

SNAC Router RA Flag

(draft-hui-stub-router-ra-flag)

Jonathan Hui <jonhui@google.com>

What is a SNAC router?

SNAC router provides:

- automatic, permissionless connectivity
- between a stub network and an infrastructure network
- typical intended use: unmanaged networks

Goals:

- Functional parity for devices on stub network
- Infra nodes can discover and connect to stub nodes
- Stub nodes can discover and connect to infra nodes

Core use case:

- 6lowpan networks (multicast bad, incompatible L2)

Why a SNAC router *RA flag*?

SNAC routers route between stub and infrastructure

- This requires IPv6, because we need RA
- There's no equivalent for IPv4

Infrastructure may not have IPv6

In this situation, stub router has to provide IPv6 addressing

Problems:

- What if infrastructure adds IPv6 later?
- M&O bits are supposed to be consistent on a link

Infrastructure vs. Stub prefix

Scenario:

- SNAC router is advertising an on-link prefix
- Infrastructure router enables IPv6
 - Advertises on-link prefix
- SNAC router shouldn't compete
 - withdraws on-link prefix

How does the stub router know that the infrastructure router is an infrastructure router?

- We need a bit in the RA to distinguish

M&O bit consistency

SNAC routers advertise route to stub network in RA

So SNAC router is always sending an RA

So it needs to advertise the same M&O bits as infrastructure

And must advertise the M&O bits seen in other SNAC router RAs

Don't want to *persist* the M&O bits we see in SNAC router RAs

Need to be able to tell the difference.

****NOTE:** we are considering proposing to just not care about this, and that seems like a better approach for this.

Status of document

SNAC working group has been discussing the document
We did a last call for comments on the document before IETF
Planning to revise document based on comments soon
We expect this revision to represent what SNAC wants

Open question

Original document added an RA Flags Option flag

But why do this when there are flags available?

So we decided to let 6man decide:

- Just allocate RA flags sequentially, or
- For some reason this flag isn't important enough to be in the header and needs to be in the RA Flags option

We don't know what that reason would be, so the document currently proposes putting the flag in the header. But we don't care very much.

SNAC router RA Flag

This is needed by the SNAC working group

But is in charter for 6man

So, SNAC is asking 6man to adopt this work

Once the new version of the document is out,

- we request a call for adoption in 6man
- we hope 6man participants will review and comment

Questions? Comments?