

## **Anycast Instance Assessment for DNS**

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The goal of this study is to create a new metric that can be passively and continuously observed from traffic arriving at the ICANN Managed Root Server (IMRS). This metric should indicate how well an instance is placed and which autonomous systems (AS) may benefit from new instance placements, better peering, or simply some additional investigation or scrutiny.

There are many reasons for deploying a new instance. Instances can be placed on behalf of a community request or to support remote communities. Other instances are large clusters that support the wider community in a region. This study does not take these factors into account and therefore the results of this study should merely be a hint towards optimisation of the placement of the IMRS instances. We will use the hop count in the IP header of DNS queries as an indication of how well an instance is placed and how well an AS can be reached.

The results are both interesting and promising and potentially helpful for determining future placements of IMRS instances.