F-Root @ ISC

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https://www.isc.org/

Who are we?

- Internet Systems Consortium, Inc.
  - a 501(c)(3) US non-profit
  - We're the "BIND" folks
  - and DHCPd and Kea, too!
  - and one of the 12 operators of the DNS Root System
- Until recently based in Redwood City, California
 - now fully virtual

The Root System

- 12 Operators (Verisign, Cogent, NASA, ISC, Netnod, RIPE, etc)
- 1086 instances as of July 2020
- Uses BGP Anycast to distribute the prefixes
- Tends to be concentrated in major cities

F-Root Globally

- 252   instances
  - ~60 owned and operated by ISC, with over 3000 peering sessions
  - Remainder in partnership with Cloudflare
- f.root-servers.net
  - 192.5.5.241
  - 2001:500:2f:f

F-Root in India

- India is 17.7% of the global population
- But only has 22 instances out of the 1086 (2%)
- ISC runs 8 of those
  - 1 directly at NIXI Chennai
  - 7 hosted by Cloudflare
    - NB: Cloudflare don't advertise the prefix to route servers
- We want to add more nodes to improve the service!
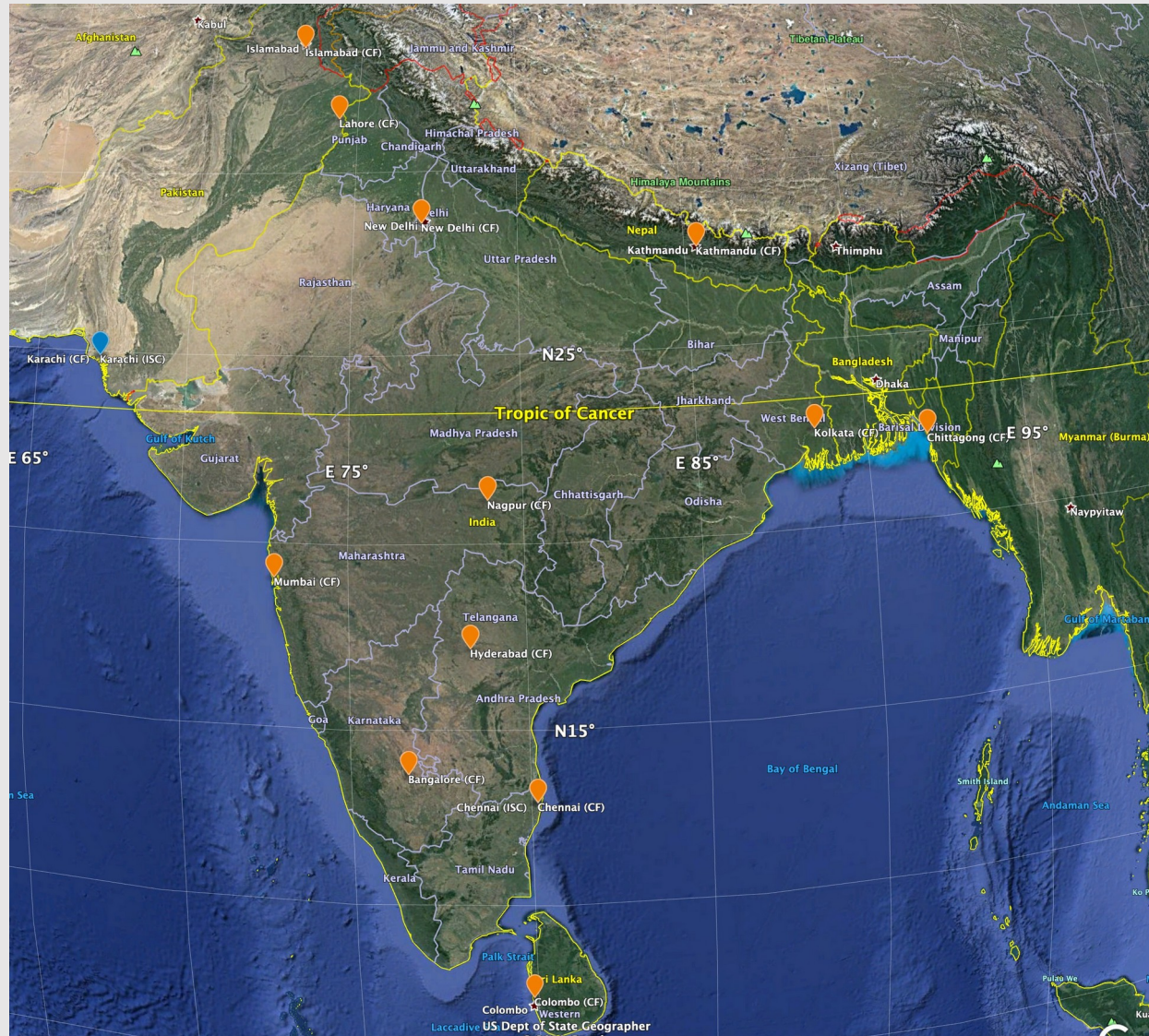
Why do we need more nodes?

- To improve the resiliency of the Root Systems against DDoS attacks (i.e. keep attack traffic local)

- To improve the latency to the Root System

- Especially for smaller networks and exchanges

How can you help #1 ?

- Sponsor a connection to an IX:
  - Sign up to our MoU
  - Supply a Dell R340 to our specs (US price ~ $3k)
  - Provide an IX peering port (10G Fibre)
  - Provide a management transit port (1G copper)
  - Provide an OOB iDRAC port (copper)
  - 1U of colocation with reliable power and cooling
- We'll do the rest

How can you help #2 ?

- Visit https://www.isc.org/froot-process/
  - MoU
  - Technical requirements guidance
  - Application form

Thank you!