GLOSSARY

32-bit ASN – 32-bit Autonomous System Numbers
32-bit Autonomous System Numbers (ASNs) are an update to the original 16-bit ASN format. 32-bit ASNs (also referred to as ASN32s, four-byte ASNs or four-octet ASNs) represent an expansion of the existing ASN numbering space.

AfNOG – Africa Network Operators' Group
An educational and operational forum for the coordination and dissemination of technical information related to backbone/enterprise networking technologies and operational practices in Africa.
www.afnog.org

AFRINIC – African Network Information Center
The Regional Internet Registry (RIR) serving Africa and some countries located in the Indian Ocean.
www.afrinic.net

Aggregation
This refers to the distribution of public Internet addresses in a hierarchical manner, permitting the "summarisation" (or aggregation) of routing information and limiting the number of routing entries.

Allocation
The range of addresses reserved for a Local Internet Registry (LIR) for sub-allocation and assignment to End Users or to the LIR's own network.

APNG – Asia Pacific Networking Group
An organisation that aims to promote the Internet and the coordination of network inter-connectivity in the Asia Pacific region.
www.apng.org

APNIC – Asia Pacific Network Information Centre
The Regional Internet Registry (RIR) serving the Asia Pacific region.
www.apnic.net

APRICOT – Asia Pacific Regional Internet Conference on Operational Technologies
A forum for key Internet players in the Asia Pacific region to learn from their peers and the global Internet community.
www.apricot.net

ARIN – American Registry for Internet Numbers
The Regional Internet Registry (RIR) serving North America and parts of the Caribbean.
www.arin.net

ASO – Address Supporting Organization
One of the supporting organisations required by the ICANN bylaws. The ASO reviews and develops recommendations on IP address policy and advises the ICANN Board on these matters.
www.aso.icann.org

ASO AC – Address Supporting Organization (ASO) Address Council (AC)
The ASO AC oversees recommendations on IP address policy, including the management of policy development activities and appointments to the ICANN Board of Directors.
See also: NRO Number Council (NC).
aso.icann.org/ac

ASO MoU – Address Supporting Organization (ASO) Memorandum of Understanding (MoU)
A set of principles that ICANN and the Regional Internet Registries (RIRs) use in forming and operating the ASO.
aso.icann.org/documents/memorandum-of-understanding-1999/

Assignment
A block of address space that is registered for a specific purpose, either for an End User or for a Local Internet Registry's (LIR) network infrastructure.

AW – Assignment Window
The maximum number of addresses that can be assigned by Local Internet Registry (LIR) to its own network(s) or to an End User or organisation without approval by the Regional Internet Registry (RIR).

AS – Autonomous System
A group of IP networks, operated by one or more network operators, that has a single and clearly defined external routing policy.

ASN – Autonomous System Number
A unique number associated with an Autonomous System (AS) that is used in the exchange of exterior routing information and as an identifier of the AS itself.

BGP – Border Gateway Protocol
An Internet protocol commonly used within and between Internet Service Providers (ISPs).

BoF – Birds of a Feather
Informal group discussions on topics of specialised interest.

Bogon
An IP packet that claims to be from IP address space reserved by the Internet Assigned Numbers Authority (IANA) or a delegated Regional Internet Registry (RIR). Areas of unallocated address space that are reserved for private or special use are called "bogon space".

ccTLD – country code Top-Level Domain
The Top-Level Domain (TLD) corresponding to a country, territory, or other geographic location (.nl for example.)

Certification
See Resource certification (RPKI).

CIDR – Classless Interdomain Routing
The addressing architecture that replaced Classful IP addressing in 1993. CIDR enables blocks of Internet number resources to be divided and allocated efficiently by allocating only the amount of address space that is actually needed.
www.ripe.net/ip-addressing

Classful IP Addressing
The addressing architecture that was used to allocate Internet number resources until 1993. It was replaced by Classless Interdomain Routing (CIDR), which enables more efficient assignment of Internet number resources.

DNS – Domain Name System
A distributed database of information that translates a domain name to an IP address. It also lists the mail servers accepting email for each domain.

DNSMON – DNS Monitoring
A RIPE NCC service that provides a comprehensive, objective and up-to-date overview on the service quality of root servers, as well as some participating country code Top Level Domains (ccTLDs), Top Level Domains (TLDs) and tier-1 ENUM domains.
dnsmon.ripe.net

DNSSEC – DNS Security
A technology that provides Domain Name System (DNS) data integrity and authentication through the use of cryptographic digital signatures.

End User
An entity receiving IP address assignments exclusively for use in operational networks and not for reassignment to other organisations.

ENOG - Eurasia Network Operators' Group
ENOG is the regional forum in which Internet experts concerned with the core operational issues of the Internet can share knowledge and expertise on issues unique to the Russian Federation, CIS and Eastern Europe.
www.enog.org

ENUM
The Internet Engineering Task Force (IETF) protocol that maps E.164 telephone numbers to Internet services using the DNS.

gTLD – generic Top-Level Domain
Top-Level Domains (such as .com, .net, .edu) that are not associated with country codes. They are generally privately owned and managed, and any individual or organisation can apply through ICANN to establish a new gTLD.

Internet Architecture Board (IAB)
The IAB is an Internet Engineering Task Force (IETF) committee and an advisory body of the Internet Society (ISOC). Its responsibilities include architectural oversight of IETF activities, Internet Standards and the appointment of the Request for Comment (RFC) Editor.
www.iab.org

Internet governance
Internet governance is the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures and programmes that shape the evolution and use of the Internet.
www.ripe.net/info

IANA – The Internet Assigned Numbers Authority
IANA is a set of functions that covers the global coordination of the DNS Root, IP addressing and other Internet protocol resources. ICANN is currently contracted to carry out the IANA functions.
www.iana.org

ICANN – Internet Corporation for Assigned Names and Numbers
The organisation responsible for, among other duties, distributing IP address space to the Regional Internet Registries (RIRs).
www.icann.org

IETF – Internet Engineering Task Force
An international community of network designers, operators, vendors and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet.
www.ietf.org

IGF – Internet Governance Forum
A global forum to discuss public policy matters and other issues related to the global deployment of the Internet. It was set up based on the outcomes of the World Summit on Information Society (WSIS).
www.intgovforum.org

IP address - Internet Protocol address
A unique numerical address used to identify a particular piece of hardware connected to the Internet. IP address serves two principal functions: host or network interface identification and location addressing.

IPv4 – Internet Protocol version 4
A method of identifying IP numbers as 32-bit numbers usually expressed as four octets. Each octet is expressed as a number between 0 and 255. For example, 207.142.131.235.
www.ripe.net/rs/ipv4

IPv4 exhaustion
The term used to describe the depletion of the pool of available IPv4 address space. The Internet Assigned Numbers Authority's (IANA) pool of IPv4 address space was exhausted on 3 February 2011.

IPv6 – Internet Protocol version 6
A method of identifying IP numbers as 128-bit numbers in eight 16-bit pieces using hexadecimal values.
www.ripe.net/rs/ipv6

IPv6ActNow
The www.IPv6ActNow.org website offers information, news, advice, links and testimonials for all stakeholders on how to deploy IPv6. IPv6ActNow is operated by the RIPE NCC.
www.ipv6actnow.org

IPv6 RIPEness
A rating system which awards stars to RIPE NCC members depending on indicators of IPv6 preparedness.
ipv6ripeness.ripe.net

IRR – Internet Routing Registry
A collection of routing policy databases that use the Routing Policy Specification Language (RPSL).

ISOC – The Internet Society
A membership organisation, providing leadership in addressing issues that confront the future of the Internet. It is also responsible for providing administrative support to the IETF.
www.isoc.org

ISP – Internet Service Provider
A person or organisation that provides an End User with access to the Internet.

IXP – Internet Exchange Point
A physical infrastructure that allows different Internet Service Providers (ISPs) to exchange Internet traffic between their networks (Autonomous Systems) by means of mutual peering agreements that allow traffic to be exchanged.

K-root
The RIPE NCC operates K-root, one of the world's 13 root name servers that implement the root name space domain for the Domain Name System (DNS). A root name server is a DNS server that answers requests for the root name space domain and redirects requests for a particular Top-Level Domain (TLD) to its name servers.
k.root-servers.org

LACNIC – Latin American and Caribbean Network Information Center
The Regional Internet Registry (RIR) serving the Latin America and Caribbean region.
www.lacnic.net

LIR – Local Internet Registry
A member of a Regional Internet Registry (RIR). The RIPE NCC refers to most of its members as LIRs. An LIR distributes IP addresses to End Users and/or uses them in its own infrastucture.

LIR Portal
The secure web interface that enables RIPE NCC members (LIRs) to view and maintain their data and request Internet number resources from the RIPE NCC.
lirportal.ripe.net

MENOG – Middle East Network Operators Group
A forum for network operators to identify areas of cooperation in the Middle East region and to exchange experience and knowledge.
www.menog.net

Multihomed
A multihomed host is one that is connected to two or more networks or has two or more network addresses.

Name server
A server that resolves Internet domain names into IP addresses and vice-versa.

NANOG – North American Network Operators Group
An educational and operational forum for the coordination and dissemination of technical information related to backbone/enterprise networking technologies and operational practices in the North American region.
www.nanog.org

nic–hdl – Network Information Centre (NIC) handle
A unique alpha-numeric character sequence that represents an individual or role in the databases maintained by Network Information Centres (NICs) and Regional Internet Registries (RIRs). It references contact details for a specific person or team.

NRO – Number Resource Organization
The NRO is made up of the five Regional Internet Registries (RIRs), with the CEOs of each RIR forming its Executive Council (EC). Its main roles are to protect the unallocated number resource pool, to promote and protect the bottom-up policy development process and to act as a focal point for Internet community input into the RIR system.
www.nro.net

NRO NC – Number Resource Organization (NRO) Number Council (NC)
The NRO NC is a group of 15 individuals selected by the five RIR communities (three from each region). It carries out the role of the Address Supporting Organization (ASO) Address Council (AC)
www.nro.net/about/number-council.html

rDNS – Reverse DNS
A database of information that translates an IP address to a domain or a host name.

Resource certification (RPKI)
The process of linking a digital "resource certificate" to an Internet number resource using Public Key Infrastructure (PKI) principles. This provides validatable proof that the associated resources have been legimately registered by the signing RIR. Resource certification is based on the Internet Engineering Task Force (IETF) standards, as discussed in the Secure Inter-Domain Routing (SIDR) Working Group. The primary goal is to make Internet routing more robust and secure.

RESTful (Representational State Transfer)
A RESTful web service (also called a RESTful web API) is a web service implemented using HTTP and the principles of REST.
See also: WEIRDs

RLCM – Resource Life Cycle Management
Resource Life Cycle Management refers to the way in which the RIPE NCC manages the different processes associated with the allocation, assignment, registration and return of Internet number resources. The resource life cycle consists of four phases: Requesting, Monitoring, Changing and Closing.

Reverse Delegation
See Reverse DNS (rDNS).

RFC – Request for Comment
A document series of the Internet Engineering Task Force (IETF) that focuses on concepts, networking and Internet protocols.

RIPE – Réseaux IP Européens
A collaborative forum open to all parties interested in wide area IP networks. The objective of RIPE is to ensure the administrative and technical coordination necessary to enable the operation of the Internet within the RIPE NCC service region. Although similar in name, the RIPE NCC and RIPE are separate entities.
www.ripe.net/ripe

RIPEstat
A RIPE NCC service that provides users with information on a specific Internet number resource (IP address, prefix or ASN) from a variety of data sources. The information is provided as visualisations which can be embedded on a website. Results are also available through a scriptable data API.
stat.ripe.net

RIPE Atlas
A RIPE NCC service that deploys thousands of small USB-powered probes to hosts and sponsors throughout the world in order to collect data and create a single large and extensive live Internet measurement network.
atlas.ripe.net

RIPE community
The collective name for the individuals, organisations and governments who have an interest in how the Internet operates.

RIPE Database
A public database that contains information about allocations and assignments of IP address space, Internet routing, and related objects in the RIPE NCC service region. It was formerly known as the RIPE Whois Database or the Whois Database.

RIPE Document
Any document published in the RIPE Document Store. These documents detail policies, projects, BCPs and RIPE NCC organisational documents. All RIPE Documents are available to the public.
www.ripe.net/ripe/docs

RIPE Labs
A platform created and maintained by the RIPE NCC for network operators, developers and industry experts to expose, test and discuss innovative Internet-related tools, ideas and analyses that can benefit the RIPE community and RIPE NCC members. It is the place to present research, showcase prototypes, share operational experience and exchange ideas.
labs.ripe.net

RIPE Meeting
Twice-yearly meetings where the RIPE NCC, RIPE community, governments, regulators, key industry players and other interested parties meet to develop policy and exchange ideas and experiences.
www.ripe.net/ripe/meetings

RIPE NCC – RIPE Network Coordination Centre
The Regional Internet Registry (RIR) serving Europe, the Middle East and parts of central Asia. The RIPE NCC is the secretariat for the RIPE community, this includes organising RIPE Meetings and providing administrative support to RIPE Working Groups.
www.ripe.net

RIPE NCC Access
RIPE NCC's single sign-on service that allows users to access its various services securely using one unified login and password.

RIPE NCC Regional Meeting
RIPE NCC Regional Meetings are free events that provide a forum for RIPE NCC members, local governments, key players in the local and global Internet industry and the RIPE NCC staff to discuss issues relevant to a specific region.
www.ripe.net/meetings/regional

RIPE NCC Roundtable Meeting for Governments and Regulators
These meetings provide a forum to discuss Internet management issues relevant to governments, regulators and industry partners. Attendance is by invitation only.
www.ripe.net/meetings/roundtable

RIPE PDP – RIPE Policy Development Process
The RIPE PDP formally tracks input into and feedback on the policies proposed by the RIPE community. The PDP is open, transparent and consensus based.
www.ripe.net/pdp

RIR - Regional Internet Registry
An organisation (such as the RIPE NCC) overseeing the allocation and registration of Internet number resources within a particular region of the world. Resources include IP addresses (IPv4 and IPv6) and Autonomous System Numbers (ASNs). The Internet Assigned Numbers Authority (IANA) allocates these resources to each RIR. RIRs also maintain public databases of their registration information.

There are currently five RIRs in operation:

- AFRINIC - serving Africa
- APNIC - serving the Asia Pacific region
- ARIN - serving Canada, many Caribbean and North Atlantic islands and the United States
- LACNIC - serving Latin America and the Caribbean
- RIPE NCC - serving Europe, the Middle East and parts of Central Asia

RIS – Routing Information Service
The RIS collects Border Gateway Protocol (BGP) routing information at several major exchange points in near real time and stores it in a database.
www.ris.ripe.net

Routing Policy
A set of agreements on the traffic routed through multiple Internet Service Provider (ISP) networks.

Routing Registry
A public database of routing policy details, routes and their aggregates, local topology between Autonomous Systems (AS) and network components, such as routers.

SANOG – South Asian Network Operators Group
A cooperational and educational forum bringing together operators in the South Asia region to discuss operational issues and technologies of interest.
www.sanog.org

Spoofing
A spoofing attack is a situation in which a person, a piece of software or a hardware device successfully masquerades as another by falsifying data and thereby inflicting damage or gaining an illegitimate advantage.

TLD – Top-Level Domain
The most general part of a domain name, commonly identified as the letters following the final dot of its name.

Transition Mechanisms
Methods of transitioning from IPv4 to IPv6. The IETF's RFC 6180 "Guidelines for Using IPv6 Transition Mechanisms during IPv6 Deployment" offers an overview.
tools.ietf.org/rfc

WEIRDS - Web Extensible Internet Registration Data Service
An IETF Working Group formed in 2012 whose purpose is to broaden the use of RESTful web services by achieving simple and common Uniform Resource Identifier (URI) patterns and responses amenable to all Internet number resource and domain name registries.

WG – Working Group
RIPE Working Groups are formal groups formed by the Internet community to discuss relevant issues, developments and to propose policies. The RIPE WGs meet twice a year at RIPE Meetings and interact year-round using RIPE Mailing Lists.
www.ripe.net/ripe/wg

WSIS – World Summit on Information Society
The WSIS took place in Geneva in December 2003 and in Tunis in November 2005. The objective of the first phase was to develop a statement of political will and establish the foundations for an Information Society for all. The objective of the second phase was to put the first phase planning into motion as well as to find solutions and reach agreements in the fields of Internet governance. The WSIS has now ended. The Internet Governance Forum (IGF) was established based on some of the outcomes of the WSIS process.
www.itu.int/wsis