

**LOMBA KOMPETENSI SISWA
SEKOLAH MENENGAH KEJURUAN
TINGKAT KOTA TANGERANG
TAHUN 2023**



**MODUL
CLIENT SERVER ENVIRONMENT**

**Bidang Lomba
IT Network Systems Administration**

IT Network Systems Administration

Client Server Environment

Introduction

The competition has a fixed start and finish time. You must decide how to best divide your time. Please carefully read the whole document prior to starting your work.

Tasks

Basic Configuration

For all machines in the given topology, do the following:

- OS installed
- Hostname configured
- IP addresses set correctly
- Timezone set to Asia/Jakarta

Client Addressing

Make sure clients in the internal network A can automatically lease addresses from A-RTR. The leased address for A-CLT should stay the same by mapping its hardware address.

Intersite Connection

Configure OpenVPN on A-RTR and B-RTR to establish a site-to-site VPN. All traffic between internal network A and internal network B must be transferred via this VPN. The VPN port should only be accessible by its peers.

Directory Service

Set B-SRV as the Primary Domain Controller of beta.net forest. All machines in the topology should join the domain. Create User0001 - User1000 in the domain and make sure the users can sign in to all machines.

DNS

Clients in the internal network A should not use B-SRV as their DNS server. Instead, DNS queries should be sent to A-RTR which is receiving replication from B-SRV. The replication between DNS servers should be secured via IP whitelisting and cryptography.

Web

Configure two websites:

- `https://drive.beta.net`
 - Only User0500-User0699 can access this site.
 - Should show the directory listing of `C:\wwwroot\drive.beta.net` in B-SRV.
 - Proxied by B-RTR using HAProxy.
- `https://soup.beta.net`
 - Hosted in A-RTR using Nginx
 - Only accessible from A-CLT
 - Webroot is located in `/srv/www/soup.beta.net`

Storage

Share the path `/srv/www/soup.beta.net` using NFSv4 so it can be used to update the content of the `soup.beta.net` site. The NFS share should only be accessible via A-CLT. Use a level 10 RAID as the underlying block storage.

File Sharing

Share the `C:\share\collaboration` directory in B-SRV via SMB. Allow only `.html` and `.txt` files whose size is no bigger than 5 MB. Also, limit the access to User0300-User499.

Backup

Configure a scheduler using SystemD in A-RTR to back up the content of `soup.beta.net` to B-RTR in `C:\share\collaboration\soup.beta.net`. The backup should happen every hour.

Appendix

Logical Topology

