DNS Zones 2: Abbreviations and Slaves

Networks Administration

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OVERVIEW

ABBREVIATIONS

There are a few ways we can abbreviate resource records.
The *origin* of a zone is the fully qualified domain name name of that zone.
@ Notation: If the domain name in a record is the same as the *origin*, it can be abbreviated with an @.

```
example.com. IN SOA ns1.example.com. tech.somedomain.net.

@ IN SOA ns1.example.com. tech.somedomain.net.

example.com. IN MX 10 mailserver.example.com.

@ IN MX 10 mailserver.example.com.
```

ORIGIN DIRECTIVE

You can explicitly define the origin of a zone by including a directive as follows:

```
$ORIGIN example.com.
```

This is optional since BIND can infer the value of $ORIGIN from named.conf, but it does make your zone file more self-documenting.

APPENDING DOMAIN NAMES

You can leave the domain names off of the record names when they match the origin.

```
fred.example.com. IN A  123.220.44.91

becomes

fred IN A  123.220.44.91


1.10.168.192.in-addr.arpa.  IN PTR pebbles.example.com.

becomes

1  IN PTR pebbles.example.com.
```

Note that we don't use a trailing dot. It is the absence of the dot that indicates that the orign domain should be appended.

REPEATED NAMES

You can omit repeated resource names used on multiple records.

```
barney.example.com. IN A 71.44.116.17
                    IN A 123.211.16.100
```

Overview

WHAT IS A SLAVE AND WHY USE ONE?

- ▶ We need to run multiple DNS servers for redundancy.
- ▶ We could run multiple masters, but then we have to update zone information on each of them.
- ▶ A better practice is to run one master server that distributes zone updates to slaves.

MASTER CONFIGURATION

file: /var/named/etc/named.conf (on master)

```
"example.com" {
    type master;
    file "master/example.com";
    notify yes;
    allow-transfer { 192.168.2.100; };
};
```

SLAVE CONFIGURATION

file: /var/named/etc/named.conf (on slave)

```
"example.com" {
    type slave;
    file "slave/example.com";
    masters { 172.16.5.10; };
};
```