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IPv6 Alias Resolution

Brinkmeyer, William

Monterey, California: Naval Postgraduate School.

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cmand.org : Too-Big Trick: IPv6 Alias Resolution

IPv6 Alias Resolution

What:

The Too-Big Trick (TBT) is a technique for IPv6 alias resolution via induced router fragmentation. Our work is detailed in a research paper that is currently under submission; please [contact us](#) for details or more information.

Why:

Alias resolution, the process of determining the set of interfaces corresponding to the same physical router, is a fundamental requirement to accurately determine router-level network topologies (and, by extension, understand their security, robustness, and resilience properties). Many traditional methods for IPv4 alias resolution do not work for IPv6. Our technique provides a new and novel technique for IPv6 that is both reliable and widely applicable.

Who:

- Billy Brinkmeyer (NPS)
- kc claffy (CAIDA)
- Matthew Luckie (CAIDA)
- Robert Beverly (NPS)
- Justin Rohrer (NPS)

Output:

- [Speedtrap: Internet-Scale IPv6 Alias Resolution](#) in Proceedings of the [Internet Measurement Conference \(IMC\) 2013](#), [LBBC13]
- [IPv6 Alias Resolution via Induced Fragmentation](#) in Proceedings of the [Passive and Active Measurement \(PAM\) 2013](#), [BBLR13]
- We have implemented TBT in a Python library and are making it available here under an MIT license. Feedback and bugfixes welcome.
- [tbt.py](#)
- The technique of PTB for IPv6 alias resolution is being added to [Scamper](#), contact Matthew Luckie for more details.

Funding:

- [NSF CNS-1111445](#)

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