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J. Palet Martinez
Consulintel, S.L.
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Reporting of Happy Eyeballs v2 Failures
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Abstract

This document describes an extension to Happy Eyeballs in order to report IPv6 failures that force the fall-back to IPv4.

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1. Introduction

Happy Eyeballs ([RFC6555]) provides a way for improving user-visible delay when IPv6 connectivity is performing worst than the IPv4 one.

However, this hides the possible IPv6 connectivity issues to the operator because users don't notice anything broken, so they aren't reporting it to their providers.

The goal of this document is to specify an extension of HE, in order to use existing protocols for providing a reporting to the operator, which can be used to setup alarms and trigger further investigation so to improve.

2. Using Syslog

In order to simplify the reporting of the HE failures, syslog ([RFC5424]) over UDP ([RFC5426]), MUST be used, by means of the default port (514) with IPv6-only.

The intend is to make this reporting very simple, so no choice of alternative ports or transport protocols is offered.

Operators willing to use this reporting MUST configure at least one syslog collector at the IPv6 prefix formed as:

Network-Specific Prefix::192.88.99.1

The Network-Specific Prefix (NSP) MUST be chosen by the operator from its RIR allocated IPv6 addressing space.

Additional collectors can be made available by using anycast at the NSP + 192.88.99.0/24 prefix

3. Discovery of the syslog collector NSP

The same mechanism described by RFC7050 ([RFC7050]) should be used to define the address of the syslog collector(s).

Because the collectors will be using an IPv6 address with the 32 low order bits from the reserved range 192.88.99.0/24, this will not be in conflict with any public addresses used in Internet, so this mechanism is compatible with the expected usage of the NSP for NAT64.

4. HE behaviour on failure detection

This section will specify the exact behaviour of HE in order to initiate the reporting and the specific format/parameters of the HE failure message to be sent to the syslog collector.

A preliminary consideration is to include, in addition to the syslog required parameters, the timeouts detected, the failed destination address and the source prefix from where the destination has failed.

TBD.

5. Privacy Considerations

The goal is to provide the operator information about the failures detected by HE, without requiring specific users traffic information. Towards this, it will be sufficient to provide to the syslog collector details about the failed destination address and source prefix. So privacy issues regarding identification of a specific device or user are avoided.

TBD.

6. Security Considerations

This document does not have any specific security considerations.

7. IANA Considerations

IANA is requested to reserve 192.88.99.0/24, which was previously released by ([RFC7526]) for this RFC.

8. Acknowledgements

The author would like to acknowledge the inputs of TBD ...

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Author's Address

Jordi Palet Martinez
Consulintel, S.L.
Molino de la Navata, 75
La Navata - Galapagar, Madrid 28420
Spain

Email: jordi.palet@consulintel.es
URI: <http://www.consulintel.es/>