

pfSense - Bug #9870

DNS fails to resolve CNAME records

10/31/2019 05:13 PM - Brian Saia

Status:	Not a Bug	Start date:	10/31/2019
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	DNS Resolver	Estimated time:	0.00 hour
Target version:		Affected Version:	
Plus Target Version:		Affected Architecture:	
Release Notes:			
Description <p>I have a pfSense router (2.4.4-RELEASE-p3 using unbound Version 1.9.1) in a home environment and it is also serving as a DNS server and recursively resolves to Cloudflare's DNS server (1.1.1.1 and 1.0.0.1)</p> <p>I came across a DNS record which would fail to resolve on my home network but would resolve on any other network. The DNS record ended up being a CNAME record which pfSense could not resolve.</p> <p>While on my home network if I used the upstream DNS resolver (Cloudflare) which my pfSense router points to I had no issue resolving the record.</p> <p>If I went to the pfSense GUI > Diagnostics > DNS Lookup and performed a lookup there it would resolve successfully and future queries from clients on my network to my router's DNS server would complete successfully.</p> <p>If my router restarted or the DNS cache cleared this problem would return.</p> <p>Below are examples of the results of the `dig` command in various scenarios:</p> <ol style="list-style-type: none">1. results from multiple devices on my home network2. note the status of 'SERVFAIL' <pre>dig coder.show ... ;; >>HEADER<< opcode: QUERY, status: SERVFAIL, id: 563 ;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1 ;; OPT PSEUDOSECTION: ; EDNS: version: 0, flags:; udp: 4096 ;; QUESTION SECTION: ;coder.show. IN A ;; Query time: 2234 msec ;; SERVER: <ROUTER IP ADDRESS>#53 ... 1. results from querying my router's upstream resolver while on my home network 2. note the status of 'NOERROR' dig @1.1.1.1 coder.show ... ;; >>HEADER<< opcode: QUERY, status: NOERROR, id: 10461 ;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1 ;; OPT PSEUDOSECTION: ; EDNS: version: 0, flags:; udp: 1452 ;; QUESTION SECTION:</pre>			

```
;coder.show.          IN    A

;; ANSWER SECTION:
coder.show.          34    IN    CNAME  hosted.fireside.fm.
hosted.fireside.fm.  48    IN    A      45.33.51.100

;; Query time: 83 msec
;; SERVER: 1.1.1.1#53(1.1.1.1)
...
```

1. results from connecting to a VPN server while on my home network
2. note the status of 'NOERROR'

dig coder.show

```
...
;; >>HEADER<< opcode: QUERY, status: NOERROR, id: 16319
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 13, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 4096
; COOKIE: 02554f82c6e44c0b9afd81805dbb5a47b2fecf27488fe956 (good)
;; QUESTION SECTION:
;coder.show.          IN    A
```

```
;; ANSWER SECTION:
coder.show.          724    IN    CNAME  hosted.fireside.fm.
hosted.fireside.fm.  73    IN    A      45.33.51.100
```

```
;; AUTHORITY SECTION:
.                  3358    IN    NS     e.root-servers.net.
.                  3358    IN    NS     c.root-servers.net.
.                  3358    IN    NS     i.root-servers.net.
.                  3358    IN    NS     g.root-servers.net.
.                  3358    IN    NS     k.root-servers.net.
.                  3358    IN    NS     l.root-servers.net.
.                  3358    IN    NS     h.root-servers.net.
.                  3358    IN    NS     f.root-servers.net.
.                  3358    IN    NS     j.root-servers.net.
.                  3358    IN    NS     d.root-servers.net.
.                  3358    IN    NS     b.root-servers.net.
.                  3358    IN    NS     a.root-servers.net.
.                  3358    IN    NS     m.root-servers.net.
```

```
;; Query time: 386 msec
;; SERVER: <VPN SERVER IP ADDRESS>#53
...
```

1. results from multiple devices on my home network after using the pfSense GUI to perform a DNS lookup
2. note the status of 'NOERROR'

dig coder.show

```
...
;; >>HEADER<< opcode: QUERY, status: NOERROR, id: 8270
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 4096
;; QUESTION SECTION:
;coder.show.          IN    A
```

```
;; ANSWER SECTION:
coder.show.          383    IN    CNAME  hosted.fireside.fm.
hosted.fireside.fm.  195    IN    A      45.33.51.100
```

```
;; Query time: 1 msec
;; SERVER: <ROUTER IP ADDRESS>#53
```

History

#1 - 10/31/2019 05:53 PM - Jim Pingle

- *Status changed from New to Not a Bug*

There is not enough information here to definitively say it's a bug and not a problem with your settings or elsewhere in your environment. Start a thread on the forum to nail down more details first.