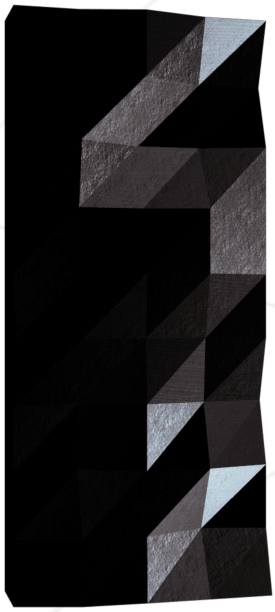

Accessible Directory

ActiveDirectory and OpenSSH on windows

Summary: In this subject, you learn how to use AD via internet interaction, configure OpenSSH on Windows, and host a web server on Microsoft.

Version: 1.00

Contents

Chapter I

Preamble

This subject is the production of a partnership between 42 and Microsoft Corporation.

Microsoft Corporation is an American multinational technology corporation headquartered in Redmond, Washington.Microsoft's best-known software products are the Windows line of operating systems, the Microsoft Office suite, and the Internet Explorer and Edge web browsers.

Through this partnership, we aim to provide you with a unique opportunity to simplify your journey towards obtaining certifications offered by Microsoft. These certifications hold significant value and recognition in the industry, enabling you to enhance your professional profile and unlock exciting career prospects in the field of security.

To access the Microsoft certification programs and explore the wide range of certificates available, you can visit the following link: Microsoft Security Certification. This comprehensive platform offers extensive training resources and examinations covering various security-related topics.

By successfully completing the projects and earning Microsoft certifications, you will demonstrate your proficiency and expertise in security practices. These certifications serve as a testament to your skills and can open doors to exciting career opportunities.

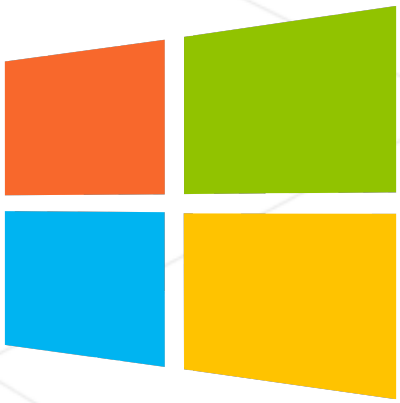

Figure I.1: https://www.microsoft.com/

Chapter II

Info

In partnership with Microsoft

Domolia is highly satisfied with your progress thus far! However, they now have a new requirement for their network: the addition of a web application that can retrieve information about users or groups, exclusively accessible to Domolia employees.

To accomplish this, they suggest creating a web application in C# using .NET and grant you permission to host the resulting application on the D: server.

Additionally, they would like you to enable SSH access to specific computers for remote control and troubleshooting purposes. For this purpose, they request the utilization of the OpenSSH server.

You're provided with a helper pdf, foundable inside the attachments of the subject.
It will show you how to access the VMs created for you to complete this subject, how to lock your VMs, etc.

Chapter III

Mandatory part

III.1 Application creation

In this section, you must create an application using the C# language.

This involves the following steps:

1. Create a web application in C# using .NET.
2. The main page should display information about Domolia, including:
   (a) Latest news about Domolia.
   (b) Weather information for a specific town (e.g., Magnat-l'Étrange, France).
3. Implement a user login functionality using the same user information as Active Directory, using any suitable method.
4. Once logged in, users should have the ability to:
   (a) Search for a specific employee of Domolia using phone number or email address.
   (b) Access an agenda displaying the connected person's meetings for a day, week, or month.
   (c) Create a meeting and invite other employees, with the meeting linked to the aforementioned agenda.
   (d) Log out from the website.

You are expected to implement a secure application with the following actions:

1. Ensure all user input is properly validated to prevent SQL injection or XSS attacks.
2. Store user passwords as hashed values instead of storing them in clear text in the database.
3. Implement an access authorization system to control the actions users can perform within the application.
4. Encrypt sensitive user data, such as personal information, to ensure privacy protection.

III.2 Hosting application

In this section, you need to host the application you have created.

This involves the following steps:

1. Install the .NET Framework and Internet Information Services.
2. Configure IIS to host your .NET application.
3. Configure the firewall settings.
4. Deploy your .NET application.

Chapter IV

Windows SSH system and OpenSSH Server

In this section, you are required to install and configure an SSH server on a Windows operating system.

This involves the following steps:

1. Install the Windows OpenSSH Server.
2. Configure the Windows OpenSSH Server to accept incoming connections.
3. Generate an SSH key pair for authenticating users.
4. Add the SSH key to the authorized keys file on the server.
5. Test the SSH server by connecting to it from a remote computer.
6. Configure the Windows Firewall to allow incoming connections to the SSH server.

Chapter V

Bonuses

You can include additional bonuses in this project. Here are some ideas for bonuses to consider for the application:

1. Implement limitations on the read/write access for users/groups based on the permissions of the connected user.

2. Provide the ability, if the connected user has sufficient rights, to create new users directly from the application.

3. Allow the connected user to access a remote desktop, enabling them to interact with folders and files remotely.

4. Integrate a chat feature that enables connected users to communicate with each other.

The bonus part will only be assessed if the mandatory part is PERFECT. Perfect means the mandatory part has been integrally done and works without malfunctioning. If you have not passed ALL the mandatory requirements, your bonus part will not be evaluated at all.

Chapter VI

Submission and peer-evaluation

You're provided with a helper pdf, foundable inside the attachments of the subject.
It will show you how to access the VMs created for you to complete this subject, how to lock your VMs, etc.

Once you've finish your assignment, you may lock your virtual machine, following the "Submission" section of the helper PDF. Note that, once locked, you will not be able to edit your virtual machines anymore, and a snapshot will be taken of your virtual machines at this moment, and will be reset to said snapshot before each evaluation.

So, be sure to have completly finished your work, as no modification non-requested by the scale will be acceptable during the evaluation !