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Member Update

Information bulletin for RIPE NCC members

The RIPE NCC Member Update is intended for RIPE NCC LIR contacts.

If you are not the right person to receive this update, please forward it to the appropriate colleague.

Members Must Confirm Independent Internet Number Resource Details or Risk Paying Extra Fees

- LIRs with independent Internet number resources need to act before 20 September to avoid paying extra fees
- LIRs can use a web interface on the RIPE NCC LIR Portal to specify whether they, or one of their existing customers, are using these independent number resources
- Failure to respond before 20 September will mean that a LIR will be charged for all independent number resources currently registered to them

Internet number resources comes from policy proposal 2007-01, "Direct Internet Resource Assignments to End Users from the RIPE NCC", which was accepted by the RIPE community in October 2008. This policy states that a contractual relationship between an End User and a Sponsoring LIR or the RIPE NCC must be established before the End User can receive independent Internet number resources directly from the RIPE NCC. It also states that such a contractual relationship must be retrospectively put in place for End Users of independent Internet number resources that were previously assigned.

Local Internet Registries (LIRs) have until **20 September 2009** to provide information about the independent Internet number resources requested by and currently registered with them. The results will be used to ensure that the LIRs are not charged for resources that should no longer be associated with their LIR.

Due to the scale of this policy's impact, the RIPE NCC is implementing it in three phases.

The term Independent Internet number resources covers **PI (IPv4/IPv6) assignments, AS Numbers, IPv6 IXP assignments and IPv4/IPv6 Anycasting assignments.**

Phase 1 (March–May 2009)

This phase focused on new assignments only. The aim of this phase was to ensure that there are contracts in place between the End User of independent Internet number resources and the requesting (Sponsoring) LIR. This phase also made it possible for End Users to sign a contract directly with the RIPE NCC, becoming what is called a Direct Assignment User.

If the LIR indicates that one of their existing customers is using a specific independent Internet number resource, the LIR must provide the RIPE NCC with an Independent Assignment Request and Maintenance Agreement. This must be uploaded by **31 December 2009**.

Phase 2 (May–December 2009)

This phase focuses on existing assignments, which number approximately 30,000. In this phase the RIPE NCC approaches the LIRs regarding the assignments requested by, and currently registered with, their LIR. All LIRs receive an email from the RIPE NCC with more detailed information. They are given access to a web interface, included in the LIR Portal, in which all the independent resources requested by their LIR are listed.

More detailed information about this agreement can be found at: www.ripe.net/rs/pi-existing-assignments.html

If you have any questions regarding this process, please contact us at enduser-contract@ripe.net.

The changes in dealing with these independent

continued on page 2 »

This publication is available online at: www.ripe.net/membership/newsletter

If you have any feedback about this publication, please contact: feedback@ripe.net

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LIRs are asked to inform the RIPE NCC about each of these independent Internet number resources by specifying whether it is used in their own network infrastructure, in the networks of one of their customers or if the End User is no longer their customer.

Phase 3 (2010+)

The results of Phase two will be used for the third and last phase of implementation which will start in 2010. This will involve contacting the End

Users for which the RIPE NCC has not received an End User Assignment Agreement (see Phase two above). After September 2009, the RIPE NCC will have accurate data on how many End Users need to be contacted directly regarding a contractual relationship.

The RIPE NCC will present an update on these activities at RIPE 59 in Lisbon, Portugal, 5–9 October 2009. •

RIPE Meetings



RIPE 58

The RIPE 58 Meeting took place at the Krasnapolsky Hotel, Amsterdam, the Netherlands, from 4–8 May 2009. RIPE 58 marked an important milestone as it represented 20 years since the first RIPE Meeting in 1989.

The RIPE 58 Meeting Report, featuring a summary of discussions on IPv6 deployment, AS Number pools, DNSSEC and global policy, is available at:
www.ripe.net/ripe/meetings/ripe-58/meeting-report.html

Minutes and presentations from the RIPE 58 plenary and RIPE Working Group sessions, as well as webcast and podcast archives are available at:
www.ripe.net/ripe/meetings/ripe-58/archives.php

RIPE 59

RIPE 59 will take place in Lisbon, Portugal, from 5–9 October 2009.

More information about RIPE 59 is available at:
www.ripe.net/ripe/meetings/ripe-59 •

RIPE NCC General Meetings

The RIPE NCC General Meeting May 2009

The RIPE NCC General Meeting (GM) May 2009 was held on Wednesday, 6 May 2009. The GM was held adjacent to the RIPE 58 Meeting, which took place from 4–8 May 2009 at the Krasnapolsky Hotel in Amsterdam, the Netherlands.

There were 82 attendees, excluding RIPE NCC staff and observers from the other Regional Internet Registries (RIRs).

The RIPE NCC General Meeting October 2009

The RIPE NCC GM October 2009 will take place on Wednesday, 7 October 2009 adjacent to the RIPE 59 Meeting at the Corinthia Hotel, Lisbon,

Portugal from 5–9 October 2009.

All RIPE NCC members are encouraged to attend. You must register prior to the meeting. More information about the RIPE NCC General Meeting is available at:
www.ripe.net/membership/gm

Members can discuss membership issues prior to the GM by using the RIPE NCC Membership Discussion List. RIPE NCC members can subscribe to this list through the RIPE NCC LIR Portal at:
<https://lirportal.ripe.net>

Archived messages from this list are available at:
www.ripe.net/maillists/ncc-archives/members-discuss •

RIPE Policy Development: March 2009 – July 2009

Submitted Proposals

From March to July 2009, six new proposals were submitted.

1. *Run Out Fairly, 2009-03*

Proposed by Daniel Karrenberg, Niall O'Reilly, Nigel Titley and Randy Bush

This is a proposal to gradually reduce the allocation and assignment periods in step with the expected lifetime of the IPv4 unallocated pool in order to address the perception of unfairness once the pool has run out.

The RIPE NCC allocates enough address space to LIRs to meet their needs for a period of up to 12 months. It is proposed to reduce this at fixed dates. The assignment period will be the same as the allocation period.

Feedback so far has revolved around the effect the proposal would have on the routing tables and the effect on the amount of requests that would come in to the RIPE NCC. As of July 2009, the External Impact Analysis for this proposal was being prepared. It will include the feedback received regarding the possible effect of this proposal.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-03.html

2. *Allocating/Assigning Resources to the RIPE NCC, 2009-02*

Proposed by Remco van Mook

This proposal sets out how the RIPE NCC can allocate/assign resources to itself. After feedback on the mailing list, the proposal was revised in April 2009. The text was made more generic in order for it to accommodate as many cases as possible, including those that are as yet unforeseen. The second version of the text states that the RIPE NCC's IP Resource Analysts (IPRAs) will evaluate the request as normal. A formal written opinion will then be sent to the pool of arbiters for final evaluation and approval.

After a one month review period and a Last Call for the new draft policy document, the RIPE Community accepted it as a policy in July 2009.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-02.html

3. *IPv4 Allocation and Assignments to Facilitate IPv6 Deployment, 2009-04*

Proposed by Alain Bidron

It is proposed that the last IPv4 /8 that the RIPE NCC will hold is to be dedicated to facilitate deployment of IPv6. Allocations and assignments from this block will be made based on demonstrated need, but the size will be downscaled taking into account existing

transition technologies. The proposed minimum allocation size is to be a /27 for such allocations and assignments. Allocations and assignments from this block will also be justified by demonstrating that the requirements of the transition plan as specified in RFC5211 are met.

This proposal was discussed during RIPE 58, together with 2008-06, "Use of Final /8", which was proposed in October 2008.

2008-06 focuses on ensuring that each existing LIR receives routable IPv4 addresses that they can use for supporting legacy IPv4 services during the transition phase to IPv6.

As both 2008-06 and 2009-04 refer to the usage of the same address resource (the last /8 the RIPE NCC will hold), only one of them can go through to the next phase of the Policy Development Process.

The Working Group Chairs have started a discussion on the mailing list regarding the differences between the two proposals in order to assess the best way forward.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-04.html

4. *Removing Routing Requirements from the IPv6 Address Allocation Policy, 2009-06*

Proposed by Rob Evans

Following discussion at RIPE 58, it is proposed that the mandates about how an allocated address range should be announced into the routing table should be removed from the address policy as this does not relate to address allocation.

So far, the proposal has received mostly positive feedback on the mailing list. A draft policy document was published for a one-month Review Phase in July 2009.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-06.html

5. *Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries, 2009-07*

Proposed by Andrew de la Haye and Stacey Hughes

According to the current global policy outlined in ripe-416, IANA will cease to make any distinction between 16-bit and 32-bit only ASN blocks by 31 December 2009 when making allocations to RIRs. This proposal is to extend this date by one year to 31 December 2010.

Given the current global policy, it is likely that RIRs will not be able to justify a new block of ASNs from the IANA after 31 December 2009 due to a glut of free 32-bit only ASNs in the

RIRs' pool. This proposal seeks to remedy this potential problem by extending the deadline for differentiation by one year. This proposal was also submitted to the other RIR regions for discussion.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-07.html

6. IPv6 Provider Independent (PI) Assignments for LIRs, 2009-08

Proposed by Andy Davidson

This proposal is to allow LIRs to receive IPv6 PI assignments in addition to an IPv6 allocation. Under the current policy, LIRs with a need for a different routing policy do not qualify for an IPv6 PI assignment. End Users do have the possibility to receive an additional IPv6 PI assignment when the need is demonstrated.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-08.html

Concluded Proposals

Four proposals were concluded in the period March to July 2009.

1. Provider Independent (PI) IPv6 Assignments for End User Organisations, 2006-01

Proposed by Jordi Palet Martinez

This proposal introduced a solution for organisations that need IPv6 Provider Independent (PI) address space.

It was accepted in April 2009 and is documented in ripe-466, "IPv6 Address Allocation and Assignment Policy".

The RIPE NCC implemented the policy in May 2009. Since then an organisation can receive IPv6 PI space if they are not an LIR, are multihomed and meet the requirements of the policies described in the RIPE NCC document entitled "Contractual Requirements for Provider Independent Resources Holders in the RIPE NCC Service Region".

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2006-01.html

2. Multiple IPv6 /32 Allocations for LIRs, 2009-05

Proposed by Daniel Rueegg

This proposal intended to allow an LIR operating separate networks in unconnected geographical areas to receive multiple /32 IPv6 allocations.

The proposal was not received very well on the mailing list and at RIPE 58. There seemed to be agreement about the problem statement but not about the proposed solution. The proposer, together with the Working Group Chairs, decided to withdraw this proposal due to insufficient support for it as it was written.

The discussion about this proposal resulted in a

new proposal to remove routing considerations from the IPv6 Policy document (see 2009-06 above).

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2009-05.html

3. Anycasting Assignments for TLDs and Tier 0/1 ENUM, 2008-05

Proposed by Brett Carr and Ondřej Surý

The proposal is to allow Tier 0/1 ENUM operators to receive IPv4 and IPv6 anycasting assignments and extend the number of anycasting prefixes that can be assigned to an operator from one to up to four assignments. Most discussions were on the definition of an ENUM operator and how this should be reflected in the policy text.

A fourth version of the proposal was published in April 2009 and reached consensus in July 2009. The proposal is documented in the following RIPE Documents:

"IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region" (ripe-471).

"IPv6 Address Allocation and Assignment Policy" (ripe-472).

The RIPE NCC implemented the policy in July 2009.

The details of the proposal can be found at: www.ripe.net/ripe/policies/proposals/2008-05.html

4. Allocating/Assigning Resources to the RIPE NCC, 2009-02 (see "Submitted Proposals" above)

Archived proposals (either withdrawn or concluded) are stored at:

www.ripe.net/ripe/policies/proposals/archive

Ongoing Proposals

As of July 2009, there were eleven proposals open in the RIPE Policy Development Process:

1. Use of final /8, 2008-06

Proposed by Philip Smith

This proposal describes how the RIPE NCC should make allocations from its last /8 worth of address space at the time of total depletion of the IANA free pool.

As mentioned above this proposal is being discussed together with 2009-04, "IPv4 Allocation and Assignments to facilitate IPv6 Deployment".

The details of this proposal can be found at: www.ripe.net/ripe/policies/proposals/2008-06.html

2. Ensuring efficient use of historical IPv4 resources, 2008-07

Proposed by Philip Smith

This is a proposal to require documentation of

all address resources held when assessing a RIPE NCC member's eligibility for further IPv4 address space.

In July 2009, a third version of the proposal was published for discussion. This last version extends the proposal to include new members.

The details of this proposal can be found at: www.ripe.net/ripe/policies/proposals/2008-07.html

3. Global Policy for the allocation of IPv4 blocks to Regional Internet Registries, 2009-01
Proposed by a team consisting of representatives from each of the five RIRs

With the depletion of the IANA free pool of IPv4 address space, the current policy regarding the allocation of IPv4 address space to the RIRs will become moot. The RIRs may, according to their individual policies and procedures, recover IPv4 address space. This policy provides a mechanism for the RIRs to retro allocate the recovered IPv4 address space to the IANA and provides the IANA the policy by which it can allocate it back to the RIRs on a needs basis. This policy creates a new global pool of IPv4 address space that can be allocated where it is needed on a global basis without a transfer of address space between the RIRs.

Following discussion in the five RIRs, a slightly different version of the proposal is being discussed in the ARIN region. In the ARIN version of the proposal it is only mandatory to return legacy space. As this is a global policy, all RIRs need to accept the same version. As of July 2009, the proposers were waiting for a decision from the ARIN Advisory Council on a way forward.

4. PI Assignment Size, 2006-05
Proposed by Philip Chr. Laustsen Langelund

This proposal suggests the minimum assignment size for PI assignments should be a /24 when routing is a major issue for a multihoming End User.

The details of this proposal can be found at: www.ripe.net/ripe/policies/proposals/2006-05.html

5. Using the Resource Public Key Infrastructure to Construct Validated IRR Data, 2008-04
Proposed by Randy Bush and Kurtis Lindqvist

This is a proposal to introduce a new registry that augments IRR data with the formally verifiable trust model of the Resource Public Key Infrastructure (RPKI) and provide ISPs with the tools to generate an overlay to the IRR which is much more strongly trustable.

The details of this proposal can be found at: www.ripe.net/ripe/policies/proposals/2008-04.html

6. Initial Certification Policy for Provider Aggregatable Address Space Holders, 2008-08
Proposed by Nigel Titley, on behalf of the RIPE Certification Task Force

The RIPE NCC plans to deploy a certification service that can be used to secure the uniqueness of Internet Number resources. This proposal lays out guidelines for how LIRs can receive certificates over their Provider Aggregatable (PA) address space holdings and how these certificates should be maintained.

The details of this proposal can be found at: www.ripe.net/ripe/policies/proposals/2008-08.html

The following five proposals, described in more detail on pages 3–4, were still ongoing as of July 2009:

- 7. Run Out Fairly, 2009-03**
- 8. IPv4 Allocation and Assignments to Facilitate IPv6 Deployment, 2009-04**
- 9. Removing Routing Requirements from the IPv6 Address Allocation Policy, 2009-06**
- 10. Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries, 2009-07**
- 11. IPv6 Provider Independent (PI) Assignments for LIRs, 2009-08**

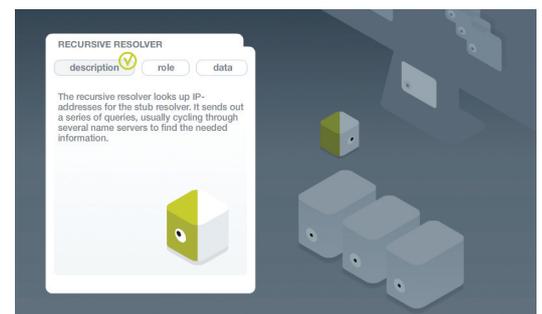
Further Information

You can find the full list of current proposals at: www.ripe.net/ripe/policies/proposals •

New RIPE NCC E-Learning Course Focuses on DNSSEC

The RIPE NCC recently launched the first module of a DNSSEC e-learning course. This introductory module explains how DNS works by following a simple query. Subsequent modules will deal with DNS vulnerabilities and DNSSEC.

RIPE NCC e-learning courses are available free of charge at: <https://e-learning.ripe.net/training/e-learning> •



Executive Outreach on IPv4 Depletion and New Officer Attestation Process

On 15 April 2009, at the behest of the Board of Trustees, ARIN sent a certified letter to the CEO, or other comparable senior executive, of approximately 15,000 organizations that currently hold IPv4 resources in its service region. The purpose of this effort was to raise executive awareness of the depletion of IPv4 resources and to encourage the active adoption of IPv6. The letter also notified resource holders that, in response to the approaching depletion of the IPv4 free address pool, the ARIN Board of Trustees had directed ARIN staff to take additional steps to ensure the legitimacy of all IPv4 address space requests.

Effective 18 May 2009, ARIN began to require that all applications for IPv4 address space include an attestation of accuracy from an officer of the organization. The officer attestation creates an additional step in the IPv4

resource request process.

Now, whenever a request for IPv4 resources is received, ARIN asks in its initial reply for the name and contact information of an officer of the organization who can attest to the validity of the information provided to ARIN. The specific definition of officer depends on the legal formation of the organization. The full text of the Officer Attestation procedure is available at: https://www.arin.net/resources/agreements/officer_attest.html

Community feedback on the letter and the new Officer Attestation process has been largely positive. Since implementation of the attestation process 18 May, ARIN has received over 96 requests for IPv4 address space. ARIN staff have requested and received the name and contact information of an officer of the requesting organization. This new process has resulted in virtually no complaints and very few, if any delays in the processing of IPv4 requests. •

The Middle East Network Operators Group (MENOG) is a regional forum offering network engineers and other technical staff the opportunity to share knowledge and experiences, and identify areas for regional cooperation.

MENOG 4: April 2009

MENOG 4 took place alongside the RIPE NCC Regional Meeting in Manama, Bahrain from 5–9 April 2009. It was the first time that a MENOG meeting has lasted for five days and also the first time that the meeting has featured workshops. MENOG 4 featured two workshops, one on routing and one on IPv6, which were both aimed at network operators and engineers. These workshops were of particular interest to attendees with a working knowledge of configuration fundamentals and who were interested in scaling their network operation or deploying a new network.

Attracting more than 90 attendees from more than 15 countries, MENOG 4 was a successful event bringing together regional network



operators, vendors, ISPs and technical groups.

MENOG 5: October 2009

MENOG 5 will take place alongside the RIPE NCC Regional Meeting in Beirut, Lebanon from 25–29 October 2009. All presentations, tutorials and workshops will take place in English.

More information about MENOG and the MENOG 5 meeting is available from the MENOG website at:

www.menog.net/meetings/menog5 •



LACNIC Update

FRIDA Meeting

From 22–23 April 2009, the first meeting of the Regional Fund for Digital Innovation in Latin America and the Caribbean (FRIDA Program) was held in Montevideo, Uruguay.

The event was conceived as a meeting place for the entire FRIDA community (coordinators, researchers, evaluators, contributors), where over 70 participants from more than 10 countries in the LACNIC region had the opportunity to share experiences and exchange knowledge on the execution of research in the field of ICTs.

At the same time, training was provided on a series of key issues involved in research project execution, such as research in the field of ICTs and public policies; design and execution of research projects in the field of ICTs; sharing and communicating project results and experiences; teaching and good practices learned from successful research experiences that have been funded by FRIDA since 2004; and the creation of a regional network of researchers. More information is available at: www.programafrida.net/en

Contest for Journalists: “Internet Governance in the Press”

For the first time ever, LACNIC invited the media and communications professionals from its service region to submit journalistic pieces related to the investigation, development and promotion of issues that will contribute to strengthen the Internet in Latin America and the Caribbean. The subject matter chosen for this first edition revolved around Internet Governance within the context of the Latin American and Caribbean region.

After having received entries by journalists from 10 different countries, the first prize was awarded to the work titled “Brasil.tec” prepared by Igor Ribeiro and Ana Ignacio and published in the IMPRENSA magazine of Brazil, while the second prize went to “EnREDando” (Radio) presented by Carlos Flores and Verónica Salgado (Radio ALER, Ecuador). More information is available at: www.lacnic.net/en/anuncios/2009-concurso-periodistas.html

LACNIC XII – 24–29 May 2009 – Panama City

More than 300 people from 40 different countries participated in LACNIC’s annual meeting, including representatives from every sector (ISPs, carriers, academia, governments, content providers). As usual, training workshops, the Network Security, Regional Interconnection (Napla) and Flip6 Forums were held, as well as LACNIC’s Public Policy Forum and its Member Assembly.

Highlights of the event included:

- **The presentation of the SIMON project**, a project that originated within the community and will be led by LACNIC. This project will measure connection delays between different countries of the region and the traffic among them, as well as identifying where traffic is headed. The information generated within the framework of this project will be of great use both for companies as well as for the governments in the LACNIC region, in support of measures that will improve connectivity among different countries.
- **Roundtable with governments of the LACNIC region**
In Panama, representatives of 10 governments in the LACNIC region agreed to form a working group within the LACNIC environment in order to create a channel of communication between the region’s governments and LACNIC. In particular, it was agreed to work on issues relating to IPv6 adoption and Internet Governance.
- **Public Policy Forum**
During the Public Forum, nine proposals were presented, six of which were approved. These are available at: www.lacnic.net/en/eventos/lacnicxii/foropublico2009.html
- **LACNIC announced** that execution of the Security Project which is being promoted with the support of the IDRC will begin in July 2009. The project aims at providing training and promoting the creation of Computer Security Incident Response Teams (CSIRTs) in the region of Latin America and the Caribbean, with the purpose of increasing the region’s ability to prevent computer security incidents and respond effectively when they occur. •

Conference Calendar

Conferences and meetings that may be of interest to RIPE NCC members

17-18 September 2009
RIPE NCC Regional Meeting, Moscow 2009
Moscow, Russia
www.ripe.net/meetings/regional

21 September 2009
RIPE NCC Roundtable Meeting
Amsterdam, the Netherlands
www.ripe.net/meetings/roundtable

5-9 October 2009
RIPE 59
Lisbon, Portugal
www.ripe.net/ripe/meetings/ripe-59

5-9 October 2009
ITU Telecom world 2009
Geneva, Switzerland
www.itu.int/WORLD2009

18-21 October 2009
NANOG 47
Dearbon, United States
www.nanog.org/meetings/future

21-23 October 2009
ARIN XXIV
Dearbon, Michigan, USA
www.arin.net

21-30 October 2009
World Telecommunication Standardization Assembly (WTSA-08)
Johannesburg, South Africa
www.itu.int/ITU-T/wtsa-08

25-30 October 2009
ICANN 36
Seoul, South Korea
<http://public.icann.org>

25-29 October 2009
MENOG 5/RIPE NCC Regional Meeting
Beirut, Lebanon
www.menog.net/meetings

2-3 November 2009
15th Euro-IX Forum
Rome, Italy
www.euro-ix.net/event/show/45

8-13 November 2009
IETF 76
Hiroshima, Japan
www.ietf.org/meetings/Omtg-sites.txt

16-17 November 2009
LINX 67
United Kingdom
<https://www.linx.net/>

15-18 November 2009
IGF
Sharm El Sheikh, Egypt
<http://igf.wgig.org/cms/index.php/futuremeetings>

21-27 November 2009
AfriNIC 11
Dakar, Senegal
www.afrinic.net/meeting

21-24 February 2010
NANOG 48
Austin, United States
www.merit.edu/learning

23 February-5 March 2010
APRICOT 2010
Kuala Lumpur, Malaysia
www.apricot.net

1-5 March 2010
APNIC 29
Kuala Lumpur, Malaysia
www.apnic.net

7-13 March 2010
ICANN 37
Nairobi, Kenya
www.icann.org/en/general/calendar

21-26 March 2010
77th IETF
Anaheim, United States
www.ietf.org

RIPE NCC Training Courses

LIR Training Courses
Amsterdam, the Netherlands
Edinburgh, Scotland
Thursday, 10 December 2009
Friday, 02 October 2009

Istanbul, Turkey
Friday, 23 October 2009
IPv6 for LIRs Training Course
Kuwait City, Kuwait
Monday, 09 November 2009
Budapest, Hungary
Friday, 16 October 2009

Sophia, Bulgaria
Friday, 13 November 2009
Riga, Latvia
Friday, 27 November 2009

London, United Kingdom
Thursday, 19 November 2009
Kiel, Germany
Friday, 04 December 2009

London, United Kingdom
Friday, 20 November 2009
Amsterdam, the Netherlands
Friday, 11 December 2009

Routing Registry Training Courses

Budapest, Hungary
Thursday, 15 October 2009

Moscow, Russian Federation
Friday, 30 October 2009

Riga, Latvia
Thursday, 26 November 2009

Kiel, Germany
Thursday, 03 December 2009

RIPE NCC Speakers

To request a RIPE NCC speaker for your event, please contact: speaker@ripe.net

A list of topics that the RIPE NCC can provide speakers for is available at:
www.ripe.net/meetings/ncc-speakers.html

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