

EX.NO: 3 **IDENTITY AND ACCESS MANAGEMENT**

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Aim:

To understand **identification, authentication, authorization, accountability, and identity management** in security.

Procedure

1. Learn the IAAA Model

Study the four core principles: Identification, Authentication, Authorization, and Accountability.

2. Understand Identification Methods

Explore how systems recognize users through unique identifiers like usernames or ID numbers.

3. Explore Authentication Techniques

Learn about different methods such as passwords, biometrics, and multi-factor authentication (MFA).

4. Study Authorization & Access Control Models

Understand how access is granted using models like Role-Based Access Control (RBAC), Mandatory Access Control (MAC), and Discretionary Access Control (DAC).

5. Learn About Logging & Accountability

Discover how system logs help track user actions and enforce accountability.

6. Understand Identity Management

Study how user identities are created, managed, and assigned roles within systems.

7. Identify Attacks on Authentication


Examine common attack methods such as brute force, phishing, and credential stuffing.

8. Compare Different Access Control Models

Analyze the strengths and weaknesses of various models like RBAC, MAC, DAC, and ABAC (Attribute-Based Access Control).

9. Learn About Single Sign-On (SSO)

Understand how SSO simplifies access by allowing users to authenticate once for multiple systems.



Identity and Access Management

Learn about identification, authentication, authorisation, accounting, and identity management.

Easy 120 min

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Room completed (100%)

- Task 1 Introduction
- Task 2 IAAA Model
- Task 3 Identification
- Task 4 Authentication
- Task 5 Authorisation and Access Control
- Task 6 Accountability and Logging
- Task 7 Identity Management
- Task 8 Attacks Against Authentication
- Task 9 Access Control Models
- Task 10 Single Sign-On

TASK 1:INTRODUCTION

What is the name of the room recommended to finish before this one?

Security Principles

✓ Correct Answer

TASK 2 : IAAA MODEL

You are granted access to read and send an email. What is the name of this process?

Authorisation

✓ Correct Answer

Which process would require you to enter your username?

Identification

✓ Correct Answer

Although you have write access, you should only make changes if necessary for the task. Which process is required to enforce this policy?

Accountability

✓ Correct Answer

TASK 3 : IDENTIFICATION

Which of the following **cannot** be used for identification?

1. Email address
2. Mobile number with international code
3. Year of birth
4. Passport number

3

✓ Correct Answer

Which of the following **cannot** be used for identification?

1. Landline phone number
2. Street number
3. Health insurance card number
4. Student ID number

2

✓ Correct Answer

TASK 4 : AUTHENTICATION

When you want to check your email, you enter your username and password. What kind of authentication is your email provider using?

1

✓ Correct Answer

Your bank lets you finish most of your banking operations using its app. You can log in to your banking app by providing a username and a password and then entering the code received via SMS. What kind of authentication is the banking app using?

4

✓ Correct Answer

Your new landline phone system at home allows callers to leave you a message when the call is not picked up. You can call your home number and enter a secret number to listen to recorded messages. What kind of authentication is being used here?

1

✓ Correct Answer

You have just started working at an advanced research centre. You learned that you need to swipe your card and enter a four-digit PIN whenever you want to use the elevator. Under which group does this authentication fall?

4

✓ Correct Answer

TASK 5 : AUTHORISATION AND ACCESS CONTROL

The new policy states that the secretary should be able to send an email on the manager's behalf. What is this policy dictating?

1

✓ Correct Answer

You shared a document with your colleague and gave them view permissions so they could read without making changes. What would ensure that your file won't be modified?

2

✓ Correct Answer

The hotel management decided that the cleaning staff needed access to all the hotel rooms to do their work. What phase is this decision part of?

1

✓ Correct Answer

TASK 6 : ACCOUNTABILITY AND LOGGING

TASK 7 : IDENTITY MANAGEMENT

What does IdM stand for?

Identity Management

✓ Correct Answer

What does IAM stand for?

Identity and Access Management

✓ Correct Answer

TASK 8 : ATTACKS AGAINST AUTHENTICATION

The attacker could authenticate using the user's response when the authentication protocol required a password encrypted with a shared key. What is the name of the attack?

Replay Attack

✓ Correct Answer

TASK 9 : ACCESS CONTROL MODELS

You are sharing a document via a network share and giving edit permission only to the accounting department. What example of access control is this?

2

✓ Correct Answer

You published a post on a social media platform and made it only visible to three out of your two hundred friends. What kind of access control did you use?

1

✓ Correct Answer

TASK 10 : SINGLE SIGN-ON

What does SSO stand for?

Single Sign-On

✓ Correct Answer

Does SSO simplify MFA use as it needs to be set up once? (Yea/Nay)

Yea

✓ Correct Answer

Is it true that SSO can be cumbersome as it requires the user to remember and input different passwords for the various services? (Yea/Nay)

Nay

✓ Correct Answer

Does SSO allow users to access various services after signing in once? (Yea/Nay)

Yea

✓ Correct Answer

Does the user need to create and remember a single password when using SSO? (Yea/Nay)

Yea

✓ Correct Answer

TASK 11 : SCENARIOS

Click on **View Site** and follow the exercise to get a flag.

{THM_ACCESS_CONTROL}

Result:

TryHackMe platform **Identity and Access Management** tasks have been successfully completed.