

## PRESS RELEASE

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### AMPATH supports the deployment of anycast for improvement of B-Root DNS Services

**Miami, Florida, April 20, 2017** - Florida International University's Center for Internet Augmented Research and Assessment ([CIARA](#)) is pleased to support the improvement of the [B-Root DNS service](#). B-Root will be *activating anycast on May 1, 2017*, providing service from a new site in Miami in addition to the current site in Los Angeles. Florida International University ([FIU](#)) and [AMPATH](#) are hosting the new hardware in Miami, and University of Southern California ([USC](#)) will provide the hardware support for this second site.

The *B Root* Domain Name Server (DNS) is operated by the [Internet and Networked Systems Division](#) at the Information Sciences Institute ([ISI](#)) along with USC's [Information Technology Services](#). *B Root* (b.root-servers.net and its predecessors) has been operational since 1987. USC/ISI has operated Internet root nameservers since the inception of the root DNS system, with the b.root-server service in the Los Angeles area.

As part of this deployment, *renumbering B-Root's IPv6 address to 2001:500:200::b, will be effective on June 1, 2017*. Planned renumbering for IPv4 is addressed later in 2017. Renumbering will help support anycast with more resilient routing. Service on old IPv6 and IPv4 addresses will be provided for at least one year after renumbering.

Anycast is an IP unicast service that it is spread through multiple locations with the same IP number (single anycast address is assigned to multiple hosts), where the routers in between are selecting the best and nearest destination<sup>1</sup>.

Benefits to anycast implementations are: one IP address in every location, service reliability, high availability, locality & latency improvements, load balancing, and a distributed response to DoS.

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<sup>1</sup> E. Basturk, R. Haas, R. Engel, D. Kandlur, V. Peris, and D. Saha, "Using Network Layer Anycast for Load Distribution in the Internet," Proc. Global Internet'98 (1998).

Please address any questions about B-Root operations to b-poc (at) isi.edu.

**About CIARA:** Florida International University's Center for Internet Augmented Research and Assessment (CIARA), in the Division of IT, has developed an international, high-performance research connection point in Miami, Florida, called AMPATH (AMericaSPATH; [www.ampath.net](http://www.ampath.net)). AMPATH extends participation to underrepresented groups in Latin America and the Caribbean, in science and engineering research and education through the use of high-performance network connections. AMPATH is home to the Americas Lightpaths (AmLight) high-performance network links connecting Latin America to the U.S., funded by the National Science Foundation (NSF), award #ACI-0963053 and the Academic Network of São Paulo (award #2003/13708-0) (<http://ciara.fiu.edu/>)

**About ISI:** The Information Sciences Institute (ISI) is a world leader in research and development of advanced information processing, computer and communications technologies. A unit of the University of Southern California's highly ranked Viterbi School of Engineering, ISI is one of the nation's largest, most successful university-affiliated computer research institutes. The Institute attracts nearly \$60 million annually for basic and applied research from federal agencies and the private sector. Our work ranges from theoretical basic research, such as core engineering and computer science discovery, to applied research and development, such as design and modeling of innovative prototypes and devices (<http://www.isi.edu/>)

**About USC:** The University of Southern California (USC) is one of the world's leading private research universities. An anchor institution in Los Angeles, a global center for arts, technology and international business, USC's diverse curricular offerings provide extensive opportunities for interdisciplinary study and collaboration with leading researchers in highly advanced learning environments (<http://www.usc.edu>)