

# BEHAVE Working Group

IETF 77 – Anaheim  
March, 2010

Chairs:

Dave Thaler, [dthaler@microsoft.com](mailto:dthaler@microsoft.com)

Dan Wing, [dwing@cisco.com](mailto:dwing@cisco.com)

# Note Well

Any submission to the IETF intended by the Contributor for publication as all or part of an IETF Internet-Draft or RFC and any statement made within the context of an IETF activity is considered an "IETF Contribution". Such statements include oral statements in IETF sessions, as well as written and electronic communications made at any time or place, which are addressed to:

- the IETF plenary session,
- any IETF working group or portion thereof,
- the IESG or any member thereof on behalf of the IESG,
- the IAB or any member thereof on behalf of the IAB,
- any IETF mailing list, including the IETF list itself, any working group or design team list, or any other list functioning under IETF auspices,
- the RFC Editor or the Internet-Drafts function

All IETF Contributions are subject to the rules of RFC 5378 and RFC 3979 (updated by RFC 4879).

Statements made outside of an IETF session, mailing list or other function, that are clearly not intended to be input to an IETF activity, group or function, are not IETF Contributions in the context of this notice. Please consult RFC 5378 and RFC 3979 for details.

A participant in any IETF activity is deemed to accept all IETF rules of process, as documented in Best Current Practices RFCs and IESG Statements.

A participant in any IETF activity acknowledges that written, audio and video records of meetings may be made and may be available to the public.



# Logistics

- Note taker and jabber scribe?
- Meeting Materials (Slides, Agenda, etc.)
  - <http://tools.ietf.org/wg/behave/agenda>
- XMPP
  - [behave@jabber.ietf.org](mailto:behave@jabber.ietf.org)
- Mailing List
  - [behave@ietf.org](mailto:behave@ietf.org)
  - <http://www.ietf.org/mailman/listinfo/behave>

# Session 2, Friday

- 13:00 Agenda, note takers (Chairs, 5)
- 13:05 IETF-3GPP Workshop on IPv6 Migration: Summary and Conclusions (Fred Baker, 5)
- 13:10 IETF77 NAT64 Experiment Report (Simon Perrault, 10)
- 13:20 Scenario 2 and 4: Solutions and Comparisons draft-perkins-sourceipnat (Charles Perkins, 10)
- 13:30 Analysis of 64 Translation draft-penno-behave-64-analysis (Reinaldo Penno, 10)
- 13:40 Re-charter, milestone discussion BEHAVE Wiki (Chairs, 45)
- 15:15 end

# Re-Charter and Milestone

## Chartered and Milestoned Work Items

# Questions to Keep in Mind

- Has the problem been observed already?
- Is problem important for deployments?
- Is it solvable (and worth the cost)?
- Does a solution need to be standardized?
- Energy and people interested in the work?
- <http://trac.tools.ietf.org/wg/behave/trac/wiki/WikiStart>

# Scenarios from Feb-2009 doodle poll (NAT-PT+implement+deploy)

1. An IPv6 network to IPv4 Internet (3+5+7=15)
  - v6v4-xlate, dns64, v6v4-xlate-stateful
2. IPv6 Internet to an IPv4 network (4+5+8=17)
  - xlate-v6v4-stateful, dns64
3. An IPv4 network to IPv6 Internet (2+1+2=5)
4. IPv4 Internet to an IPv6 network (2+6+8=16)
  - v6v4-xlate
5. IPv6 to IPv4 within the same organization (4+3+4=11)
  - v6v4-xlate, dns64, v6v4-xlate-stateful
6. IPv4 to IPv6 within the same organization (2+2+3=7)
  - v6v4-xlate

# Problem: SCTP NAT

- Currently chartered work, due Dec-2009
- draft-ietf-behave-sctpnat
- Need new milestone date

# Re-Charter and Milestone

Chartered Work Items  
(no milestone dates)

# Problem: BEHAVE scenario 3 (An IPv4 network to IPv6 Internet)

- draft-liu-behave-nat46
- draft-huang-behave-pnat
- draft-huang-behave-rfc2767bis
- draft-huang-behave-rfc3338bis
- draft-thaler-6man-unique-v4mapped
- draft-perkins-behave-dpinat
- draft-perkins-sourceipnat

# Problem: BEHAVE scenario 4 (IPv4 Internet to an IPv6 network)

- draft-perkins-behave-dpinat
- draft-perkins-sourceipnat
- draft-xli-behave-dns46-for-stateless
- draft-wing-behave-http-46-relay
- draft-xli-behave-xlate-partial-state
- draft-xli-behave-divi

# Problem: multicast IPv6/IPv4 translation

- Scope: IPv6 senders and IPv4 listeners, or IPv4 senders and IPv6 listeners?  
SSM or ASM?
- draft-venaas-behave-v4v6mc-framework
- draft-jiang-behave-v4v6mc-proxy

# Re-Charter and Milestone

## Un-Chartered Work Items

# Problem: IPv6-only hosts encountering IPv4 address literals

- draft-wing-behave-http-ip-address-literals
- draft-wing-v6ops-v6app-v4server
- draft-wing-behave-learn-prefix

# Problem: avoiding NAT64 with dual-stack host for local networks

- draft-wing-behave-dns64-config
- draft-boucadair-behave-dns-a64
- draft-boucadair-behave-dns64-discovery
- draft-cao-behave-dsdns64
- draft-xu-behave-hybrid-type-prefix

# Problem: avoiding NAT64 with dual-stack hosts for remote networks

- draft-xu-behave-hybrid-type-prefix

# Problem: high availability stateful NAT

- draft-chen-behave-rsnat
- draft-xu-behave-nat-state-sync
- draft-xu-behave-stateful-nat-standby

# Problem: NAT load balancing

- draft-chen-behave-olnat
- draft-wang-behave-nat64-load-balancer
- draft-xu-behave-stateful-nat-standby

# Problem: analysis against NAT-PT

- draft-penno-behave-64-analysis

# Problem: improved traceroute across a translator

- draft-xli-behave-icmp-address

# Problem: large scale NAT

- draft-nishitani-cgn
- draft-shirasaki-nat444
- draft-ietf-v6ops-incremental-cgn

# Problem: problems with shared IP addresses

- draft-ford-shared-addressing-issues
- Adopted by INTAREA Working Group

# Problem: Improving Teredo's peer reachability

- draft-denis-icmpv6-generation-for-teredo

# Problem: IPsec across an IPv6/IPv4 translator

- RFC 3947 is IPsec across a NAT44
- Problem: want to explain IPsec over NAT64?

# Problem: IP address referrals

- draft-carpenter-behave-referral-object-01
- GROBJ BoF

**Problem: SCTP across NAT64**

**END**