

# Stub Router RA Flag

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

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# What is a stub router?

Unmanaged (self-configuring) router

- connects opportunistically to an infrastructure network
- provides routing to a stub network

Stub network:

- A network that is a leaf network: no routes go through it
- Main current use case: constrained networks
  - e.g. 802.15.4 mesh networks

Not all routers that route to stub networks are stub routers

- e.g. home networks are generally stub networks
- but don't have to be with prefix delegation

# Why a stub router *RA flag*?

Stub 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:

- Stub router is advertising an on-link prefix
- Infrastructure router enables IPv6
  - Advertises on-link prefix
- Stub 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

Stub routers advertise route to stub network in RA

So stub 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 stub router RAs

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

Need to be able to tell the difference.

# 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.

# Stub 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?