Troubleshooting DNS

LPIC-2: Linux Engineer (202-450)

Objectives:

At the end of this episode, I will be able to:

1. Describe potential issues that could cause BIND to fail.
2. Utilize the ss, systemctl, rndc, and named-checkconf utilities to troubleshoot a BIND server.

> Additional resources used during the episode can be obtained using the download link on the overview episode.

- Typical BIND failures
    - Configuration error
    - Software/networking conflict
    - Corrupted database
- Verify configuration files
    - `named-checkconf`
    - Similar to `named-checkzone`
    - No arguments needed
- Restart BIND if necessary
    - When adding new zones
        - `sudo rndc reconfig`
    - When modifying a zone
        - `sudo rndc reload lab.itpro.tv`
    - Full restart
        - `systemctl restart named.service`
- BIND startup issues
    - Verify *named* started successfully
        - `systemctl status named.service`
    - Check the logs
        - `journalctl -u named.service`
    - Locating a software conflict
        - `sudo ss -natp`
- Verify database integrity
    - Write the database to disk
        - `sudo rndc dumpdb -zones`
        - `sudo rndc dumpdb -cache`
    - View the database export
        - `less /var/cache/bind/named_dump.db`
- DNS Client Tools
    - `dig`
    - `nslookup`