Services & Backups Playbook

# 1. Purpose

The purpose of this step is to simulate the support infrastructure that real organizations depend on. Networking isn’t just cables and routing; it requires services that deliver IPs, names, applications, and backup reliability. By configuring DHCP, DNS, TFTP, and HTTP, the project demonstrates not only connectivity but also sustainability and recoverability — key aspects of professional enterprise networking.

# 2. Services & Backups – Playbook

## Step 1: Configure DHCP (HQ-SRV)

- Assign static IP to HQ-SRV: 192.168.99.4/28, Gateway: 192.168.99.1.  
- Enable DHCP service and create pools for VLANs 10, 20, 30, 40, 50, and 99.  
- Set correct default gateway, DNS server, and IP ranges in each pool.  
- Verify by setting PCs to DHCP and checking leases.

## Step 2: Configure DNS (HQ-SRV)

- Enable DNS service.  
- Add record:  
 Name: www.hq-web.com  
 Address: 192.168.99.5  
- Verify by browsing from a PC using hostname instead of IP.

## Step 3: Configure TFTP (HQ-SRV)

- Enable TFTP service on HQ-SRV.  
- On HQ-RTR and BR-RTR:  
copy running-config tftp  
Address or name of remote host []? 192.168.99.4  
Destination filename [hq-rtr-confg]? hq-rtr-backup  
  
- To restore:  
copy tftp running-config  
  
- Verify with: dir

## Step 4: Configure HTTP (HQ-WEB)

- Assign static IP to HQ-WEB: 192.168.99.5/28, Gateway: 192.168.99.1.  
- Enable HTTP service (and HTTPS if needed).  
- Customize homepage to say 'Welcome to HQ-WEB'.  
- Verify from HQ and Branch PCs using both IP and DNS name.

# 3. Explanation

Enterprise networks rely on services to support users and devices. DHCP centralizes IP management so clients get addresses automatically, DNS provides user-friendly naming, and HTTP offers an internal web app to test connectivity across VLANs and sites. TFTP backups are essential for configuration management — ensuring that if a router or switch fails, configs can be quickly restored. These services bring realism to the lab by simulating the backbone of IT operations.