

The logo for FIU (Florida International University) is located in the top left corner. It consists of the letters 'FIU' in a bold, blue, blocky font with a yellow outline. The background of the entire slide is a complex, glowing blue and teal digital circuit board pattern with various geometric shapes and lines.

FIU

EXPLORING PENETRATION TESTING TECHNIQUES: A PRACTICAL GUIDE

EEL4806 RVBB 1241: Ethical Hacking and Countermeasures.

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INTRODUCTION

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2. What is Penetration Testing?
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INTRODUCTION



"IN CYBERSPACE, THE
SILENT WARRIORS ARE
THE ONES WHO
PROTECT US ALL."

"DID YOU KNOW I ONCE
ACCIDENTALLY HACKED INTO MY
OWN WI-FI NETWORK WHILE TRYING
TO TROUBLESHOOT?"



"Did you know that a new cybersecurity attack is launched every 39 seconds?"

WHAT IS PENETRATION TESTING?

- "Proactive approach"
- "Identifying vulnerabilities"
- "Mitigating risks"



PENETRATION TESTING METHODOLOGIES



The Ransomware Attack on Norsk Hydro:

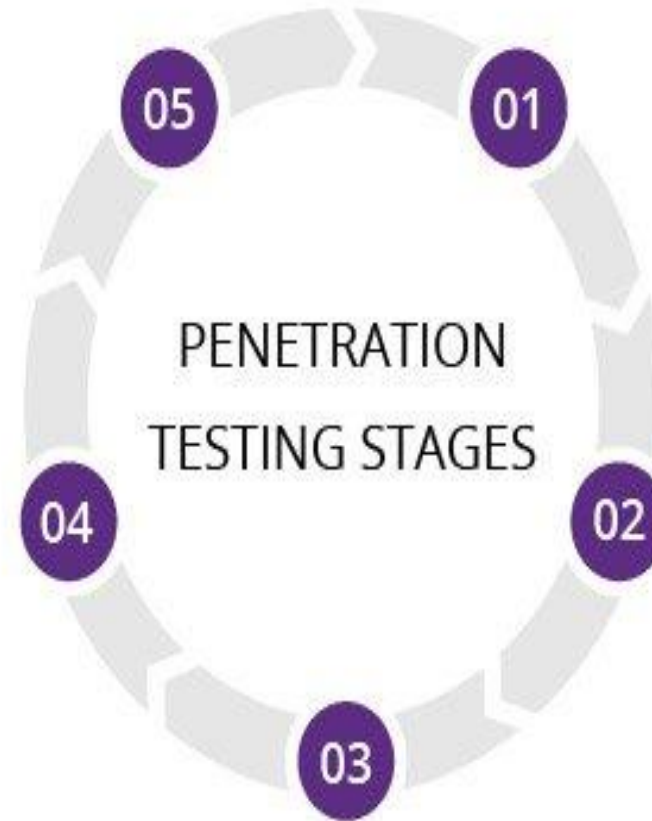
The test identified several vulnerabilities that could have been exploited by the attackers to gain access to Norsk Hydro's systems. The penetration test allowed Norsk Hydro to identify and address these vulnerabilities before any further attacks could occur.

Analysis and WAF configuration

Results are used to configure WAF settings before testing is run again.

Maintaining access

APTs are imitated to see if a vulnerability can be used to maintain access.



Planning and reconnaissance

Test goals are defined and intelligence is gathered.

Scanning

Scanning tools are used to understand how a target responds to intrusions.

Gaining access

Web application attacks are staged to uncover a target's vulnerabilities.

PENETRATION TESTING TOOLS

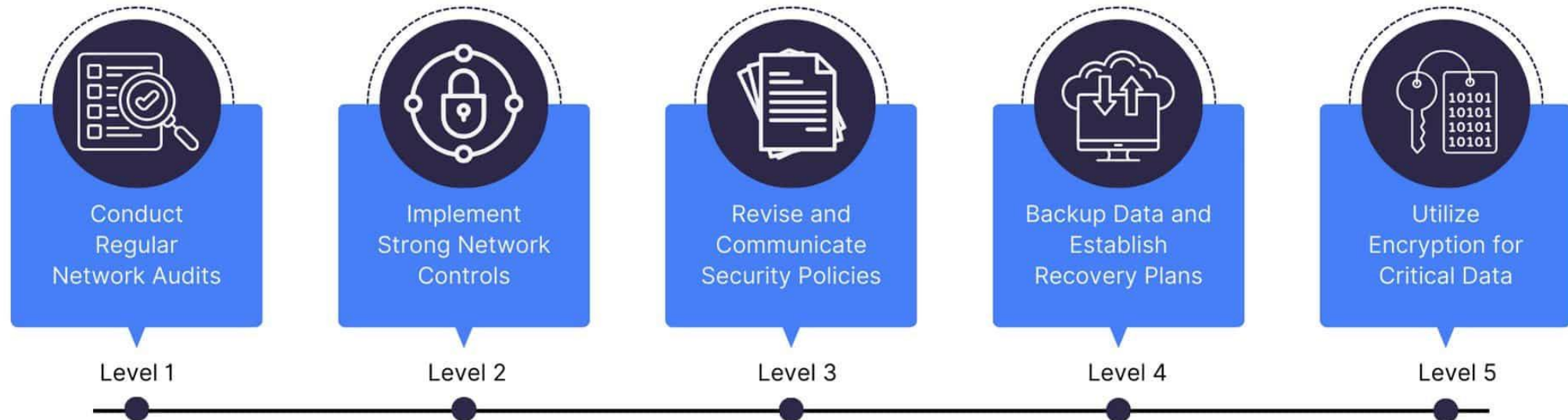


HANDS-ON PENETRATION TESTING



BEST PRACTICES AND MITIGATION TECHNIQUES

Securing the Network Foundation





THANK YOU

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