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

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Removing one of the next IPv6 speed bumps

- 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 ☺

Generic IPv6 troubleshooting procedures for helpdesks around the world

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- A starting point for technical support staff in supporting IPv6

- For ISPs or enterprise IT helpdesks

- Fear of the unknown has prevented or delayed many organisations from rolling out IPv6 to their users

- 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 into the group and talk him into creating a special version of the tool meant specially for helpdesks ☺

Tools used

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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 tunnelling mechanisms that are active. 6to4 is a protocol that tries to get IPv6 traffic through a public relay, using IPv4 to reach the public relay. 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.

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

  - NANOG BCOP TF

- Join the mailing lists and contribute to discussion:

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

  - NANOG BCOP TF: http://bcop.nanog.org/

After that

- 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.

Comments?
Questions?