

逆引き/IPアドレス

JPNIC 技術部 小山祐司

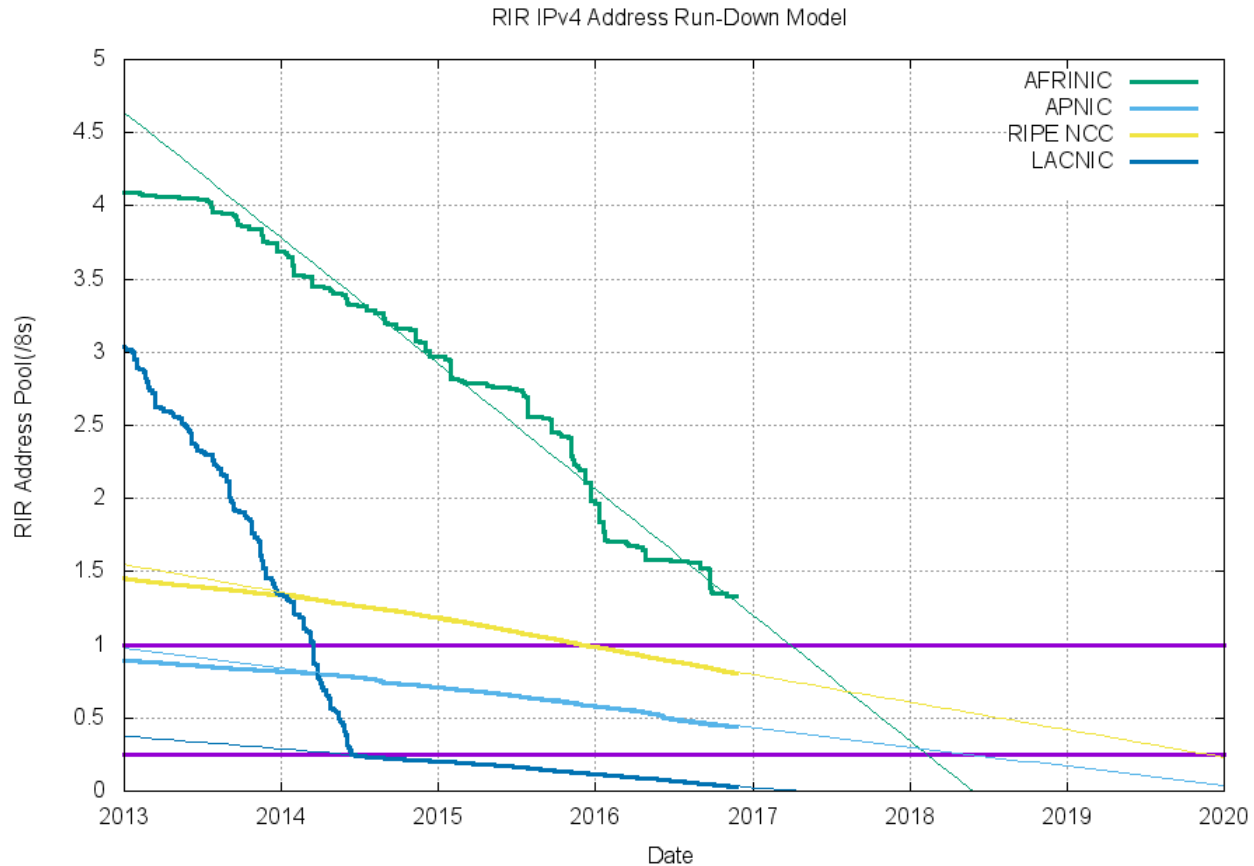


一般社団法人 日本ネットワークインフォメーションセンター

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IPアドレス

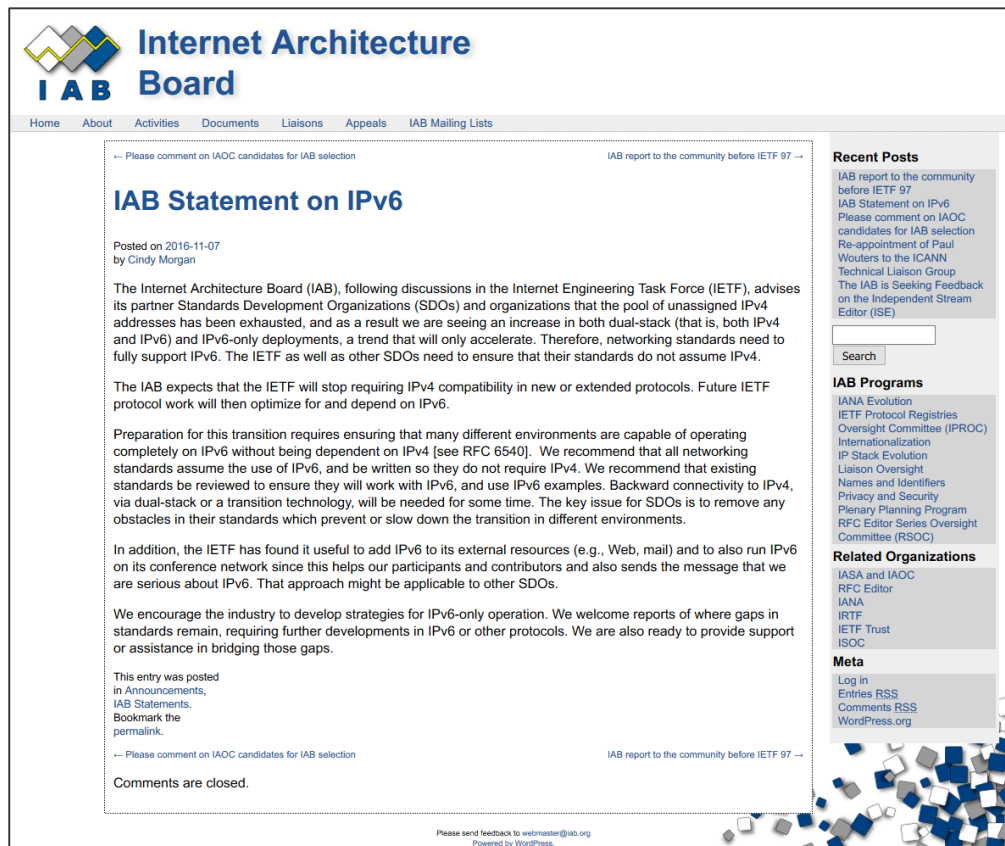
IPv4アドレス在庫枯渇



<http://www.potaroo.net/tools/ipv4/index.html>

IAB Statement on IPv6

v6への移行を見越した標準化を要請



The screenshot displays the IAB Board website with the following content:

- Header:** Internet Architecture Board logo and navigation menu (Home, About, Activities, Documents, Liaisons, Appeals, IAB Mailing Lists).
- Article Title:** IAB Statement on IPv6
- Metadata:** Posted on 2016-11-07 by Cindy Morgan.
- Text:**
 - The Internet Architecture Board (IAB), following discussions in the Internet Engineering Task Force (IETF), advises its partner Standards Development Organizations (SDOs) and organizations that the pool of unassigned IPv4 addresses has been exhausted, and as a result we are seeing an increase in both dual-stack (that is, both IPv4 and IPv6) and IPv6-only deployments, a trend that will only accelerate. Therefore, networking standards need to fully support IPv6. The IETF as well as other SDOs need to ensure that their standards do not assume IPv4.
 - The IAB expects that the IETF will stop requiring IPv4 compatibility in new or extended protocols. Future IETF protocol work will then optimize for and depend on IPv6.
 - Preparation for this transition requires ensuring that many different environments are capable of operating completely on IPv6 without being dependent on IPv4 [see RFC 6540]. We recommend that all networking standards assume the use of IPv6, and be written so they do not require IPv4. We recommend that existing standards be reviewed to ensure they will work with IPv6, and use IPv6 examples. Backward connectivity to IPv4, via dual-stack or a transition technology, will be needed for some time. The key issue for SDOs is to remove any obstacles in their standards which prevent or slow down the transition in different environments.
 - In addition, the IETF has found it useful to add IPv6 to its external resources (e.g., Web, mail) and to also run IPv6 on its conference network since this helps our participants and contributors and also sends the message that we are serious about IPv6. That approach might be applicable to other SDOs.
 - We encourage the industry to develop strategies for IPv6-only operation. We welcome reports of where gaps in standards remain, requiring further developments in IPv6 or other protocols. We are also ready to provide support or assistance in bridging those gaps.
- Footer:** This entry was posted in Announcements, IAB Statements. Bookmark the permalink. Comments are closed.
- Right Sidebar:** Recent Posts, Search, IAB Programs (IANA Evolution, IETF Protocol Registries Oversight Committee (IPROC), Internationalization, IP Stack Evolution, Liaison Oversight, Names and Identifiers, Privacy and Security, Plenary Planning Program, RFC Editor Series Oversight Committee (RSOC)), Related Organizations (IASA and IAOC, RFC Editor, IANA, IRTF, IETF Trust, ISOC), Meta (Log in, Entries RSS, Comments RSS, WordPress.org).

<https://www.iab.org/2016/11/07/iab-statement-on-ipv6/>

IPv6 in the DNS

v6で問い合わせるリゾルバの割合(AS毎)

Origin AS	Use %	AS NAME
AS15169	31.90%	GOOGLE – Google Inc., USA
AS7018	13.50%	ATT-INTERNET4 – AT&T Services, Inc., USA
AS7922	11.50%	Comcast Cable Communications, LLC, USA
AS36692	3.40%	OPENDNS – OpenDNS, LLC, USA
AS8151	2.70%	Uninet S.A. de C.V., MX Mexico
AS17676	2.40%	GIGAINFRA Softbank BB Corp., Japan
AS4134	1.70%	CHINANET-BACKBONE No.31,Jin-rong Street, China
AS28573	1.60%	CLARO S.A., Brazil
AS9498	1.60%	BBIL-AP BHARTI Airtel Ltd., India
AS3320	1.40%	DTAG Internet service provider operations, Germany
AS2516	1.20%	KDDI KDDI CORPORATION, Japan

<https://labs.apnic.net/?p=875>

lame delegation

逆引きDNSのlame delegation 改善

JPNICの取り組み

- 逆引きDNSのlame delegation(以下lame)を減らす
- lameになっている逆引きゾーンの委任を停止
(45日以上続く場合)

lameによる影響と対策

影響

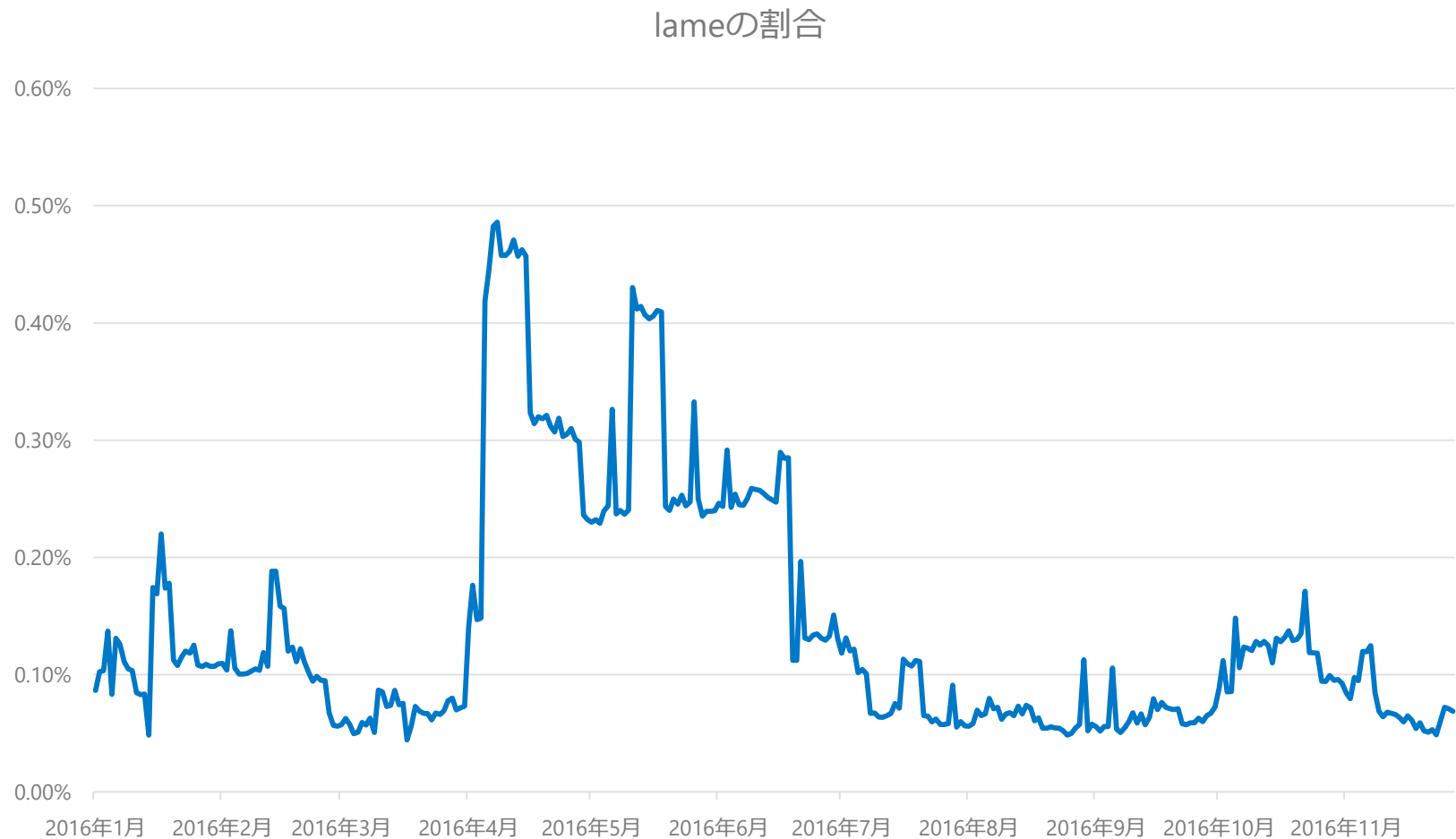
逆引きDNSを利用するアプリケーションの
動作不良・遅延（メール配送やログ解析など）

対策

lameになっているゾーンへの委任を停止

- 45日間続けてSOAの問い合わせに対してAA bit付き回答がない場合、lameと判断、委任停止
 - SOAの権威付き回答があれば委任再開
- 登録・変更申請の時点でlameなら委任停止

逆引きゾーンに占めるlameの割合



逆引きDNSSEC

逆引きDNSSEC

- 2015年11月より登録受付開始
- 登録数は少数
- KSK key-rollover は12月予定

