IPv6 Troubleshooting for Helpdesks using isp.test-ipv6.com document

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Misconceptions and reality ;)

- **Disclaimer: This document is *not* an ISOC document. This is a product of a group of a brilliant experts from the community (list with names comes later in the slidepack).**

- **I just happen to be the initiatior and one of the editors of the document**

- **I would like to thanks ISOC for dedicating some of my working time to run this effort.**

Internet Society ™

Removing one of the next IPv6 speedbumps

- **One of the first speed-bumps was addressed by RIPE-554**

- **Next speed-bump is lack of IPv6 knowledge at ISP helpdesks**

IT helpdesk staff can be… difficult sometimes ☺

HELPDESK

HAVE U TRIED TURNING IT OFF
AND ON AGAIN?

Removing one of the next IPv6 speedbumps

Title: *"Generic IPv6 troubleshooting procedures for helpdesks around the world"*

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This document is intended to provide a starting point for technical support staff at ISPs or enterprise IT helpdesks in supporting IPv6. Problems with IPv6 are very rare, but fear of the unknown has prevented or delayed many organizations from rolling out IPv6 to their users, when all technical problems have been solved. While this document cannot encompass all possible problems, it should provide a solid first step for front-line support personnel.

Tools used?

- **Fact 1.: We need to build a short and simple set of detect/explain/action scenarios that would help people at help desks identify and fix the issue**

- **Fact 2.: We need a simple online tool to detect the state of connectivity on the users computer**

- **Fact 3.: Test-ipv6.com is a very useful tool that detects the state of connectivity on the users computer**

- **So the idea emerged to bring Jason Fesler in the group and talk him into creating a special version of the tool meant specially for ISP helpdesks ☺**

Tools used?

Table of content

Example: one of the possible generic situations

Help desk code: 624

    6to4

      IPv4: Good, AS65536, CableCo

      IPv6: Good, 6to4, Preferred

IPv4 address: 192.0.2.1

IPv6 address: 2001:db8::1

Example (continued):

Interpretation: "6to4" was used to provide an IPv6 address; and the host was configured to actively take advantage of this service. Any web site that has an IPv6 presence, will be reached using 6to4 instead of native IPv4.   Modern operating systems do not prefer these kinds of tunnels by default. Be aware that the user might have a very old operating system or a non-default configuration.

Action: Have the user disable any automatic tunneling mechanisms that are active.

6to4 is a protocol that runs on the PC and tries to get IPv6 traffic through a public relay, using IPv4 as a temporary transport device. Public 6to4 relays offer no SLA; and published studies show approximately 15% failure rates.

Example (continued):

Windows: Disable tunnel interfaces using http://support.microsoft.com/kb/929852 (for example, Microsoft Fix it 50412).

If IPv6 is desired, configure IPv6 and test again. Verify the user has an IPv6 address, and a default route.

Example (hardest and longest one):

112 - IPv4, plus Broken IPv6

Help desk code: 112

IPv4: Good, AS65536, CableCo

IPv6: broken

IPv4 address: 192.0.2.1

Status and future work?

Document is in final pre-draft stage and will be currently submitted to

- RIPE BCOP TF and subsequently to RIPE IPv6 WG

Join the mailing lists and contribute to discussion:

RIPE BCOP TF: https://www.ripe.net/mailman/listinfo/bcop

RIPE IPv6 WG ML: http://www.ripe.net/mailman/listinfo/ipv6-wg/

Issues/comments/ideas tracker URL:https://git.steffann.nl/go6/ipv6-troubleshooting-for-helpdesks/issues

After we go through first few community consensus building cycles and document edits we MAY choose to submit it for comments also to other BCOP efforts in other continents depending on interest from other regions.

Some interest from around the world?

Possibly…

```
[root@haktar httpd]# head -1 go6.si-v6-
access_log-20140420 | awk '{print $5}'
```

[13/Apr/2014:03:56:36

```
[root@haktar httpd]# grep IPv6-
troubleshooting-for-helpdesks-v00.pdf go6.si-
v6-access_log* | wc -l
```

2296

```
[root@haktar httpd]#
```

Where the document lives and resides?

http://go6.si/v6helpdesks

New versions of the document will be added as they emerge, ;)

Please read the draft and comment! All ideas for improvements are very welcome.

Thank you! Comments/Questions?

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