

DNS, Apache and tunnel broker demos

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Building DNS files

- using BIND as example
- `www.example.org = 192.0.2.1` and `3ffe:b00:1::1`
- Name to IP address
 - name to IPv6 address = AAAA record
 - name to IPv4 address = A record
 - in zone file `example.org`:
 - `www.example.org. IN A 192.0.2.1`
 - `www.example.org. IN AAAA 3ffe:b00:1::1`
- Works in Bind since 4.9.X

Building DNS files (cont.)

- Additional considerations
 - named.conf
 - listen-on {192.0.2.1;};
 - listen-on-v6 {3ffe:b00:1::1; };

 - masters {3ffe:b00:1::1;};
 - allow-transfer {3ffe:b00:1::1;};
 - IPv6 transport available in:
 - Bind 9.X
 - Bind 8.4
 - Bind 8.X with ipv6 patch

Building DNS files (cont.)

- Client
 - IPv6 transport of DNS requests
 - /etc/resolv.conf
 - nameserver 3ffe:b00:1:1::2
- Testing
 - dig name a
 - dig name aaaa
 - dig name any

Enabling IPv6 on Apache Web Server

- Apache 2.0 or Apache 1.3 with ipv6 patch
- httpd.conf
 - `ipv4: Listen 192.0.2.1:80`
 - `ipv6: Listen [3ffe:b00:1:1::1]:80`
 - `<VirtualHost 192.0.2.1 3ffe:b00:1:1::1>`

Using a Tunnel Broker

- IPv6 over an IPv4 cloud
- need a dual stack and the tsp client.
- Using freenet6.net (<http://www.freenet6.net>)
 - with TSP client on freebsd (available for windows, *bsd, linux, solaris, qnx, ...)
 - tspc.conf
 - client_v4=auto # use the IPv4 address on the interface
 - userid=anonymous|myusername
 - passwd=myspasswd #if not using anonymous
- # tspc -v
- Whenever your ipv4 address change, do tspc again.
 - it keeps your IPv6 address and prefix
 - it re-establishes the IPv6 tunnel
 - looks like dhcp for IPv6 (over IPv4 link-layer)