**Hardware Vulnerability Research**

**CYBR3020**

**Vulnerabilities and Exploits**

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Table of Contents

[Introduction 1](#_Toc210408021)

[Topic 1 1](#_Toc210408022)

[Subtopic 1.1 1](#_Toc210408023)

[Subtopic 1.2 1](#_Toc210408024)

[Subtopic 1.3 2](#_Toc210408025)

[Topic 2 2](#_Toc210408026)

[Subtopic 2.1 2](#_Toc210408027)

[Subtopic 2.2 2](#_Toc210408028)

[Subtopic 2.3 2](#_Toc210408029)

[Subtopic 2.4 2](#_Toc210408030)

[Topic 3 2](#_Toc210408031)

[Subtopic 3.1 2](#_Toc210408032)

[Subtopic 3.2 2](#_Toc210408033)

[Subtopic 3.3 2](#_Toc210408034)

# Introduction

In today’s digital age, organizations are exposed to an intentional and unauthorized actions against a computer system or network to compromise its data or functionality. Such action includes cyberattack, cyber intrusion, security breach, malicious hacking, and unauthorized access.

# Topic 1

One of the crucial components of an organization’s security strategy is often referred to as Identity and Access Management (IAM). IAM ensures that the right people, machines, and software components access the right digital resources at the right time and for the right reasons.

## Subtopic 1.1

IAAA (Identification, Authentication, Authorization, Accountability) is the foundation of Identity and Access Management (IAM). IAM is a discipline and a type of framework for solving the challenge of secure access to digital resources.

## Subtopic 1.2

Authentication provides a way of identifying a user. It can be done through various mechanisms: something you know, something you have, something you are, and multi-factor authentication.

## Subtopic 1.3

Once the system has successfully validated a user through authentication, it moves to the stage where a system determines the specific actions and resources a user is allowed to access. This is the authorization stage where it ensures that users or systems can only access resources and perform actions they are permitted to. Proper authorization prevents unauthorized actions

# Topic 2

## Subtopic 2.1

## Subtopic 2.2

## Subtopic 2.3

## Subtopic 2.4

# Topic 3

## Subtopic 3.1

## Subtopic 3.2

## Subtopic 3.3

References