

# TEST PROJECT IT NETWORK SYSTEM ADMINISTRATION

WSG23\_TP39\_Module-B:Microsoft Environment

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# 1 INTRODUCTION

## 1.1 CONTENTS

This Test Project proposal consists of the following document/file:

1. WSG23\_TP39\_Module B.pdf

## 1.2 DESCRIPTION OF PROJECT AND TASKS

You work as a system integrator for a large corporation. The company wants to setup high available directory services and they want include automated and secure services. Before the installation takes place in the real network, the company instructs you to test the settings in a pilot project.

For the pilot project, you decide to configure the devices according to the diagram. For more information, see the appendix and the work tasks.

Tasks are broken down into following configuration sections:

- Basic configuration
- Networking services
- Directory and domain
- Common services
- File sharing

All sections are independent but all together they build complex infrastructure. Some tasks are pretty simple and straight, some may be tricky.









## 1.3 INSTRUCTIONS TO THE COMPETITOR

- The information for the access to the VMs can be found in the appendix.
- Use the password "**Passw0rd**" if nothing other is specified.
- You will always have two network interfaces: Internal and VPN. Only modify the DNS configuration (so keep DHCP enabled for both network interfaces).
- **4 hours** are available for the project.



## 2 SETUP KASSEL.ORG

### 2.1 HQ-DC

1. Assign hostname according to Table 1.
2. Configure HQ-DC as a domain controller for **kassel.org**. Configure DNS role with corresponding forward and reverse zones.
3. Create OUs.
  -  00 Central Administration
  - ▲  01 Company
    -  IT
    -  Management
    -  Sales
  - ▲  02 Clients
    -  Computer
    -  Domain Controllers
4. Create users, groups in **kassel.org** domain according to the Table 2. All created accounts must be switched on and have a password set to **Passw0rd**.
  - a. Naming convention for all users: 5 first letters from the last name extended with the first letter from the first name (e.g. stamms).
5. There should be no computer in the default OU “Computer”, instead place them into the corresponding OU in “02 Clients”.
6. Configure file quotas according to the Table 3.
7. Configure roaming profiles for Sales group and configure redirection of My Documents and Desktop folders according to Table 4.
8. Configure group policies in kassel.org domain:
  - a. **[GPO-01]** Members of the IT group must be the members of local administrators groups on all computers of this domain.
  - b. **[GPO-02]** <https://wsg.kassel.org> must be used as the default IE browser homepage for all domain users.
  - c. **[GPO-03]** A welcome animation is disabled on client computers.
  - d. **[GPO-04]** Network folders should be mounted as network disks (Z:\) for the members of the Management groups respectively according to the Table 3.
  - e. **[GPO-05]** Disable Recycle Bin on the desktop, screen saver and changing of background image on the desktop for all domain users, except the members of IT group.
9. Setup corresponding roles to enable the distributed file system on the HQ-DC and DC-SRV machines.
  - a. Prevent only .exe and .cmd files on the shares.
  - b. Create folders according to the Table 4.



## 2.2 HQ-CLT

1. Assign hostname according to Table 1.
2. Join computer to kassel.org.

## 3 SETUP DATACENTER.KASSEL.ORG

### 3.1 DC-DC

1. Assign hostname according to Table 1.
2. Configure DC-DC as a domain controller for **datacenter.kassel.org**. Configure DNS role with corresponding forward and reverse zones.
3. Install and configure Certificate Service. Install only the “Certificate Authority” with Common Name for this CA: **DC-DC-CA**
  - a. Create a template for Clients and Servers. Name the template “WorldSkills-ClientServerCert”. Set the subject name format to “common name”. Publish the template in Active Directory.
  - b. Configure autoenrollment of the “WorldSkills-ClientServerCert” certificate to all clients and servers via GPO.

### 3.2 DC-SRV

1. Assign hostname according to Table 1. Set DNS server on “Internal” interface accordingly.
2. Join domain datacenter.kassel.org.
3. Setup corresponding roles to enable the distributed file system on the HQ-DC and DC-SRV machines. Create folders according to the Table 4.
4. Install Web Server (IIS).
  - a. Create a website that is accessible via HTTP and HTTPS which will be the Public File Download (make sure you’ll see the files while accessing the URL and get not 403).
  - b. Name/URL of the site will be wsg.kassel.com.
  - c. Make sure to get no certificate warning while visiting the website via HTTPS and the certificate was issued by DC-DC-CA.
  - d. For this purpose also create a folder in the inetpub directory called wsg and leave some files there.
  - e. Make sure wsg.kassel.com is also available via FTP (no SSL required at this point). The user Anonymous without a password should have read access to the folder and all users from group GG-IT should get modify access on FTP.



## 4 TABLES

Table 1. Basic configuration

	Hostname	Operating system	IPv4 address
1	HQ-DC	Windows Server 2019 (GUI)	10.1<n>.1.10/24
3	HQ-CLT	Windows 10	10.1<n>.1.11/24
4	DC-DC	Windows Server 2019 (GUI)	10.1<n>.2.10/24
5	DC-SRV	Windows Server 2019 (GUI)	10.1<n>.2.11/24

Table 2. Domain hierarchy

Organizational unit	Group	Members of group
00 Central Administration		
01 Company		
IT	GG-IT GG-LocalAdmins	stamms, steinhr stamms
Management	GG- Management	leykaa, weiss
Sales	GG- Sales	romerh, johnsc
02 Clients		
Computer		
Domain Controllers		

Table 3. File Server Quotas

	Path	Quota type/sizep	Notification
1	User home folder	Hard/42 Mb	Event log at 80%
2	Profile folder	Hard/42 Mb	Event log at 80%
3	On all other folders/ shares	Hard/200 Mb	Event log at 85%

Table 4. File services

	Server	Physical path	UNC	Description
1	HQ-DC	D:\Share\Homes	\\kassel.org\home	Mounted as H:\ for Managers group users
2	HQ-DC	D:\Share\Profiles	\\kassel.org\profiles	Replicated folders for roaming profiles
3	DC-SRV	D:\Share\Home	\\datacenter.kassel.org\home	
4	DC-SRV	D:\Share\Profiles	\\datacenter.kassel.org\profiles	Replicated folders for roaming profiles



## 5 APPENDIX

### 5.1 TOPOLOGY

