ANAME: Address-specific DNS Name Redirection (draft-ietf-dnsop-aname)

Peter van Dijk
Senior PowerDNS Engineer
with Evan Hunt and Anthony Eden
Why ANAME?

$ORIGIN example.com.

@ IN SOA ...

@ IN NS ns1

@ IN A 192.0.2.1

www IN CNAME example.com.my-cdn.example.net.
Current solutions

1. CNAME at apex
2. CNAME flattening
3. cron updates
4. ALIAS or ANAME from various commercial operators
5. ALIAS in open source PowerDNS auth
Creating a single standard

**How Standards Proliferate:**
(See: A/C chargers, character encodings, instant messaging, etc.)

**Situation:**
There are 14 competing standards.

14?! RIDICULOUS! WE NEED TO DEVELOP ONE UNIVERSAL STANDARD THAT COVERS EVERYONE'S USE CASES. YEAH!

**Soon:**

**Situation:**
There are 15 competing standards.
$ORIGIN example.com.

@ IN SOA ...

@ IN NS ns1

@ IN ANAME example.com.my-cdn.example.net.

www IN CNAME example.com.my-cdn.example.net.
Remember CNAME?

;;; QUESTION SECTION:
;www.example.com. IN A

;;; ANSWER SECTION:
www.example.com. IN CNAME example.com.my-cdn.example.net.
example.com.my-cdn.example.net. IN A 198.51.100
Compare ANAME

;;; QUESTION SECTION:
;example.com. IN A

;;; ANSWER SECTION:
example.com. 86400 IN ANAME example.com.my-cdn.example.net.
example.com. 86400 IN A 198.51.100
Concerns

- DNSSEC
- loops
- GSLB
- TTL limiting/counting down
Next steps

- get some code running
- restructure the draft (separate primary and secondary auth behaviour)
- more examples
- figure out what to do with IPv23