LACTLD's Anycast Cloud

ccTLD News Virtual Session
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About LACTLD

- Non-profit organization that brings together and represents the interests of ccTLD managers in Latin America and the Caribbean.
- Founded on August 20, 1998 in Buenos Aires, Argentina.
- Currently based at La Casa de Internet de Latinoamérica y el Caribe (Latin America and Caribbean Internet House), in Montevideo, Uruguay.
- 29 Associate
- 5 Affiliates
- 8 Observers

How does the DNS work in a ccTLD?

- There are multiple “authoritative servers”
- Typically, one of them is the primary server (master) and the others are the secondary (slaves)
- This allows for
  - load balancing,
  - proximity to clients,
  - robustness and resilience
- We have seen cooperation in the DNS since the early days: the ccTLDs would voluntarily “share” their secondary in an informal way
- This sharing is hardly scalable

Upgrade: Anycast Service

- Anycast is an addressing technology that allows optimal and efficient use of networks
- The “anycast” technology is the evolution of the slave server service
- A server “hides” multiple nodes within a “cloud”
- It is highly scalable
- It is more efficient when nodes go down
- Provides better response to DoS attacks

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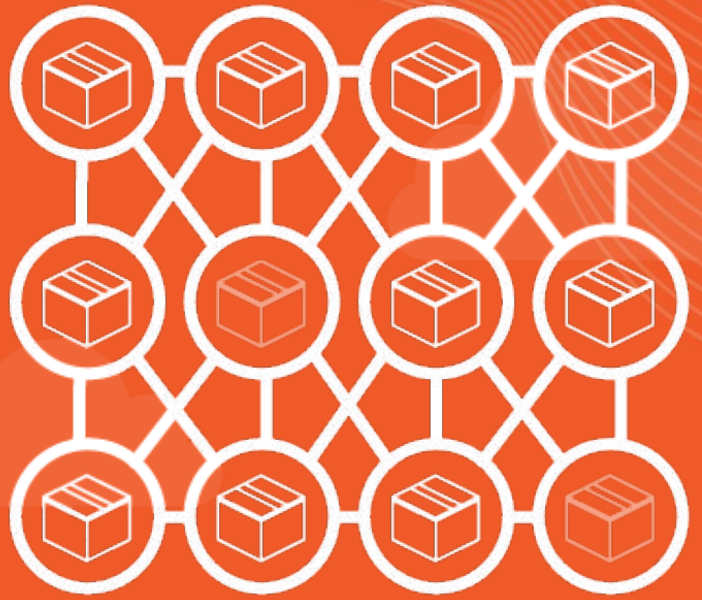
LACTLD’s Anycast Cloud

LACTLD's Anycast Cloud is a collaborative network that seeks to strengthen the infrastructure and stability of the DNS in Latin America and the Caribbean. It is a regional non-profit initiative based on the best effort principle.

- LAC ccTLDs (LACTLD members and non-members) can join the Anycast Cloud as a client or host (one or more nodes)
- Nodes can also be hosted by external organizations

LACTLD’s Anycast Cloud - Main benefits

- Optimal load balancing
- Shorter response time
- Robustness and resilience
- Efficient use of infrastructure
- Topological diversity
- Local traffic exchanges



LACTLD’s Anycast Cloud - Success story

- Operating since 2015
- Currently,
  - 10 Nodes
  - 13 Clients
  - 124 Zones
- Setting up a new node improves the response time in the node's neighborhood for all ccTLDs that are clients of the Anycast Cloud

LACTLD’s Anycast Cloud - Conclusions

- Regional collaboration success story
- “Sharing resources together”
- Technology developed and maintained in the region
- Robustness and resilience of the Internet in Latin America and the Caribbean
- You can learn more at https://anycast.lactld.org/en/

Would you like to host a Node?

- Provide hardware with management interface / virtual console (such as Dell iDRAC, HP iLO, VNC, etc).
- Be able to “speak” BGP.
- A machine with the proper hardware to perform authoritative DNS tasks, including hosting.
- Internet access with adequate bandwidth, and management with your access provider(s) to allow the transit of resources via BGP.
- Allow firewall management in order to control access to the server.
- Need more details? Contact us: contacto@lactld.org

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Would you like to “use” our Anycast Cloud?

- Must be a LAC ccTLD
- Share a PGP encrypted TSIG for secure transfer
- Allow AXFR/IXFR at the ccTLD master from the Cloud distribution point
- Transfer trials
- Resolution trials
- Synchronization monitoring
- Add NS a.lactld.org to the area of the ccTLD
- Add NS a.lactld.org in the root (IANA)
- Need more details? Contact us: contacto@lactld.org

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Thank you

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https://anycast.lactld.org