

2025-01 ASN requirements revisited

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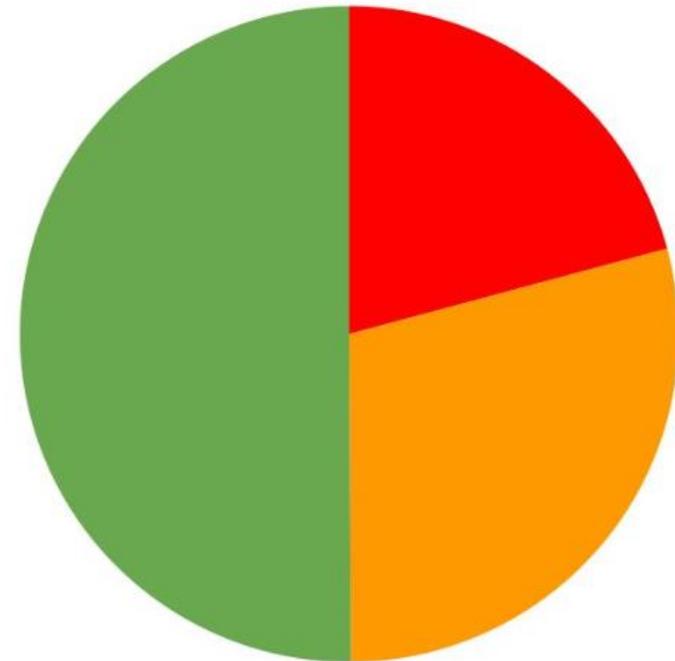
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Motivation

- There are many legitimate reasons to run a single homed ASN
- 32-bit ASNs are general use and are no longer a scarce resource.
- Half of the ASNs allocated by RIPE do not meet the requirements.
 - According to RIPE NCC*
- Current policy is unenforceable in practice
- Writing a policy that is/can be actually followed in practice.

Usage all ASNs (~38,500)

● Not Visible ● Single-Homed ● Multi-Homed



Current policy text

2.0 Assignment Criteria

In order to help decrease global routing complexity, a new AS Number should be used only if a new external routing policy is required, see RFC1930.

A network must be multihomed in order to qualify for an AS Number.

When requesting an AS Number, the routing policy of the Autonomous System must be provided. The new unique routing policy should be defined in RPSL language, as used in the RIPE Database.

The RIPE NCC will assign the AS Number directly to the End User upon a request properly submitted to the RIPE NCC either directly or through a sponsoring LIR. AS Number assignments are subject to the policies described in the RIPE NCC document entitled “Contractual Requirements for Provider Independent Resource Holders in the RIPE NCC Service Region”.

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New policy text - snip

2.0 Assignment Criteria

LIRs and End Users may be issued the first Autonomous System Number (ASN) upon request without justification.

LIRs and End Users may be issued additional ASNs.

Requirements for additional ASNs are:

- A unique external routing policy for the Autonomous System must be provided. The uniqueness of the routing policy includes the announced prefixes.
- The Autonomous System must peer with a third party.

When requesting an AS Number to be visible in the Global Routing Table (GRT), the routing policy of the Autonomous System must be provided. The new unique routing policy should be defined in RPSL language, as used in the RIPE Database. When requesting an AS Number not to be visible in the GRT, documentation on the non-visible purpose (e.g., a reference to the assigned IXP LAN prefixes) must be provided.

Reasonable periodic use cases may be allowed. A benefit statement for such must be provided.

The requester must fulfil the criteria for which the application was approved within six months after the ASN is issued.

Approval of an additional ASN may depend on the fulfilment of criteria and up-to-date documentation for existing ASNs.

In case of an ASN visible in the GRT, RIPE NCC verifies that the ASN fulfils the criteria by checking the GRT.

In case of an off-GRT ASN, RIPE NCC may request operational proof that the criteria are fulfilled. Failing to provide sufficient proof is considered as not fulfilling the criteria.

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Edge cases considered

- (legal) entities with very diverse branches. (SpaceX, Starlink)

Arguments supporting the proposal

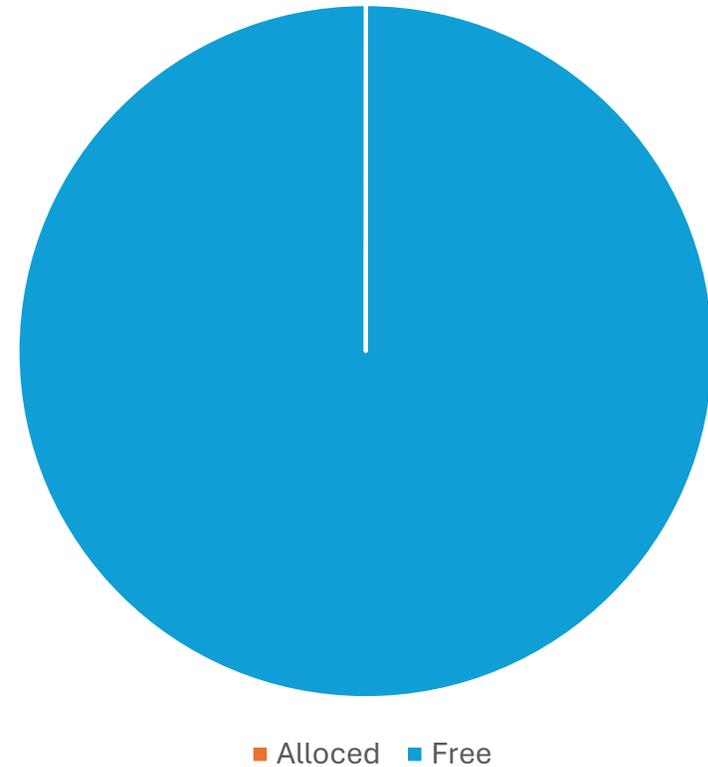
ASNs:

- There are 4 294 967 296 32bit ASNs
- IANA has allocated 402 332 ASNs to RIRs
- Which is 0,01 %

While:

- RIRs have allocated 88 400 ASNs
- Which is 0,002 %

IANA 32bit ASNs allocated



Arguments against the proposal

- Increase of complexity in the GRT
- New technologies built on easy availability of AS numbers could exponentially increase the request rate for new ASNs

TLDR

- You are entitled to the first ASN (no questions asked)
- Multi-homed requirement is gone
- You need to peer with a third-party

BUT:

- You have to follow the documentation that YOU have provided to RIPE NCC (or update it)
- You have 6 months to do so

Open questions

- What to do after 6 months?
- Should there be a higher responsibility for LIRs?