culture of the Internet technical communities.



There are five of them:

1. **Fostering confidence and protecting opportunities** – The objective of security is to foster confidence in the Internet and to ensure the continued success of the Internet as a driver for economic and social innovation.

The Internet is about opportunity; let's keep it that way.

2. **Collective responsibility** – Internet participants share a responsibility toward the system as a whole. When you are on the Internet, you are part of the Internet. Your virus scanner does not only protect you against harm from the Internet, but also protects the Internet against hostile takeover of your computing power.

3. **Fundamental properties and values** – Security solutions should be compatible with fundamental human rights and preserve the fundamental properties of the Internet – the “Internet invariants”. In other words, they should preserve global reach, the ability to connect individuals and new networks, and preserve permissionless innovation

4. **Evolution and consensus** – Effective security relies on agile evolutionary steps based on the expertise of a broad set of stakeholders. When threats and their impacts evolve, the security posture to deal with them needs to change too. Security measures taken today may not be adequate in a decade.

5. **Think globally, act locally** – It is through voluntary, bottom-up self-organization that the most impactful solutions are likely to be reached. This is really a reflection of the subsidiarity principle: solutions should be defined and implemented by the smallest, lowest, or least centralized competent community – either topically or geographically.



“ The Internet is about opportunity; lets keep it that way. ”

Collaborative security is a guiding policy, a mindset to approach Internet security. By itself it will not provide solutions; action is required, and that is where the community must be involved. This is not new. We see collaborative security at work all around us with hundreds of organizations working in this field, from operational groups, standards organizations, individual coders, professionals, volunteers, and activists.

No single entity will solve Internet security. Whatever you do security-wise, you have to think about how you contribute to protecting the system.

So what does the Internet Society do?

We are particularly interested in technologies that make the global Internet ‘tick’.

That is why we support the DNSSEC initiative and took a convening role in global IPv6 deployment. We are also interested in the security of the routing system.

With an initiative called MANRS we are supporting a collaborative community of network operators that adhere to a set of routing security principles and take concrete actions that improve the security and resilience of the routing system. More information about this initiative can be found at <http://www.routingmanifesto.org>

This text is adapted from a video presentation for Internet Society’s Intercommunity 2015 event. You can view the whole video at <https://youtu.be/Vx2vso8Zl3k>

Anycast and robust DNS

Anycast has become the must-have service for anyone doing DNS, as it boosts performance and reliability and delivers critical protection against DDoS and other attacks. So it's no surprise that the DNS anycast market has become rather crowded in recent years.

Not all DNS anycast services are created equal, so customers must carefully consider network architecture, features, service levels, and their provider's expertise, says Johan Ihrén, Netnod's Senior Systems Specialist.

"We repeatedly hear that Netnod is a pioneer of anycasting, and one of the most experienced, trusted, and respected operators in the field," says Johan Ihrén.

"In our product, DNSNODE, our network presence, unique architecture, expertise, and support combine for the highest quality DNS anycast service on the market."

Netnod's DNSNODE service delivers a complete suite of authoritative DNS services, combining global anycast and local unicast services from sites all around the world. As a platform, DNSNODE has been specifically designed to deliver the most reliable, resilient and efficient DNS service possible.

A bigger footprint for resilience and performance

The benefits of DNS anycast come from an expanded service footprint, spreading risks across a broader area and creating multiple levels of redundancy. The value of anycast providers is, therefore, dependent on the scope of their geographical presence and their degree of interconnection among network peers.

Another critical consideration is the provider's approach to routing. While many providers make a strict separation between global and local transit,



a better way is to consider each site case-by-case, aiming to reduce routing paths and optimise the responsiveness and efficiency of services.

DDoS attacks are an unfortunate fact of life and, while no one can prevent them, the right architecture and engineering decisions can significantly mitigate their effects on uptime and overall performance.

Operating a mix of sites with significant geographical and topological spread – both at the edges of the Internet and in select core locations – can help to localise potential DDoS attacks, reducing their overall impact as unaffected parts of the anycast constellation automatically take up the load.

Anycast basics

Anycast introduces a routing prefix into the global routing system from multiple separate points of entry. This allows several identical servers to share the same IP address, shifting redundancy management from the DNS layer to the routing layer.

From the outside, an anycast service looks exactly like a multi-homed network, but because the sites do not share an internal backbone, the traffic reaches diverse sites without the need to backhaul through a central server. With anycast, you seamlessly maintain identical data sets at all locations, bringing your DNS services closer to end users.

The benefits of anycast include:

- **Better redundancy and higher availability** – Because the identical service is available at multiple, diverse locations, it simply is not a problem if a user cannot reach a particular site. The routing system will automatically re-route queries to the best available location. This is automatic protection for network outages. But it also means operators can choose to bring down a particular site for maintenance without disrupting your overall service – your other sites will seamlessly take over the traffic.
- **Improved load sharing** – Thanks to anycasting, DNS queries are automatically shared across all the available sites. No single site ever
- **Lower latency** – expanded server footprints and a mix of global and local interconnections ensures shorter paths between DNS services and end users. Shorter paths mean faster response times and more reliable responses.
- **Reduced jitter** – Shorter paths between the service and its end users also mean less variation in latency, known as “jitter”. Since jitter is a major cause of instability in DNS resolvers, reducing it creates a more stable service.
- **Simpler, more reliable operations** – By moving services closer to the end users, anycast helps eliminate

has to carry the entire load, meaning better, faster service to all end users.

much of the complexity that accumulates along the path. Services become simpler and more reliable.

- **DDoS mitigation** – There is no complete defence against large-scale DDoS attacks, but bot armies are rarely distributed evenly across the entire Internet, so the diversity of anycast services is essential. More sites in more locations means less risk of a successful attack.

The Netnod advantage

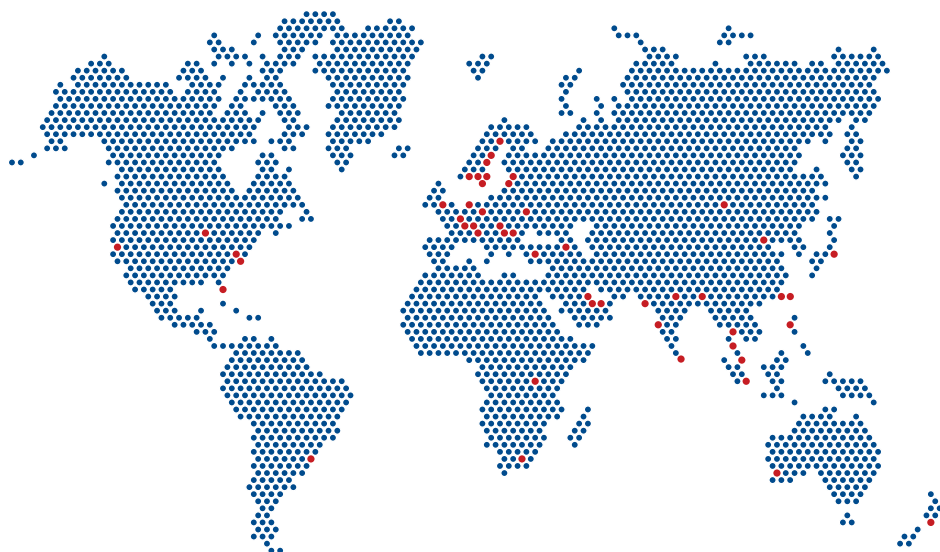
Netnod operates Internet Exchange Points and the I-root-server as a non-profit organisation. It has a long history of pioneering and providing vital services to the Internet community and, since it does not run a competing registry business, Netnod has no conflicts of interest in the DNS market.

“We value transparency and neutrality and are committed to standards-based Internet development,” says Patrik Fältström, Netnod’s Head of R&D.

“Over the years, we have built one of the largest server footprints in the world, developed unique skills, technical competence, and a finely tuned monitoring system. In 2016, we will continue to expand DNSNODE, increasing the value of the service to customers.”

To learn more, contact us today at dnsnode@netnod.se

<http://www.netnod.se/dns/dnsnode>



HELSINKI	BANGKOK	BEIJING	CHICAGO	TAIPEI	THIMPHU	DUBAI
STOCKHOLM	FRANKFURT	JAKARTA	BUCHAREST	MALMÖ	KARACHI	PORT VILA
MILAN	BRUSSELS	DOHA	MANILA	KUALA LUMPUR	KIEV	MUMBAI
LONDON	TOKYO	MIAMI	WASHINGTON DC	PORTO ALEGRE	TALLINN	COLOMBO
GENEVA	JOHANNESBURG	PERTH	GÖTEBORG	MANAMA	ULAANBAATAR	BELGRADE
AMSTERDAM	PARIS	WELLINGTON	SUNDSVALL	KATHMANDU	ASHBURN	
OSLO	SAN FRANCISCO	WIEN	UMEÅ	YEREVAN	ST PETERSBURG	
HONGKONG	LULEÅ	ANKARA	SINGAPORE	LUXEMBOURG	KIGALI	



Nurani Nimpuno
Head of Outreach and Communications

THE LATEST BUZZ IN THE INDUSTRY (APRIL 2015 – SEPTEMBER 2015)

– What's been going on at the meetings you've missed?



The International Telecoms Week (ITW)

As usual, this year's ITW was an intensive event with many meetings and socials. In total over 6500 participants from all over the world descended upon Chicago. Netnod was present with a booth and some fun giveaways, and Martin Eriksson and Alexander Borodin spent the week networking and spreading the word about the advantages of peering in Northern Europe. The LINX-NoVA social, high above the clouds at the Signature Room at the 95th[®], offered a pretty impressive and special view over Chicago. What a city!



RIPE 70

The RIPE 70 meeting was the largest to date with 678 participants registered and present! Kurtis Lindqvist, Nurani Nimpuno, Patrik Fältström, and Lars-Johan Liman presented, participated, and networked with people in the community. The discussions centred around the IPv6 transition and challenges with the growing IPv4 transfer markets, the IANA Stewardship transition, and security – all addressing challenges in a changing world! Kurtis gave a talk on IXP Topology in Europe which generated a lot of good discussions. Nurani presented the IANA Stewardship transition process work and participated in the following panel discussions.



The RIPE community praised the CRISP team for its effort and expressed a strong support for the transition. It is fantastic to see what an active community RIPE still is, 25+ years since it first started.

NANOG

This NANOG was another record breaker in terms of participation with over 1200 participants. The big trend among all the talks was automation. It was also clear that IPv6 no longer is a thing of the future. It's everywhere and it's faster!

EuroDig 2015



EuroDIG is a Pan-European dialogue on Internet governance – an open platform for informal and inclusive discussion and exchange on public policy issues related to Internet Governance (IG) between stakeholders from all over Europe. The topics this year were Accessibility, Human rights, Innovation and economic development, Internationalised Domain Names (IDN), Media in the digital ages, Participation in IG policy making and Cyber-Security. Nurani participated as a speaker on the IANA Stewardship transition process.

ENOG 9

Netnod was the main sponsor of ENOG 9, the ninth Eurasian Network Operators' Group meeting, which took place in June in the beautiful Russian city of Kazan. This edition had around 250 attendees from across the region. Martin, Patrik, and Alexander attended. Martin gave a talk about Netnod, and Patrik talked about the IANA Stewardship process, a subject that caused some discussions

both in and outside of the agenda during the 2-day event. Overall, the agenda had a great mix of talks about the Internet situation in Russia and a lot of technical talks. Netnod hosted the very appreciated social at one of Kazan's finest restaurants – The Pashmir. We enjoyed a magnificent Tatar barbeque evening. Our special t-shirts with the Netnod logo in Cyrillic letters disappeared in no time. In conclusion, ENOG 9 was a great event!



the focus was on the next steps with all three proposals combined into one. It was an intense week of discussions and meetings, but good food, beautiful Argentinian Malbec, and a little bit of tango, got us all through the week!



ICANN53

Liman, Patrik and Nurani participated in the ICANN53 meeting, which took place in a cold, but beautiful Buenos Aires. Unsurprisingly, IANA stewardship transition dominated most sessions at the meeting. With the Names Community CWG having finalised their proposal the week leading up to the meeting,



IETF 93

The IETF93 was coding central. The IETF Hackathon before the event was fully packed with people. The Code Sprint worked on tools for the IETF, and the CryptTech meeting to hack on open-source hardware designs. And of course, the regular topics, such as real-time communications, security & privacy, and the Internet of Things, also filled the agenda.

AfPIF 2015

Johan Ihrén participated in this year's AfPIF, which brings together ISPs, IXPs, policy makers, regulators, content providers, operators, infrastructure providers and others to discuss interconnection in Africa. Netnod was proud to continue to support AfPIF – something we have been committed to since its inception.

Capacity Russia

Martin and Alexander had a busy couple of days at Capacity Russia in Moscow early September. Despite the current ruble crisis, the event was well attended. Participants were mingling, networking and discussing business, all around the conference venue. Netnod was very satisfied with our presence. One of the highlights was the horse gambling social event. We were surprised to suddenly find ourselves mingling with real horses, wearing top hats, carrying horsewhips, and betting on cockroach races. We also enjoyed great food, a magic show, live music and drinks of course. They sure know how to party in Russia!



Nurani Nimpuno

Head of Outreach and Communications

EPF celebrated its 10th anniversary.

The European Peering Forum (EPF) was held in sunny and warm Madrid, 20 – 23 September. This year celebrated the 10th EPF, and we saw a record number of 272 attendees from all over the world. As Netnod is one of the co-organisers of the EPF, we are particularly proud of how the forum has developed since it started, and we are very pleased with the outcome this year. The EPF stretches over three days, with the first half of each day filled with presentations on peering, interconnection, network operations and IXPs, and the second half of the day with short, but intense bilateral meetings, aimed to develop existing and new peering relationships among the participants. Kurtis Lindqvist gave his very last talk at the EPF as CEO of Netnod, taking us back in time, from the early beginnings at Netnod until today. It was a talk that generated lots of laughs and comments, but also one that received a standing ovation from the audience.

An important part of the EPF are the social events – people chat and relax after a full day of meeting, but the



socials are just as important as the meetings to discuss peering and interconnection, and to establish new relationships. So this year we enjoyed a fabulous cocktail social at the Tartan Rooftops – overlooking all of Madrid and enjoying an amazing and beautiful sunset. The fantastic gala dinner was

held at Casino de Madrid, a unique establishment with a history of many hundred years in Madrid. A truly classy way to celebrate the EPF's 10th birthday.



Nurani Nimpuno
Head of Outreach and Communications



The IANA Stewardship Transition – are we done yet?

In the last two Netnod News issues, we have covered the historical process of the transition of the control of the IANA functions from the US Government to the global multistakeholder community. It is a process which Lars-Johan Liman, Patrik Fältström, and Nurani Nimpuno are all deeply involved with.

The names community, the last out of the three communities involved, finally submitted its proposal in June, which allowed the IANA Stewardship Transition Coordination Group (ICG) to go ahead and consolidate all three proposals into one. The combined proposal has then gone through a public

comment period, which closed on 8 September.

So what's next? As we speak, the ICG is preparing the last touches on the final proposal that will be submitted to the National Telecommunications and Information Administration (NTIA). The final discussions on the ICANN Accountability work done in the CCWG is taking place. If it all goes according to plan, the transition will be completed at the earliest in July 2016.

Get the latest news on the IANA Stewardship Transition at the ICG website: <http://www.ianacg.org>

Work meets pleasure:

Your travel guide to the upcoming industry events



Dublin – ICANN54 meeting

18 – 25 October 2015

Dublin means **castles** and **pubs!** The Dublin Castle on Palace street, is well worth a visit! Also make sure to visit the famous **Guinness Storehouse** and have a drink at Ireland's longest bar. Dublin is of course also the place to be for whiskey and dark beer. Get that and much more at **Temple Bar**.



Berlin – Euro-IX meeting

25 – 27 October 2015

If the weather is good, why not try something new in Berlin? The runway at the old disused **Tempelhof airport** has been turned into an activity park. For the foodies, the department store **KaDeWe** is the place to go.

Café tips: The charming **Fräulein Wild** (Dresdener Strasse 13) with its freshly baked bread and cakes, is trendy and old fashioned at the same time. In Neukölln the best cafés are **Katulki** and **Tischendorf**

(Fiedelstrasse) and in Prenzlauer Berg there is a wonderful book café called **Shakespeare & Sons**.



Yokohama, Japan – IETF 94

2 – 6 November 2015

Yokohama has an impressive port. Go to **Osanbashi Pier** and watch the large cruise ships coming in. To get a 360° view of the city, the **Sky Garden deck** on the 69th floor is the place to be. Make sure to also check out **The Landmark** – the tallest building in Japan.

Do you love noodles and museums? Great! At the **Cup Noodles Museum** you can learn all about Cup Noodles and even design your own.

For the sports fans, a baseball game at **Yokohama Stadium** is a given.

Paris – Capacity Europe

2 – 4 November 2015

Paris is the city that has it all; fabulous food, wine, drinks, fashion, history, culture, nightlife...

If it's your first time in Paris, the **hop-on hop-off bus** is not a bad way to get a quick sense of the city. **Le Marais** and **Montmartre** are beautiful areas with a lot to discover. Go to **Rue des Rosiers** in Marais for its lovely stores, bakeries and the best falafel in Europe. At 6 Rue des Ecoiffes, there is a great little Italian

restaurant called **L'alimentari**, which serves the best pasta.

The views from **L'Arc de Triomphe** and **le Sacre Coer**, are worthy alternatives to the **The Eiffel Tower** with much shorter queues. If you want to try a real French bistro, the **Café des Musées**, 40 Rue de Turenne, serves superb French food. Try the chocolate cake!

João Pessoa, Brazil – IGF 2015

10 – 14 November 2015

You cannot go to João Pessoa and not swim in the crystal clear waters of **Picão-zinho** with the hundreds of colorful fish amongst the coral. Run, cycle or roller skate along the coastal path at **Manaira** and **Cabo Branco**.

A must for all visitors is to go to the north of the city at sunset to enjoy saxophonist **Jurandy** play **Ravel's Bolero** while being paddled up and down the Rio Paraíba in a small canoe.

Taste regional cuisine at **Mangai** restaurant, which serves great meat and seafood. Save room for the superb desserts!



Bucharest, Romania – RIPE71

16 – 20 November 2015

Bucharest is surrounded by nature. Visit **Herastrau Park** in the north, where you can take a boat trip and enjoy the calm and green surroundings.

The Old Town offers a lot of history and charm with its beautiful old buildings, cozy restaurants and cafes. Shop local arts & crafts and get some great local food – cheap and tasty! Try the local sausages, stews and the local **Stejar beer**.

Stockholm, Sweden

– Internetdagarna 2015

23 – 24 November 2015

Stockholm in November means very short days – it'll be dark by 4 pm. That makes it perfect for the **International film festival**, in Stockholm 11-22 November.

Another indoor activity is **Abba The Museum**, so much more than an ordinary museum. Get the true sense of what it would be like to be the 5th ABBA member, try on their stage costumes, and share the stage with the famous band. Your material will be recorded on your ticket.



San Diego, California – NANOG66

8 – 10 February 2016

The **Gaslamp Quarter** has exploded with new trendy fashion stores, restaurants and art galleries in recent years. **East Village** is of course famous for its cool cafes and live music, where artists and musicians from all over the world hang out. Get a sense of the Spanish and Mexican roots in the **Old Town**. More of a beach person? Go out to **Mission Beach** and **Pacific Beach**, where surfers and students enjoy the most beautiful beaches in all of California. Stay classy!



Auckland, New Zealand

15 – 26 February 2016

Auckland - **The City of Sails** is the place where you, on a sunny day, can see thousands of sailing boats. Go on a small cruise in the **Watemata Harbour**.

Catch a great view of the city from **Mt Eden**, an extinct volcano. At Newmarket, find the **Lion Breweries** where you can try the local beers, Lion, Red Beers and Steinlager.

And of course, explore the beautiful nature and wineries, at **Waiheke Island**, famous for its world-class red wine.



Marrakesh, Morocco – ICANN 55

6 – 11 March 2016

Markets are big in Marrakesh. Do not miss the UNESCO World Heritage listed **Jemaa el-Fnaa market**, a quiet place during the day, but in the evening thousands of Moroccans enter the streets after work to get a drink and socialize.

The Old Town, **the Medina**, is where tourists mix with locals to shop for scarves, dried spices, carpets, dates and clothes.



Alexander Borodin
Communications Officer

Where to meet up with Netnod

OCTOBER 2015 - MARCH 2016

ICANN54

18-22 October 2015
Dublin, Ireland
<https://meetings.icann.org/en/dublin54>

27th EURO-IX

25-27 October 2015
Berlin, Germany
<https://www.euro-ix.net>

IETF94

1-6 November 2015
Yokohama, Japan
<https://www.ietf.org/meeting/94/index.html>

Capacity Europe

2-4 November 2015
Paris, France
<http://www.capacityconferences.com/Capacity-Europe.html>

IGF 2015

10-14 November 2015
Joao Pessoa, Brazil

RIPE71

16-20 November 2015
Bucharest, Romania
<https://ripe71.ripe.net>

Internetdagarna 2015

23-24 November 2015
Stockholm, Sweden
<https://internetdagarna.se>

NANOG66

8-10 February
San Diego, CA, USA
<http://nanog.org/meetings/home>

APRICOT

15-26 February
Auckland, New Zealand
<https://2016.apricot.net>

ICANN55

6-11 March
Marrakech, Morocco
<https://meetings.icann.org/en/>

Netnod Spring Meeting 2016

16-17 March
Stockholm, Sweden
<https://www.netnod.se/netnod-spring-meeting-2016>



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Netnod manages Internet exchange points (IXPs) in Sweden and Denmark, offers DNS anycast & unicast slave services to TLDs, and is the operator of i.root-servers.net, one of 13 logical DNS root name servers.