DNS Server Lab Report

# Overview

This lab involved configuring a DNS server using BIND9 on Ubuntu Server within a VirtualBox virtual environment. The goal was to resolve domain names for internal clients dynamically via DNS.

# Steps Taken

1. Built upon the DHCP server setup with a functioning Ubuntu Server VM.  
2. Installed the BIND9 DNS server package.  
3. Configured the `/etc/bind/named.conf.options` file for proper forwarding and listening.  
4. Restarted BIND9 and verified it was active.  
5. Verified DNS resolution by updating the Kali client’s `resolv.conf` and confirming name resolution with `ping`.  
6. Confirmed successful communication with the DNS server.

# Challenges Faced

• Initial communication errors due to missing or incorrect DNS entries.  
• BIND9 service needed proper port and IP listening configuration.  
• Nameserver changes on clients needed to be applied manually.  
• Required troubleshooting of DNS logs and services.

# Lessons Learned

• How to configure and test a local DNS server.  
• Basic understanding of DNS queries, zones, and name resolution.  
• Importance of checking service status and network interfaces.