



32-bit ASN Take-Up Report

Policy Adjustments Needed?

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Slow Take-Up of 32-bit ASN

2009 Q1 Statistics

- Out of the **521** assigned ASNs we know that:
 - **385** were 16-bit* requested from start
 - * reasons were supplied during first request
 - **48** were 16-bit (swapped from 32-bit to 16-bit)
 - **50** were 32-bit assigned
 - **38** pending



Why 32-bit Was Exchanged For 16-bit:

- **37%** - their network devices (or part of them) do not support 32-bit ASNs, hardware is outdated, no update is available
- **21%** - the OS version on the router which will act as border router doesn't support 32-bit ASN yet



Why 32-bit Was Exchanged For 16-bit: Other reasons

- **22%** - the upstream provider does not support 32-bit ASNs, device is not yet available
- **13%** - one (or more) of the peering partners do not support 32-bit ASNs
- **4%**- the main transit provider does not support 32-bit ASNs
- **3%** - the Internet Exchange does not support 32-bit ASNs

The merits of these considerations might be challenged.
In these instances, the RIPE NCC provides guidance.



Current Policy Statement – Regional

- As of 1 January 2009, all assignments will be 32-bit only ASN by default unless a 16-bit ASN is specifically requested
- From 1 January 2010, RIPE NCC starts using an undifferentiated pool (16-bit and 32-bit only)
- Policy is not specific on how to assign by January 1st 2010

RIPE NCC proposes to continue the current way of assigning after 1 January 2010

(All assignments will be 32-bit only ASN by default unless a 16-bit ASN is specifically requested)



“Undifferentiated Pools”



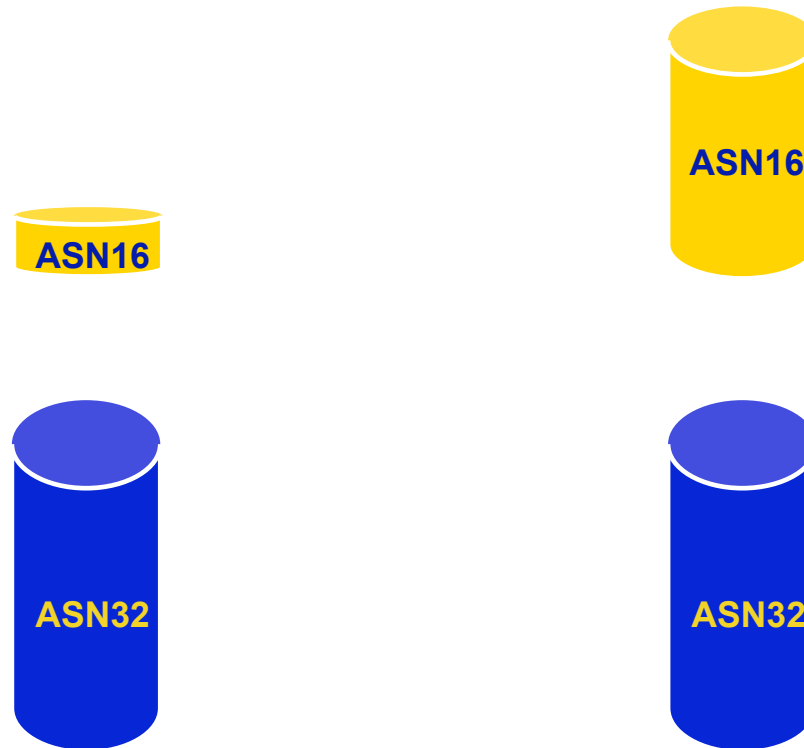
Until 31 December 2009



From 1 January 2010



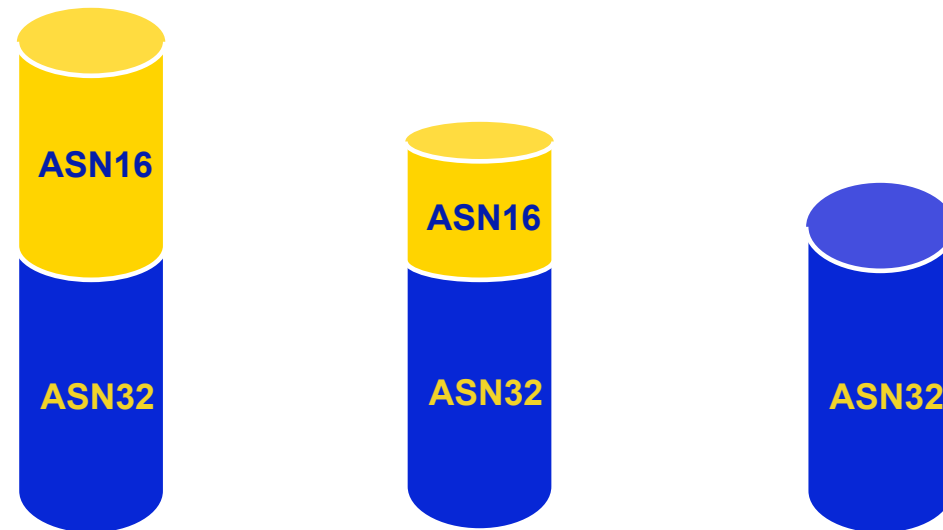
Refilling “Differentiated Pools”



Until 31 December 2009



Refilling “Undifferentiated Pools”



From 1 January 2010

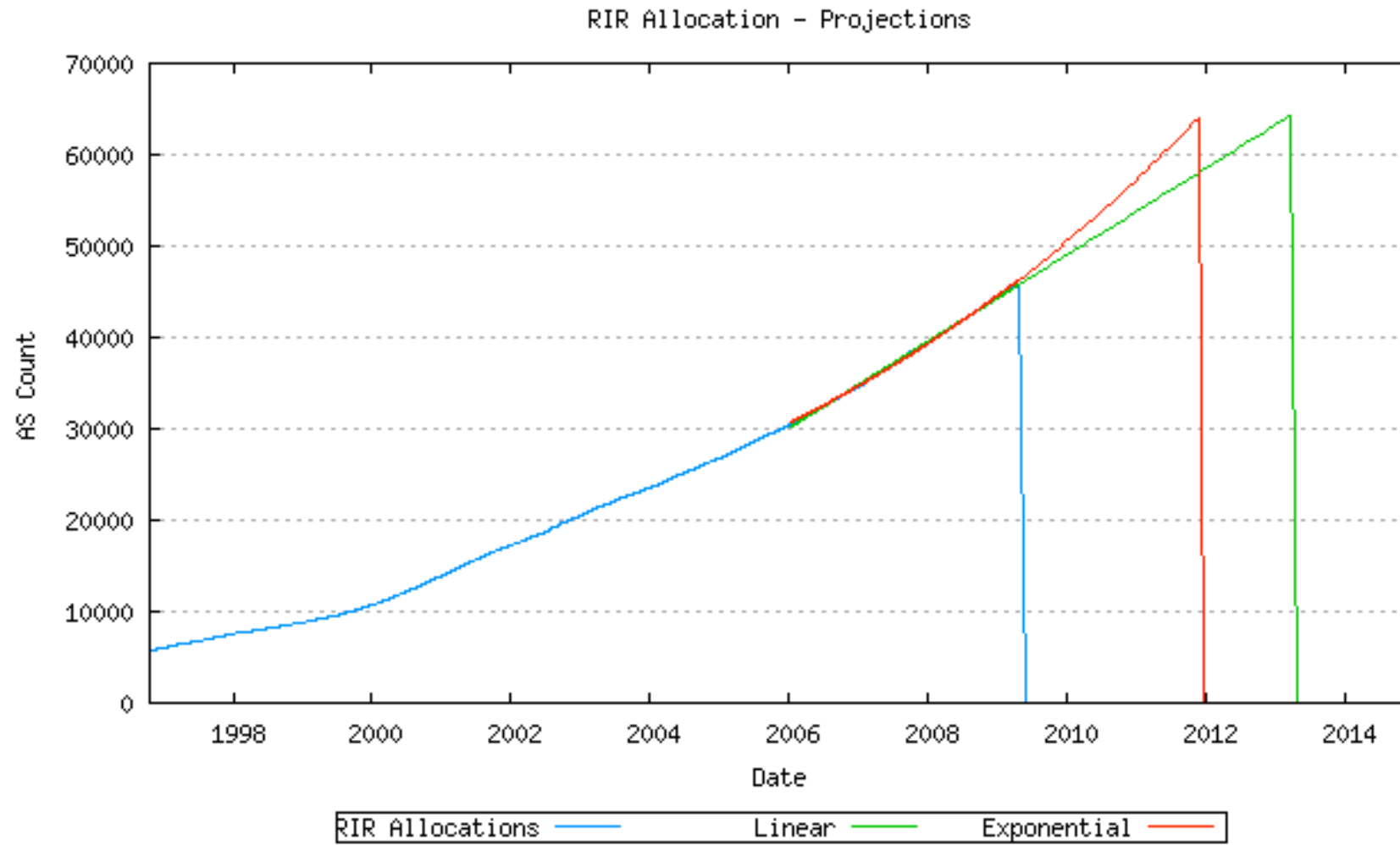


Current Policy Statement - Global

- Until 31 December 2009, RIRs can receive two separate ASN blocks from the IANA - one for 32-bit only ASNs and one for 16-bit ASNs
- As of 1 January 2010, the IANA will operate ASN allocations from an undifferentiated 32-bit ASN allocation pool
- Risk: The RIPE NCC will not qualify for new 16-bit ASN blocks due to the low usage rate of 32-bit only blocks

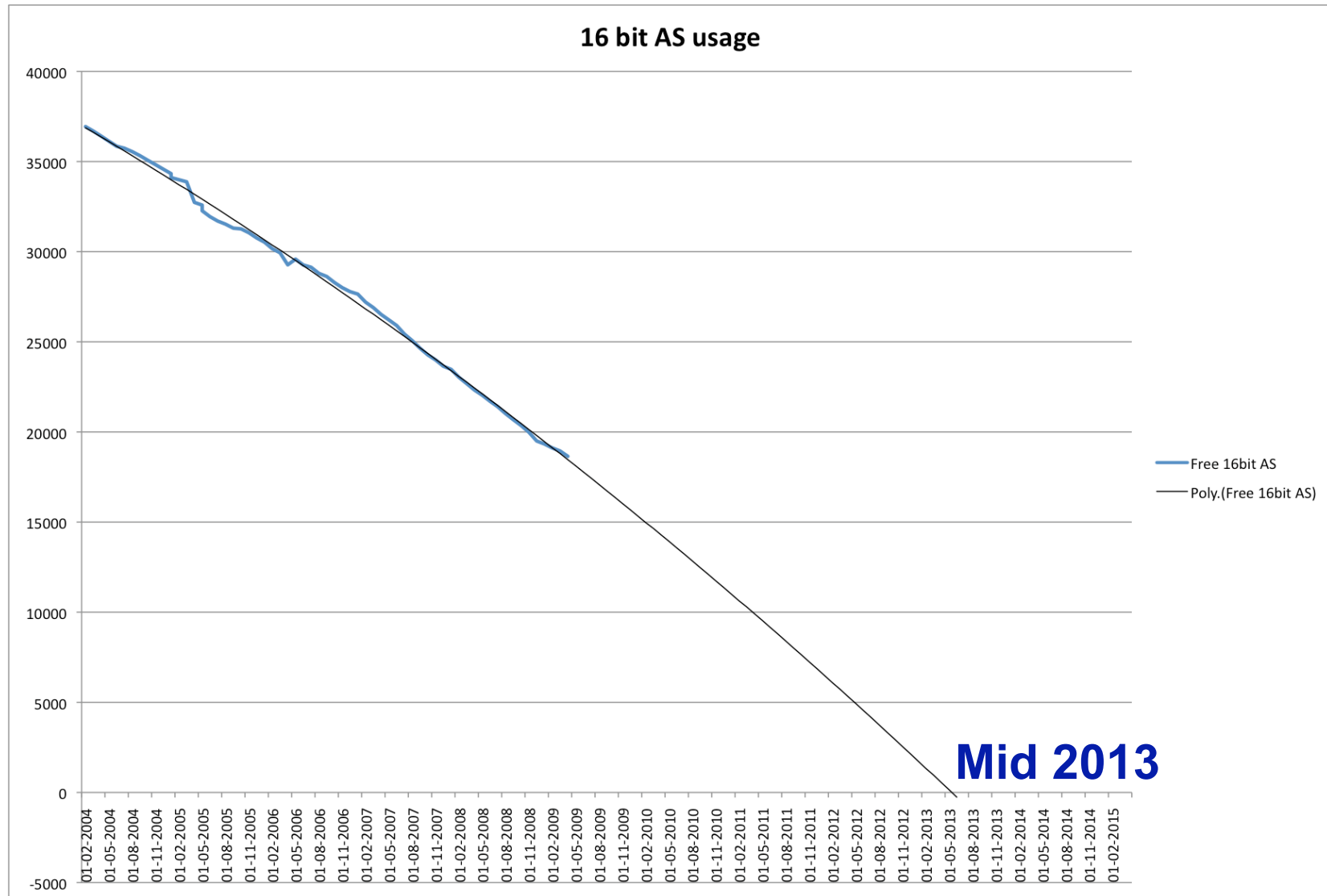


16-bit ASN Allocation History and Projections





ASN Allocation History and Projections





Summary So Far

- The current policy was crafted around operational incentive and an earlier run out date
 - Fact 1: Operationally our members don't seem to be ready (or maybe just lazy?)
 - Fact 2: More 16-bit left than previously projected

Do we need to sync policy with current facts?



Alternatives

1. Do nothing
2. Extend global policy by 12 months
3. Run out of 16-bit ASN globally



1. Do Nothing

- Pros
 - Easy
 - Large incentive for members to get ready for ASN32
- Cons
 - Angry members
 - **Operational issues**
 - Holding back *a large amount* of 16-bit ASN could be perceived as artificial and a barrier for new entrants



2. Extend Global Policy by 12 Months

- Pros
 - Addresses all cons on the previous slide for a year
 - No substantial change to the policy, just change one date
- Cons
 - Needs policy action by all RIRs
 - Less incentive to get ready for ASN32
 - May end up here again in another 12 months



3. Run Out of 16-bit ASN Globally

- Pros
 - Address all issues
- Cons
 - More complex global policy change (may not converge)
 - Least incentive to get ready for ASN32



Other Regions

- LACNIC

- As of 1 January 2010, LACNIC will allocate 32-bit AS Numbers by default. 16-bit AS Numbers **may** be allocated, if available, in response to applications specifically requesting a 16-bit resource and that duly justify the technical reasons why a 32-bit AS number would not be appropriate for its needs. *Proposal stage.*

- ARIN

- Issue raised during open policy hour at last ARIN Meeting
- Proposal being considered to allocate last blocks from the IANA to RIRs



Alternatives

1. Do nothing
2. Extend global policy by 12 months
3. Run out of 16-bit ASN globally
4.