

draft-hilliard-v6ops-ipv6-discard-prefix

A Discard Prefix for IPv6



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i n t e r n e t n e u t r a l e x c h a n g e

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Problem Definition

Remotely-triggered black holes are vital for protection from DoS

RTBHs operate by wiring a chosen prefix to a Null/discard interface

Black-holed addresses are propagated in IGP with next-hop address of the chosen prefix

uRPF then causes these packets to be dropped - invalid destination

Some operators see value in formally reserving a prefix for this



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Questions which were asked

What do we do in IPv4?

As far as we can tell, everyone does their own thing

Why not use the provider's own space?

Most providers needs this feature, so why not look at creating a best practice?

Why not use the documentation prefix - 2001:db8::/32?

Because it's a documentation prefix and shouldn't appear in production configurations

This annoys procedural compliance wonks

Wouldn't a single address work - e.g. ::2?

Some operators might need more than one



Issues which are less important

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“I want it to be /32 or /48 or /64”

The important issue is: “do we want 1 address or more than one”?

If the latter, then let's just request a reasonable sized block and be done with the issue for all time

“I want to make a cute hex-text acronym”

Tempting, but not everyone speaks english

“I think it should be inside fc00:: or 0000::/8”

The important issue is: do we suggest that the space be in global unicast 2000::/3 or not



Issues which are less important

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The Bike Shed



Important issues

Does this proposal solve a problem worth solving?

Straw poll of operators think so. No operators have suggested it's a bad idea / waste of time / etc

Is creating a prefix like this going to cause operational problems?

We don't think so, but there are guidelines in the ID to deal with this

Should Fred Baker's suggestion for `::2/128` be handled separately?

A hard-wired device-local IPv6 discard prefix is standards track and probably belongs in its own ID.

`::2` proposes a device-local address guaranteed to dump your traffic

This ID proposes an IGP routable prefix, and is a generic mechanism for dealing with unwanted traffic to a specific src/dst

SHOULD NOT vs MUST NOT?

Probably not appropriate to have MUST NOT in Informational doc. Also, don't want to limit possibilities here



Even more important issues

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Is there anything else that hasn't been discussed?

It's always the things you miss that end up biting you

