

Contemporary requirements for zone transfers

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GPG: 2deb 97b1 0a3c 151d b67f 1ee5 00e7 94bc 4d08 9191

A long, long time ago.

- /etc/**hosts**
- Service owner responsible for the name resolution

Next.

- Authoritative DNS **servers**
- DNS **registries**
- **Cloud** DNS services

A Split.

The diagram features a central vertical line that splits into two curved arrows. The left arrow points to a dark purple box labeled 'Customers', and the right arrow points to a white box labeled 'Providers'. A white box containing the text 'A Split.' is positioned at the top of the vertical line, with the arrows curving away from its bottom corners.

Customers

Providers

[[Docs](#)] [[txt](#) | [pdf](#)] [[draft-ietf-dnsext...](#)] [[Diff1](#)] [[Diff2](#)]

PROPOSED STANDARD

Internet Engineering Task Force (IETF)
Request for Comments: 5936
Updates: [1034](#), [1035](#)
Category: Standards Track
ISSN: 2070-1721

E. Lewis
NeuStar, Inc.
A. Hoenes, Ed.
TR-Sys
June 2010

DNS Zone Transfer Protocol (AXFR)

Abstract

The standard means within the Domain Name System protocol for maintaining coherence among a zone's authoritative name servers consists of three mechanisms. Authoritative Transfer (AXFR) is one of the mechanisms and is defined in [RFC 1034](#) and [RFC 1035](#).

[[Docs](#)] [[txt](#)|[pdf](#)] [[draft-ietf-dnsind...](#)] [[Diff1](#)] [[Diff2](#)] [[Errata](#)]

Updated by: [3007](#), [4035](#), [4033](#), [4034](#)

PROPOSED STANDARD

Errata Exist

Network Working Group
Request for Comments: 2136
Update: [1035](#)
Category: Standards Track

P. Vixie, Editor

ISC

S. Thomson

Bellcore

Y. Rekhter

Cisco

J. Bound

DEC

April 1997

Dynamic Updates in the Domain Name System (DNS UPDATE)

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.



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Customers

Providers



Customers



Providers

- DNSSEC
- CAA
- TLS
- ...



Customers



Providers

- DNSSEC
- CAA
- TLS
- ...



Customers

- Backup datacenters
- Geobalancing
- ASN-based balancing
- **CI/CD**



Providers

- DNSSEC
- CAA
- TLS
- ...

08:35 < j***k> and also VERY FUNNY PEOPLE
08:35 < m***k> j***k likes us \o/
08:35 < s***k> we like j***k
08:36 < d***n> DNS DEPLOY
08:36 < j***v> What is this "DNS DEPLOY" thingy you guys keep screaming?
08:36 < d***n> j***v, when we deploy new dns content
08:36 < j***k> <http://i.qkme.me/364h55.jpg>
08:36 < j***v> Alerting eachother?
08:36 < d***n> yup
08:37 < j***v> d***n: Why?
08:37 < d***n> in case there's problems and I guess also as a locking mechanism

DDoS Challenges

- **UDP**-based protocol
- **Thanks God**, a **truncate** thing
- Amplification attacks

Cloud solutions!

- Amazon Route53
- Dyn
- Azure
- Cloudflare
- Google Cloud
- ...

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But.

What about AXFR?

Amazon Route 53

API Reference

Amazon Route 53

API Reference

“DNS Zone Transfers (AXFR/IXFR) support for Route53 is a hotly asked for feature, and is one that we will consider adding in the future.”

*Amazon, **2012.***

NST's DNS Filter Chain Algorithms

Combine our powerful Filter Chain algorithms to build perfectly tailored traffic management setups matching your business logic.

Intelligent Filters

PULSAR Sort answers by Pulsar performance estimates

SHED_LOAD Shed traffic if load is too high, based on realtime metrics

GEOTARGET_LATLONG Sort answers by distance to requester using latitude and longitude

Dynamic Filters

PRIORITY Failover according to prioritized answer tiers

SELECT_FIRST_N Return the first N answers

SELECT_FIRST_REGION Return all answers in the same region as the first answer

DNSControl

<https://github.com/StackExchange/dnscontrol/>

“Synchronize your DNS to multiple providers from a simple DSL”

A Standard?

- DOTS
- CDNI
- DNSops?

A Standard?

Zone transfers with blackjack and stuff

- Balancing and failover
- Traffic load measurement & rate limiting
- Dynamic filters
- Extensions

Q&A

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