

.ht

Recovering DNS from the quake

Gaurab Raj Upadhaya

PCH

APRICOT 2010 lightning Talks

Haiti

- We all know the news
- On 12th January 2010, a catastrophic 7.0 Rector scale earthquake 25 KMs from Port-au-Prince

Haiti DNS

- .ht has six authoritative servers
 - ns1.nic.ht (in Port-au-Prince)
 - ns2.nic.ht (in Port-au-Prince)
 - dns.princeton.edu (in New Jersey)
 - ns3.nic.fr (in Paris)
 - ht-ns.anycast.pch.net (anycasted to 50+ locations)
 - charles.cdec.polymtl.ca (Montreal Polytechnique)

When Earthquake Struck

- Master server for all secondaries was offline
- Zone data getting stale and soon would time out
- EXCEPT..

One secondary was oddly behaving

- ht-ns.anycast.pch.net continued to have new zone serials compared with others.
- John Crain @ ICANN noticed this and contacted AFNIC (nic.fr) through Phil Regnauld and PCH simultaneously to ask what was happening
- This was 15 January 2010

There are two servers

- The backend of .ht is run on the COCCA servers in sydney, but only the 'ht-ns.anycast.pch.net' was configured to be able to pull zones from this server.
- The other server operators were not aware of this second server which had been unaffected by the earthquake
- by 16 January 2010, all operational secondaries were pulling from the second server in Sydney.



Subject: Re: .ht zone serial number refresh

From: Stephane Bortzmeyer ▾

Date: 1/16/10 8:39 PM

To: Bill Woodcock ▾

Cc: John Crain <crain@icann.org> ▾, Garth Miller ▾, Jonny Martin ▾, Gaurab Upadhaya ▾, Stephane Bortzmeyer ▾, Jean-Philippe.Pick@nic.fr ▾, Mohsen.Souissi@nic.fr ▾, Phi

On Thu, Jan 14, 2010 at 04:27:54PM -0800,
Bill Woodcock <woody@pch.net> wrote
a message of 56 lines which said:

We're pulling current zone data from a master server at CoCCA, per
instructions from Stephane, at the time we originally set it up some
months ago:

Everyone is now in synch with the new master, thanks to all:

```
% check_soa ht
There was no response from ns2.nic.ht
There was no response from ns1.nic.ht
ns3.nic.fr has serial number 2010011736
dns.princeton.edu has serial number 2010011736
charles.cdec.polymtl.ca has serial number 2010011736
ht-ns.anycast.pch.net has serial number 2010011736
```

nic.ht

- on 19th January, Jean-Philippe Pick from AFNIC realized that nic.ht zone was soon going to expire.
- Could have side effects on the .ht
- Proposed that all secondaries for .ht also secondary for nic.ht

nic.ht

- The yet to be expired nic.ht zone was on the server in princeton.
- Copy the zone data to the server in Sydney so that all other can be re-configured
- Configure all the secondaries to serve this zone
- done on 20- January 2010

What next

- ns1.nic.ht and ns2.nic.ht are offline, but should soon be online
- The DNS protocol will work around the problem for now

Lesson Learnt

- In this case, it went as well as anyone could have hoped for, but not have.
- RFC2182
 - (need I say more.. that document is from 1997....)
 - Possibly needs updating for diversity of hidden masters.

.cl

Earthquake 8.8 , 27-Jan-2010

- During the earthquake and after it, DNS service for .CL worked without interruptions for our customers and users. This service is provided using more than 50 DNS servers over different cities in every continent.
- During this emergency, some of these 50 DNS servers suffered connectivity loss or power failure after the earthquake, but thanks to the redundancy, there was no service discontinuity. Everything came back to normal as of today Monday 1st of March by 11:30AM, with the recovery of the DNS server located in the city of Concepcion, Chile, very close to the epicenter.
- Nevertheless, connectivity problems of some of NIC Chile's Internet providers, caused the zone updates for new domains, were not done with the usual frequency of half an hour. This issue was fully resolved by the evening of Sunday, 28th of February.

Thanks to

- Stephane Bortzmeyer
- Stephane Bruno
- Jean-Philippe Pick
- John Crain
- Max Larson Henry
- Garth Miller
- Phil Regnauld
- Irwan Tillman
- Bill Woodcock
- Others behind the scene