COMP 012 - Network Administration

Project Development Phase

SESSION 13: PROJECT SPRINT 1 - FOUNDATION

ACTIVITY 13.1: PROJECT PROPOSAL AND NETWORK DESIGN

Topic: Planning your infrastructure project

Description: Create comprehensive project plan and network design

INSTRUCTIONS:

Define project scope:
• Small business infrastructure
• Minimum: 2 Windows + 2 Linux servers
• Network with multiple VLANs
• Security implementation
• Optional: Cloud integration

Create project documentation:
• Business requirements
• Technical requirements
• Server roles and purposes
• Network topology design

Design network architecture:
• Physical topology diagram
• Logical topology diagram
• IP addressing scheme
• VLAN plan
• Security zones

Create Bill of Materials:
• All virtual machines needed
• Specifications (RAM, disk, network)
• Software requirements

Get instructor approval

Deliverables: Submit project proposal and network design documents	**30 Points**

ACTIVITY 13.2: WINDOWS SERVER DEPLOYMENT

Topic: Deploying Windows infrastructure

Description: Set up Windows servers for your project

INSTRUCTIONS:

Deploy Windows Server #1 (Domain Controller):

- Install Windows Server 2022
- Configure static IP
- Install AD DS role
- Create domain (yourproject.local)
- Configure DNS
- Create OU structure
- Create users and groups

Deploy Windows Server #2 (Application):
- Install Windows Server 2022
- Join to domain
- Install required roles:
  - IIS for web server
  - File server role
  - Or other role per your design

Configure Group Policy:
- Password policy
- Account lockout policy
- Desktop restrictions (if applicable)

Document all configurations

Deliverables: Submit Windows deployment screenshots and configurations	**40 Points**

ACTIVITY 13.3: LINUX SERVER DEPLOYMENT

Topic: Deploying Linux infrastructure

Description: Set up Linux servers for your project

INSTRUCTIONS:

Deploy Linux Server #1 (Web/App):
- Install Ubuntu Server 22.04
- Configure static IP
- Install web server (Apache/Nginx)
- Configure virtual hosts
- Set up SSL (self-signed OK)
- Secure with UFW firewall

Deploy Linux Server #2 (Database/Utility):
- Install Ubuntu Server 22.04
- Configure static IP
- Install database (MySQL/PostgreSQL)
- Or install monitoring tools
- Configure backups

Integration with Windows:
- Configure DNS resolution

• Test connectivity to Windows servers
• Optional: SSSD/realmd for AD integration
Document all configurations
Milestone: 25% complete

Deliverables: Submit Linux deployment screenshots and configurations (25% milestone)	**35 Points**

TOTAL POINTS: 105