

Getting the Most from Number Resources



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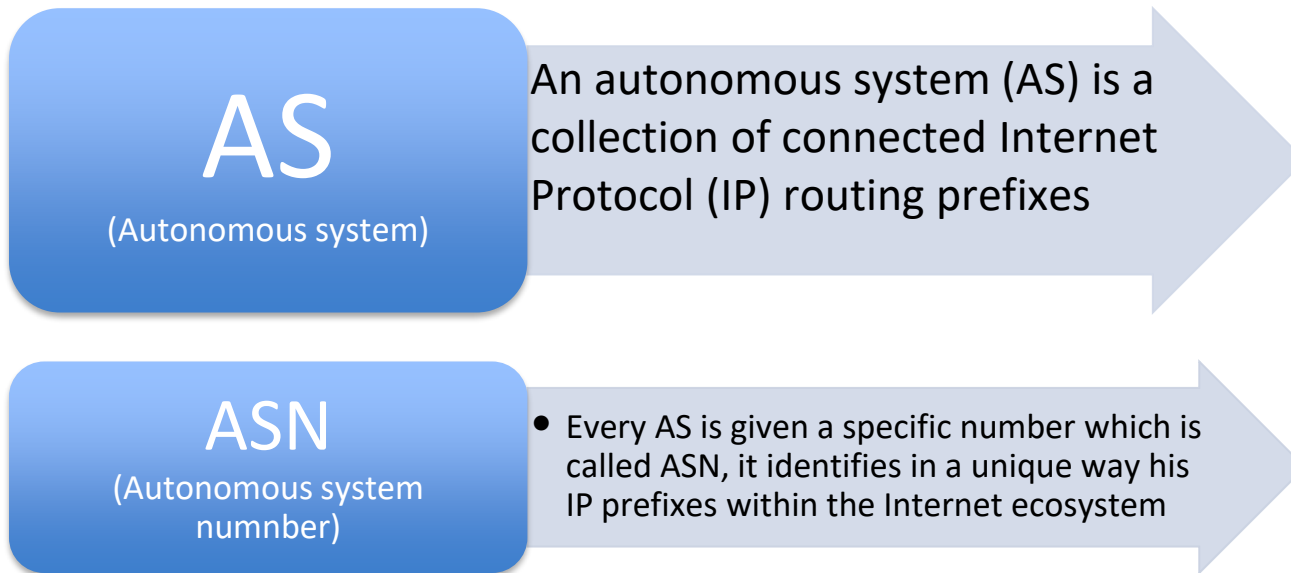
Own
Resources



Which Resources are we talking about?

- Internet resources
 - IPv4 Addresses
 - IPv6 Addresses
 - ASN (Autonomous System Numbers)

Two important definitions



[https://en.wikipedia.org/wiki/Autonomous_system_\(Internet\)](https://en.wikipedia.org/wiki/Autonomous_system_(Internet))

Private resources vs public resources

RFC 1918

- Address Allocation for Private Internets
(in the next slides we explain further)

&

RFC 1930

- Guidelines for creation, selection, and registration
of an Autonomous System (AS)
Section 10: “Reserved AS
Numbers”

64512 through 65535

Private resources vs public resources

RFC 1918 (Feb 1996) titled:

“Address Allocation for Private Internets”

.... But the concept is even older [1]
RFC 1597 (Marzo 1994)...

[1] the origin, not the allocation

Out of Curiosity: Why those addresses?

- 10.0.0.0/8: Used by ARPANET that was shutdown during that time. Mr Jon Postel considered good idea to use this very same block
- 172.16.0.0/12: lowest space available in the Class B space
- 192.168.0.0/16: lowest space available in the Class C space

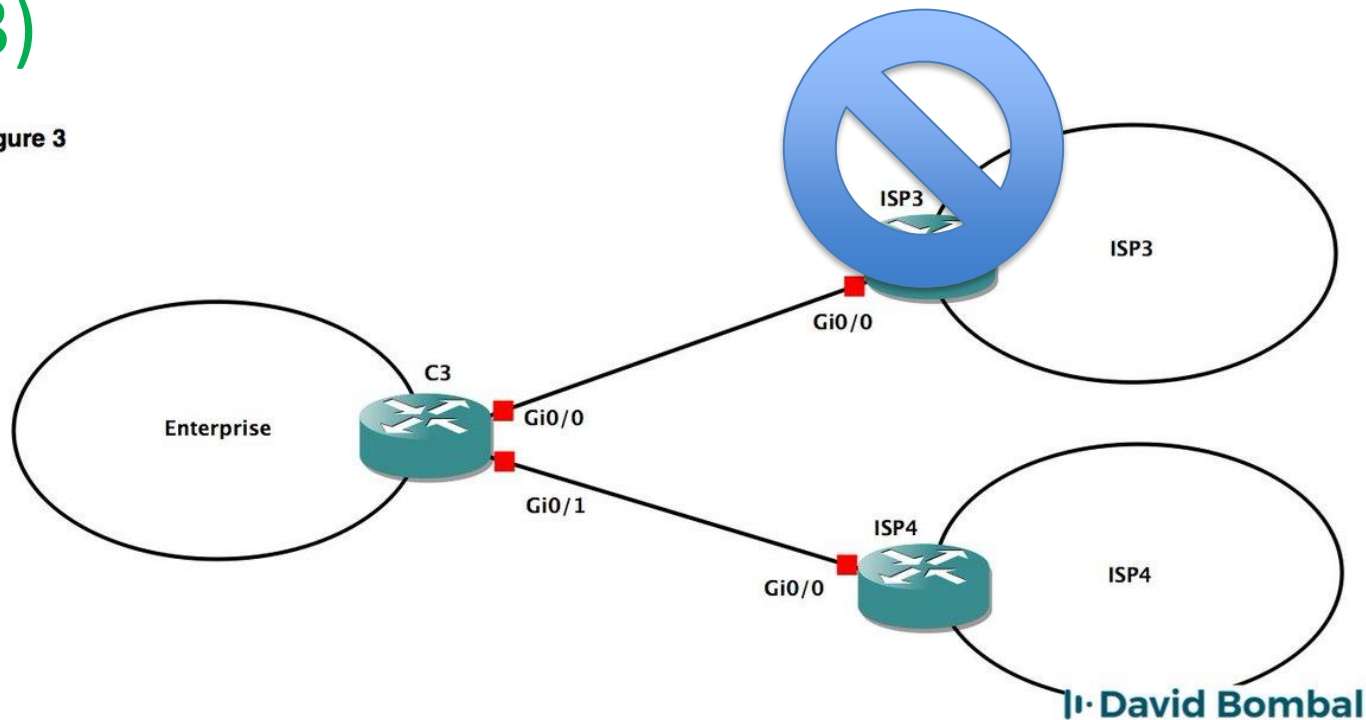
Maybe you are aware of this but as a reminder

- All resources assigned by RIRs (such as ARIN & LACNIC) are usable in Internet (public/global)

Importance of numbering capacity in operators (1/5)

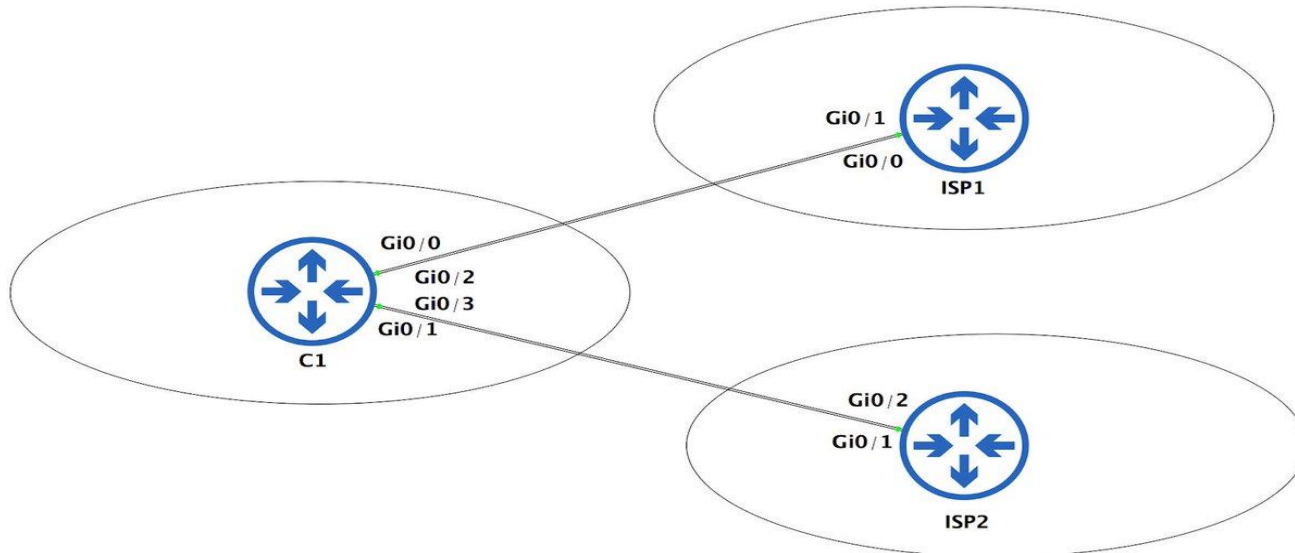
- You can “easily” change your upstream provider (such as: I do not want to use anymore ISP 3)

Figure 3



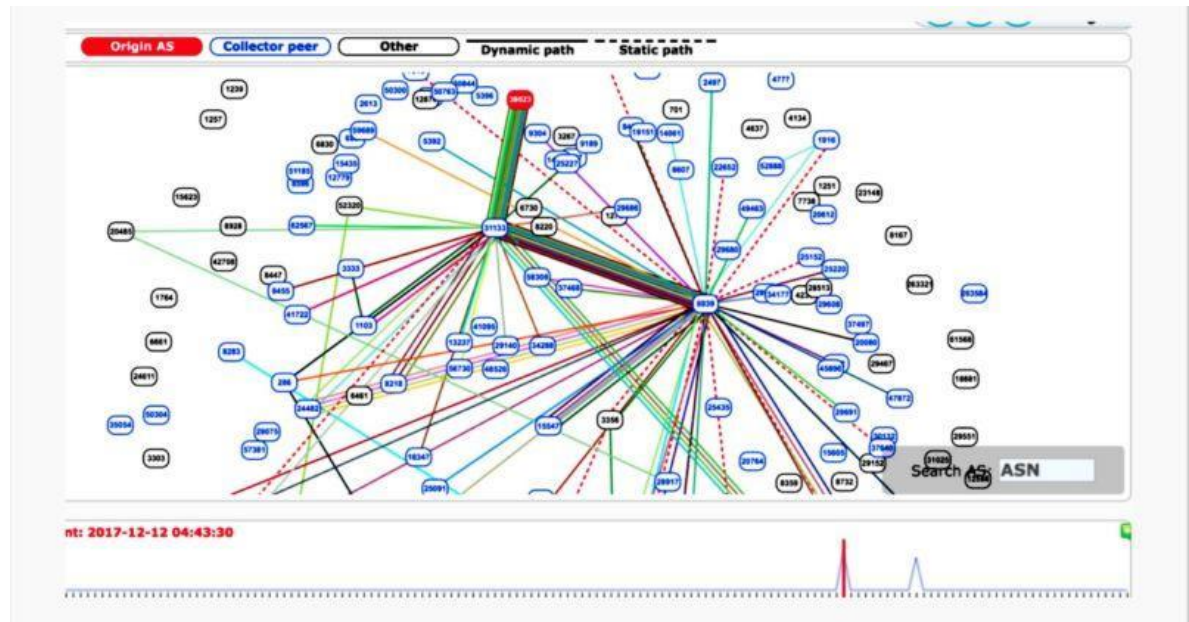
Importance of numbering capacity in operators (2/5)

- Having your own resources is the optimal way for doing multi-homing



Importance of numbering capacity in operators (3/5)

- Your organization will appear in the Internet ecosystem



Importance of numbering capacity in operators (4/5)

- When CDNs measure traffic they measure bytes by Autonomous System Number (ASN).



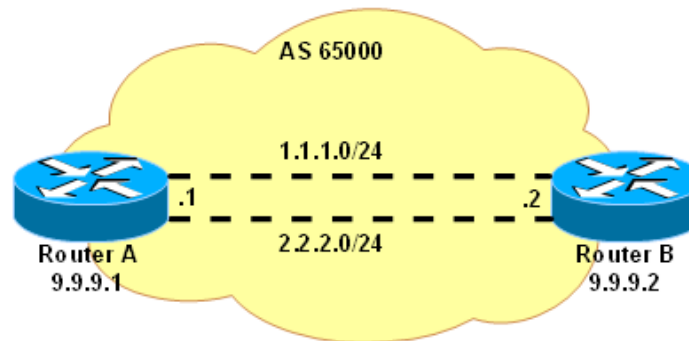
Importance of numbering capacity in operators (5/5)

- Please note that LACNIC has a policy for “critical infrastructure” such as ccTLDs and IXPs) [1]

IPv4 Addresses Reserved for Critical Infrastructure

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- If you need to connect to other organizations the most convenient way is by having your own resources



[1] <https://prensa.lacnic.net/news/en/policies/ipv4-addresses-reserved-for-critical-infrastructure>

Thanks !



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