

Project Documentation: Active Directory Setup and Group Policy Configuration

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Project Title: Group Policy Implementation for Active Directory Environment

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1. Introduction

This documentation details the steps involved in setting up an Active Directory (AD) environment using Microsoft Azure virtual machines (VMs). The project includes the creation of two VMs, installation of AD on one, configuration of a domain, user account creation, and applying Group Policy (GPO) settings to a client machine. Additionally, specific restrictions were enforced on the client machine, including custom desktop backgrounds and the inability for users to power off the system using the standard method.

2. Project Overview

The goal of this project was to create a robust Active Directory environment for managing users and computers. The key steps included:

1. Creation of two Azure VMs: one acting as the Domain Controller (onkar-dc) and the other as a client machine (onkar-client).
 2. Installation of Active Directory on the Domain Controller (onkar-dc).
 3. Creation of a domain (onkar-singh.com) and a user account for the client machine.
 4. Configuration of Group Policy to apply custom settings, such as a custom background and restrictions on powering off the client machine.
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3. Infrastructure Setup

3.1 Azure VM Creation

The first step in the project was to create two virtual machines in the Azure portal:

- **onkar-dc:** This VM was designated as the Domain Controller and was used to host the Active Directory service.
- **onkar-client:** This VM was created as a client machine and was joined to the domain created on the Domain Controller.

Azure Portal Screenshot

(Insert screenshot showing the two VMs created on Azure)

3.2 Active Directory Installation

The next step was to install Active Directory on the **onkar-dc** VM. This involved setting up a Domain Controller, which would manage the domain and user accounts.

Active Directory Installation Screenshot

(Insert screenshot showing the AD installation on the onkar-dc VM)

4. User Account and Domain Configuration

4.1 Domain Creation

After Active Directory was installed, I created a domain named **onkar-singh.com** on the **onkar-dc** VM. This domain would serve as the central point for managing users and computers.

4.2 User Account Creation

A user account named **client** was created within the domain. This account was used to join the **onkar-client** VM to the domain, allowing the machine to interact with the Active Directory environment.

Client User Account Created Screenshot

(Insert screenshot showing the user account "client" created under the **onkar-singh.com** domain)

5. Group Policy Configuration

5.1 Desktop Customization

To ensure that the **onkar-client** VM had a uniform appearance, I configured a Group Policy Object (GPO) to set a custom background for the desktop. This policy was applied specifically to the **onkar-client** VM.

GPO Policy - Desktop Customization Screenshot

(Insert screenshot showing the GPO policy applied for the desktop background)

5.2 Power Restrictions Configuration

As part of the project's security requirements, I applied a Group Policy that restricted the user from shutting down the **onkar-client** VM using the standard power options in the Start menu. Instead, I created a custom **restart button** on the desktop, which would be the only way for users to restart the system.

Power Restrictions Policy Screenshot

(Insert screenshot showing the policy restricting shutdown options and the restart button configuration)

6. Conclusion

In this project, I successfully created an Active Directory environment on Azure VMs, configured a domain, and applied various Group Policies to a client machine. The policies ensured the client machine had a custom desktop background and enforced restrictions to prevent the user from powering off the machine via the standard shutdown options. This project helped to improve the management and control of machines in an enterprise environment.

7. Screenshots

1. Azure Portal - VM Creation

Home >

Virtual machines

Default Directory [REDACTED]

+ Create ▾ ↶ Switch to classic ⌚ Reservations ▾ ⚙️ Manage view ▾ ↻ Refresh ↓ Export to CSV

Filter for any field... Subscription equals all Type equals all Resource group equals all ✕

Showing 1 to 2 of 2 records.

<input type="checkbox"/> Name ↑↓	Subscription ↑↓	Resource group ↑↓	Location ↑↓
<input type="checkbox"/> onkar-client	[REDACTED]	[REDACTED]	East US
<input type="checkbox"/> Onkar-DC	[REDACTED]	[REDACTED]	East US

2. Active Directory Installation

Server Manager

Server Manager ▸ Dashboard

WELCOME TO SERVER MANAGER

1 Configure this local server

QUICK START

- 1 Configure this local server
- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group
- 5 Connect this server to cloud services

WHAT'S NEW

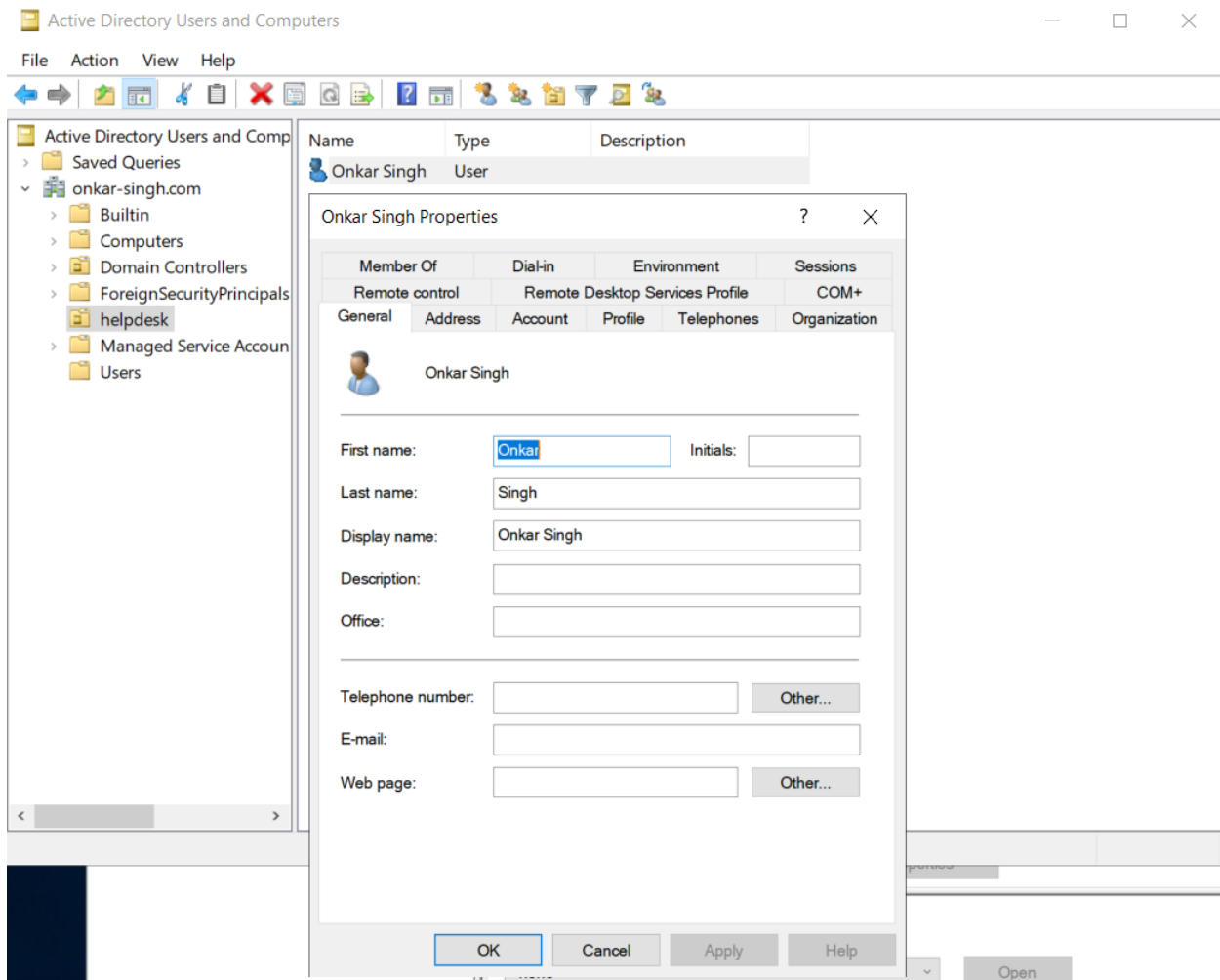
LEARN MORE

ROLES AND SERVER GROUPS

Roles: 3 | Server groups: 1 | Servers total: 1

AD DS	DNS	File and Storage Services	Local Server	All Servers
1	1	1	1	1
<ul style="list-style-type: none">ManageabilityEventsServicesPerformanceBPA results	<ul style="list-style-type: none">ManageabilityEventsServicesPerformanceBPA results	<ul style="list-style-type: none">ManageabilityEventsServicesPerformanceBPA results	<ul style="list-style-type: none">ManageabilityEventsServicesPerformanceBPA results	<ul style="list-style-type: none">ManageabilityEventsServicesPerformanceBPA results

3. Client User Account Created

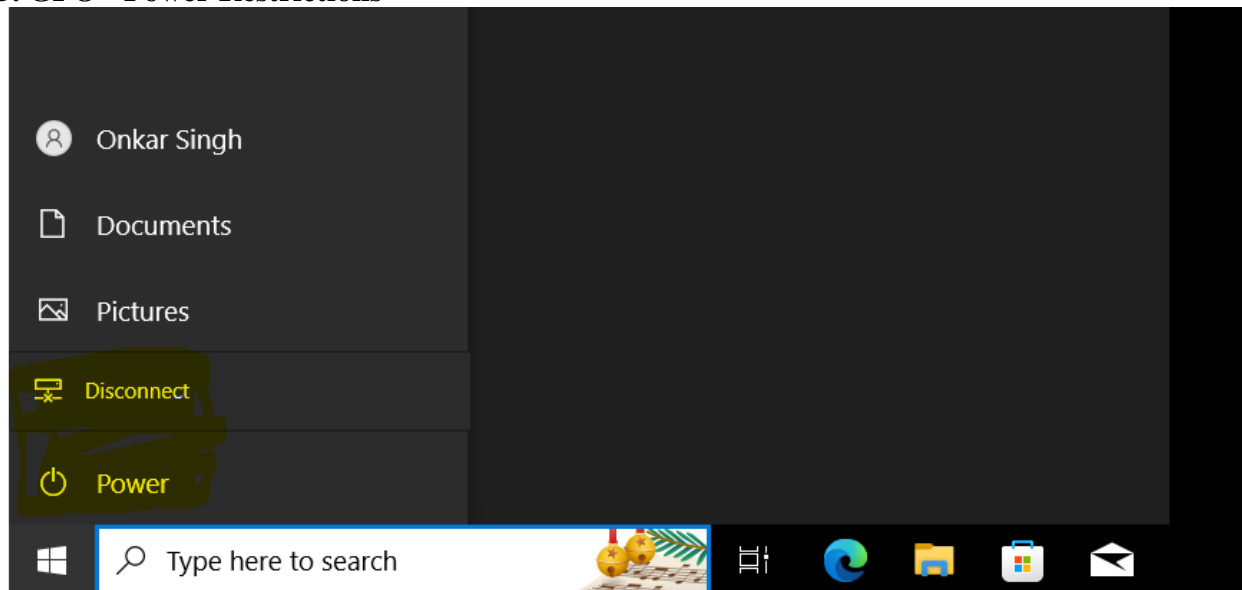


4. GPO - Desktop Customization

The screenshot displays the Group Policy Management Editor interface. The left-hand navigation pane shows the tree structure: Computer Configuration > Policies > Desktop. The main pane shows the 'Desktop Wallpaper' policy, which is currently set to 'Enabled'. The 'Wallpaper Name' field is populated with '\\Onkar-DC\D\user-wallpaper.png'. The 'Wallpaper Style' is set to 'Stretch'. The 'Help' pane on the right provides detailed instructions on how to use this setting, including examples of local and UNC paths.

The desktop background is a dark blue gradient. A large white watermark 'onkar-singh.com' is centered on the screen. Below the watermark, the text 'Wallpaper set using group policy' is displayed. In the bottom right corner, a system dialog box asks 'Do you want to restart the PC?' with a green 'Restart' button. The Windows taskbar at the bottom shows the search bar, task icons, and system tray with the time 7:31 AM and date 12/20/2024.

5. GPO - Power Restrictions



6. GPO - Helpdesk Link

