



Technical report

Operating Systems ST0257



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1 General Research

The first activity is simple, the idea is just research about the history of the operating systems.

1.1 Assignment

- Make a conceptual map about operating systems.
- Make a timeline that reflects the history and generation of operating systems.

1.2 Conceptual Map

This is the conceptual map using draw.io:

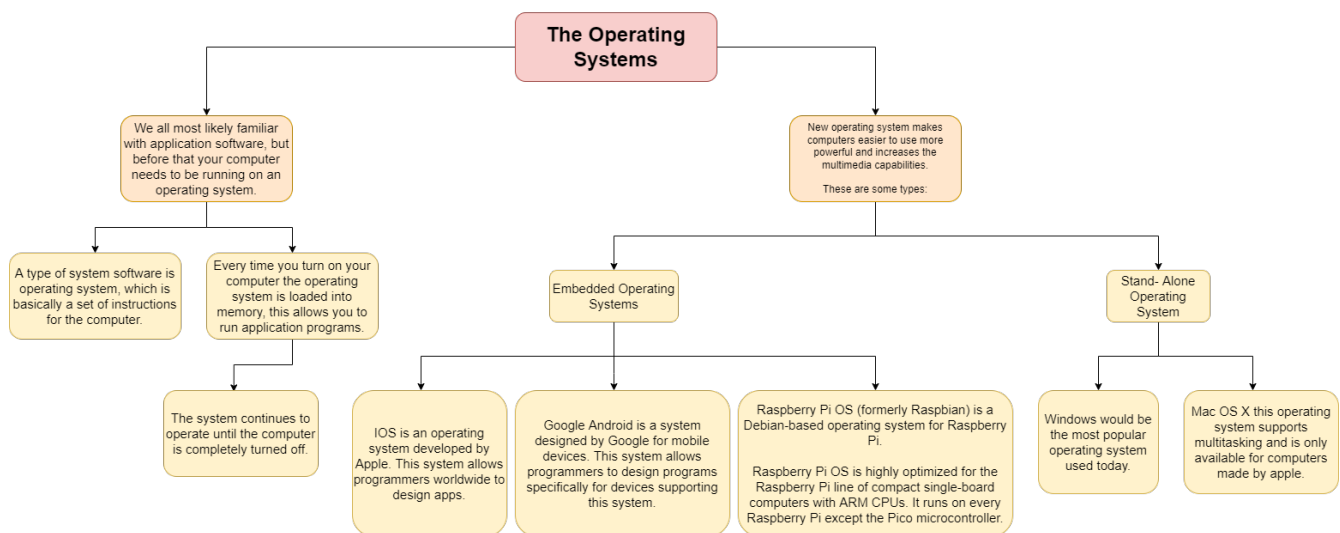


Figure 1: Operating Systems Conceptual Map

URL

[ConceptualMap.png](#) [GitHub file](#)

1.3 Timeline

This is the Operating System Timeline using draw.io:

URL

[OperatingSystemsTimeLine.png](#) [GitHub file](#)

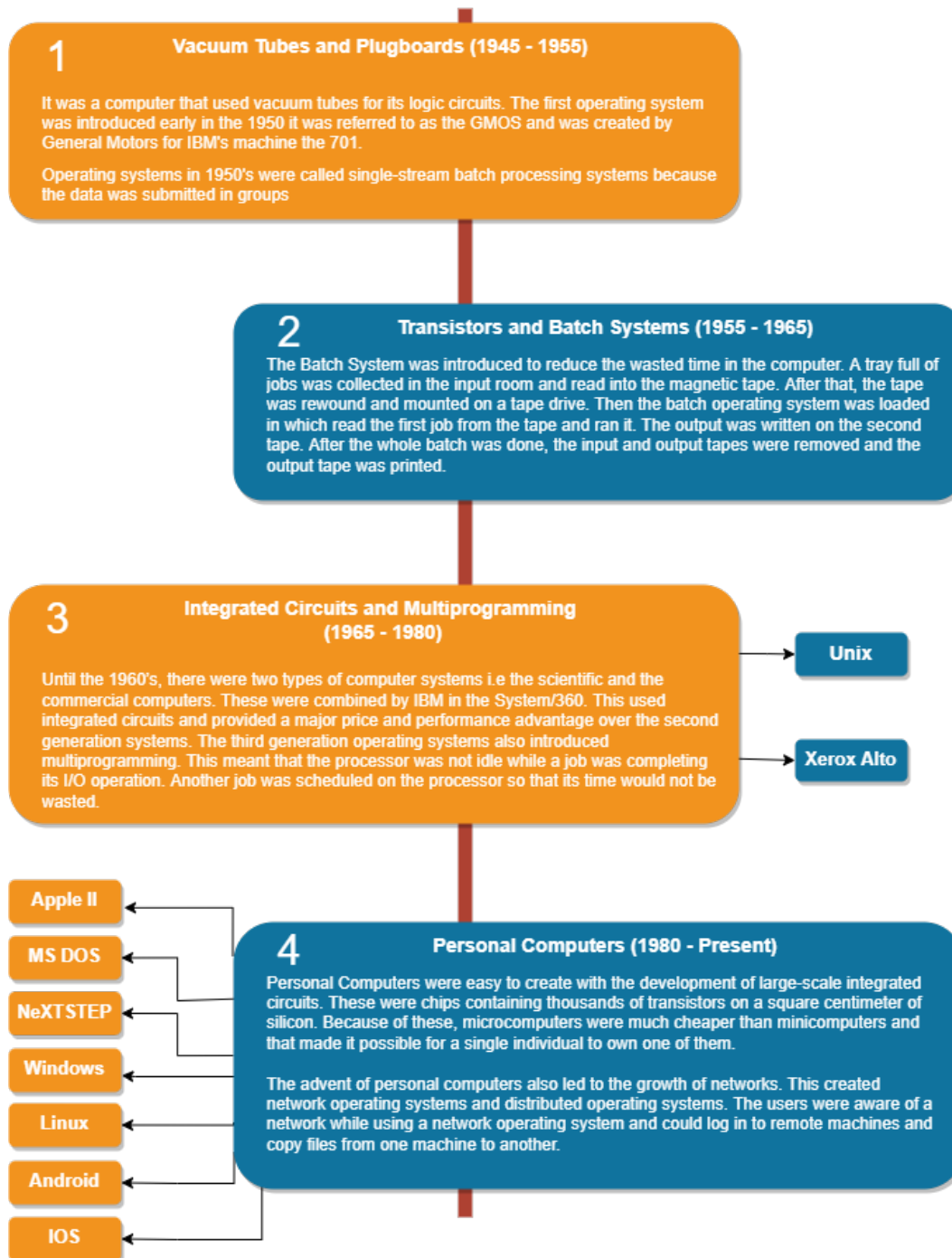


Figure 2: Operating Systems Timeline

2 Disclaimer

A penetration test is considered a snapshot in time. The findings and recommendations reflects the information gathered during the assessment and not any changes or modifications made outside of that period.

Time-limited engagements do not allow for a full evaluation of all security controls. **EAFIT** prioritized the assessment to identify the weakest security controls an attacker would exploit. **EAFIT** recommends conducting similar assessments on an annual basis by internal or third-party assessors to ensure the continued success of the controls.

2.1 Confidentiality Statement

This document is the exclusive property of **EAFIT**. This document contains proprietary and confidential information. Duplication, redistribution, or use, in whole or in part, in any form, requires consent of **EAFIT**.

2.2 Contact info

Contact info.			
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2.3 Assesment overview

From *Date 1* to *Date 2*, **EAFIT** engaged Penetration tests to evaluate the security posture of its infrastructure compared to current industry best practices. All testing performed is based on the NIST SP 800-115 Technical Guide to Information Security Testing and Assessment, OWASP Testing Guide (v4), and customized testing frameworks.

Phases conducted for penetration testing are the following:

- Planning and preparation.
- Reconnaissance / Discovery.
- Vulnerability Enumeration / Analysis.
- Initial Exploitation.
- Expanding Foothold / Deeper Penetration.
- Cleanup.
- Report Generation.

3 Antecedents

The following document takes all the processes and results given by the audit made to the machine **Operating Systems ST0257** from the platform **HackTheBox**.



Figure 3: Details of the machine

URL

<https://app.hackthebox.com/machines/98>

3.1 considerations

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3.2 examples

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4 Objectives

The idea is to check the machine state of the machine **Operating Systems ST0257**.

4.1 considerations

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4.2 results

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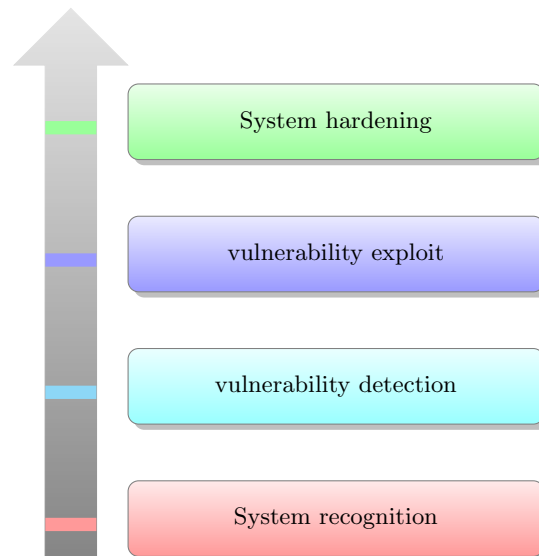


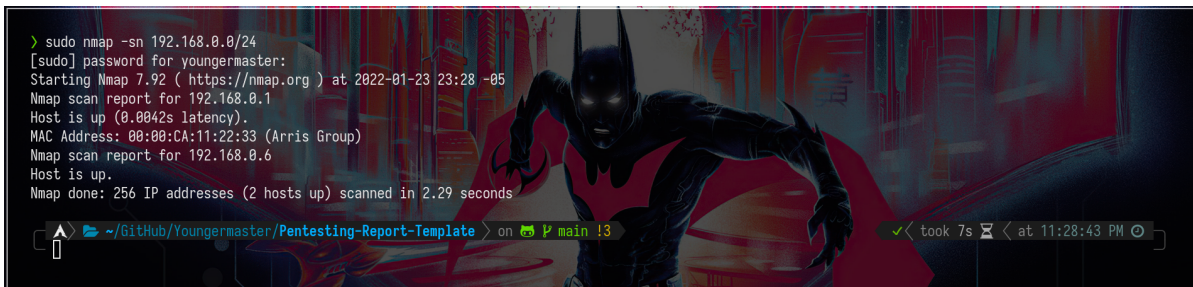
Figure 4: Workflow

5 Vulnerability analysis

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5.1 Initial Recognition

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5.2 Improvement

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```

1 # This function is taken from S4vitar's blog.
2 # https://s4vitar.github.io/bspwm-configuration-files/
3
4 ports="$(cat $1 | grep -oP '\d{1,5}/open' | awk '{print $1}' FS='/' | xargs | tr ' ' ',')"
5 ip_address="$(cat $1 | grep -oP '\d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}' | sort -u | head -n 1)"
6 echo -e "\n[*] Extracting information...\n" > extractPorts.tmp
7 echo -e "\t[*] IP Address: $ip_address" >> extractPorts.tmp
8 echo -e "\t[*] Open ports: $ports\n" >> extractPorts.tmp
9 echo $ports | tr -d '\n' | xclip -sel clip
10 echo -e "[*] Ports copied to clipboard\n" >> extractPorts.tmp
11 cat extractPorts.tmp; rm extractPorts.tmp
  
```

Code 1: This script allow us to extract nmap generated info

Donec ut tincidunt dolor. Curabitur sit amet porttitor magna, nec consectetur mi. Praesent quis congue tellus, a tincidunt mauris. Aenean sed luctus enim. Donec ut maximus nisi, sed malesuada erat. Aliquam sollicitudin ullamcorper sem vitae ultrices. Sed iaculis enim egestas, suscipit arcu ac, lacinia risus. Proin scelerisque mi eu feugiat euismod:

TCP
Ports
593, 1337

Vivamus vitae elit porta, tempor justo tincidunt, accumsan ligula. Proin nec magna sit amet leo dignissim sollicitudin sit amet ut quam:

```
> cat ../Hacking-Challenges/HackTheBox/0.common_utilities/nmap_port_scanner.sh

File: ../Hacking-Challenges/HackTheBox/0.common_utilities/nmap_port_scanner.sh

1  # -sCV gets the version and the services that runs on the given ports.
2  # -p$(ports) The given ports.
3  # -oN exports all the info in a "targeted" mode.
4
5  nmap -sCV -p$(ports) $ip -oN targeted
6
7  # Note: If the target blocks the pings, use the -Pn flag
8
9  nmap -sCV -p$(ports) $ip -oN targeted -Pn

~/GitHub/Youngermaster/Pentesting-Report-Template on main !4
```

Figure 5: These are the results of lorem ipsum

Ut vulputate fermentum scelerisque 5 and 8. Interdum et malesuada fames ac ante ipsum primis in faucibus.