Implementing NginX as a Reverse Proxy

LPIC-2: Linux Engineer (202-450)

Objectives:

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

1. Describe the purpose and function of a reverse proxy.
2. Configure NginX to act as a reverse proxy for an Apache-based back-end.

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

- Implementing NginX as a Reverse Proxy

    - What is a reverse proxy?
    - When to use a reverse proxy
    - Configuring NginX as a reverse proxy

- What is a reverse proxy?

    - Middle-man
    - Sits in between a source and destination
    - Can provide many features

        - Caching
        - Encryption
        - Load balancing

- When to use a reverse proxy

    - Encryption

        - Can be used to off-load SSL/TLS operations from a web server

    - Performance

        - Edge servers to support geo-routing

    - Masking complexity

        - Hide multiple servers behind one server
        - Very useful with Docker containers

    - Minimize attack surface

        - The proxy is the only server exposed to the Internet

- Configuring NginX as a reverse proxy

    - Edit the configuration

        - `sudoedit /etc/nginx/sites-available/default`

    - Modify the `location` section
    - Minimum entry

        - `proxy_pass <remote_destination>;`

Example:

```
server {
    listen 80 default_server;
    server_name lab.itpro.tv;
    location / {
        proxy_pass http://web01.lab.itpro.tv:8080;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
    }
}
```

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