So You Inherited a BIND Server…

DNS Best Practices from Day One

The Question

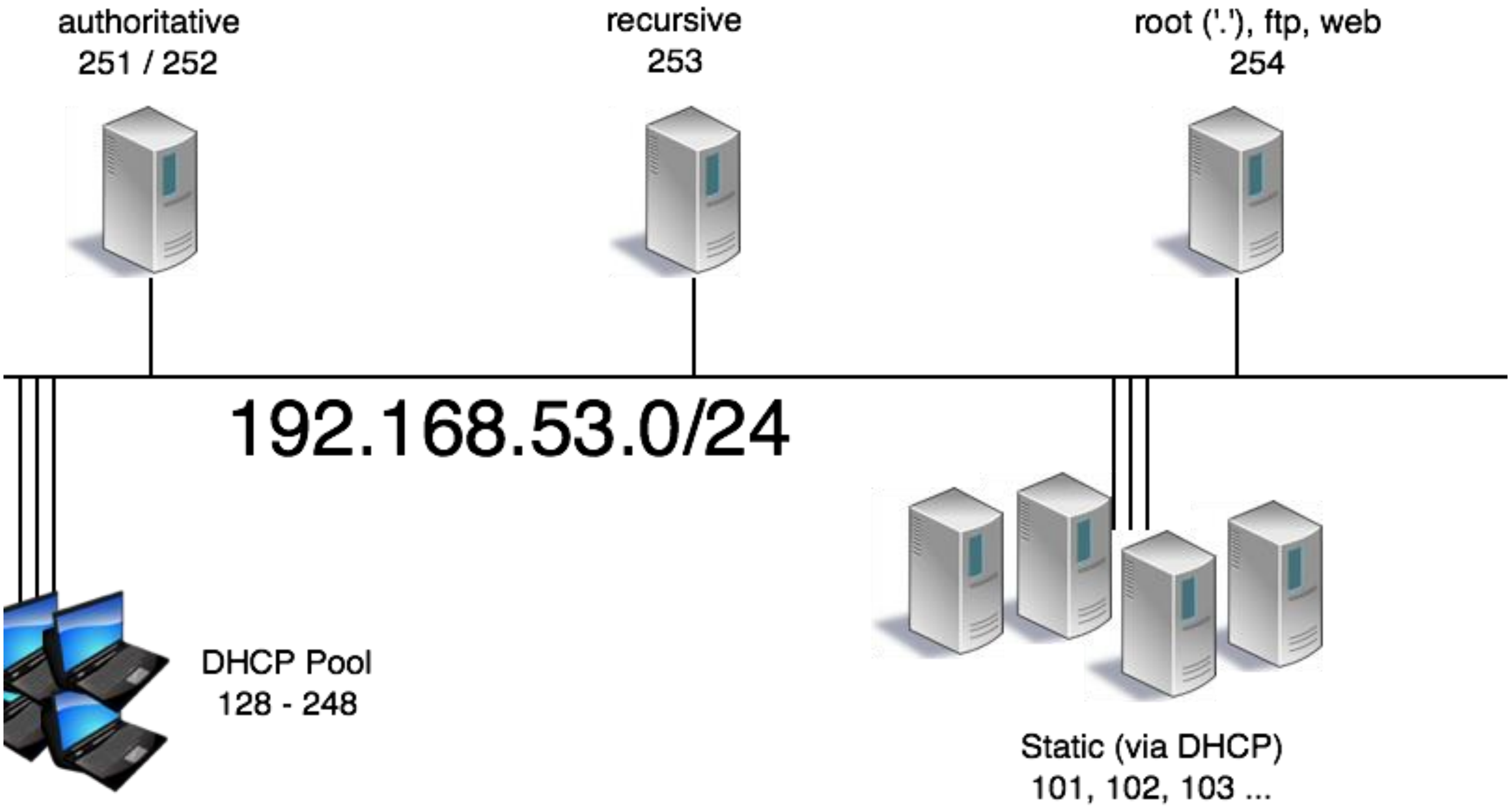
- What would you do if dropped into an existing organization to run their DNS?

First action, Recon!

- Actually, first action is freak out!
- 2nd action is caffeine, then deep breath and recon:

Any network or infrastructure diagrams available?

diagrams


authoritative
251 / 252
recursive
253
root ('.'), ftp, web
254
192.168.53.0/24
DHCP Pool
128 - 248
Static (via DHCP)
101, 102, 103 ...

Pick a nameserver, login!

- Running a current version of BIND?

  named –V
- OS?
- How is named started on this box? Does this match the version currently running?
- Is there a nanny script in use?

named -V

```
% named -V
BIND 9.8.4-P2 built with '--prefix=/usr' '--infodir=/usr/share/info' '--mandir=/usr/share/man' '--enable-threads' '--enable-getifaddrs' '--disable-linux-caps' '--with-openssl=/usr' '--with-randomdev=/dev/random' '--without-idn' '--without-libxml2'
using OpenSSL version: OpenSSL 0.9.8zd-freebsd 8 Jan 2015
```

On to named.conf

- Do the global options make sense?

- Basic security check:
  - TSIG secured zone transfers?
  - allow-transfer?
  - allow-query (is this an open resolver?)

Global options

```
options {
	directory "/etc/namedb/";
	dnssec-enable yes;
	dnssec-validation yes;
	allow-recursion { none; };
	allow-query { any; };
	allow-transfer { none; };
	notify no;
	key-directory "/etc/namedb/keys";
	max-journal-size 32k;
	zone-statistics yes;
	listen-on { 192.168.53.251; };
	listen-on-v6 { 2001:db8:100::251; };
	notify-source 192.168.53.251;
	notify-source-v6 2001:db8:100::251;
};
```

zone stanzas

```
zone "example.com" IN {
 file "example.com-zone";
 type slave;
masters { 192.168.53.4; 192.168.53.8; };
notify no;
};
```

logging

- Is the logging stanza sane and actually occurring?
- Check the config as well as the actual logs.
- Have a look at the system logs

logging stanza

```
logging {
    channel query_log {
        file "logs/query.log" versions 5 size 1M;
        severity info;
        print-time yes;
    };
    category queries { query_log; };
};
```

named-checkconf is your friend

```
$ named-checkconf –z
zone ./IN: loaded serial 121 (DNSSEC signed)
zone test.dnslab.org/IN: loaded serial 50 (DNSSEC signed)
```

rndc

- Is rndc configured?
- If not, ‘rndc-confgen –a’

- rndc status

- rndc notify zone
- rndc retransfer zone

Recon Repeat

- Repeat the prior Recon for all known nameservers!
- If diagrams were available, check to see if configs match stated functionality.

Authoritative specific

- Use external tools to check service:
  - DNSViz
  - zonemaster.iis.se
  - ednscomp.isc.org (firewall check)

Recursive specific

- Perform queries against these servers via dig

```
dig @192.168.53.53 www.example.com.
```

- Are they answering appropriately?
- Are they refusing appropriately?

Actions for Day 2

- Meet with the following teams:
  - Provisioning: how fast for new servers?
  - Operations: how’s life?
  - Security: about those firewalls…
  - Monitoring: alerting on?, peak traffic?
  - Architecture: future plans?
  - Management: support?

Recursive, Island specific

- Consider a local copy of the root zone
- RFC 7706
- Mirror zone

Questions

?

Thank You!

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