Vulnerability Assessment & System Setup Report

---Windows 7

---by vinayak chauhan

Introduction

Windows 7 is a Microsoft Windows operating system that was widely used for personal and enterprise computing. Although it has reached end-of-life, Windows 7 is still studied in cybersecurity education to understand legacy systems, operating system vulnerabilities, and security misconfigurations.

This report documents the process of downloading, installing, and verifying Windows 7 in a virtual environment using Oracle VirtualBox for educational and learning purposes only.

1.1 Objective of the Report

The objectives of this report are:

- To document the process of installing Windows 7 in a virtual machine
- To understand legacy operating system environments
- To verify successful system setup
- To create an isolated lab environment for academic study
- To follow ethical and legal practices during installation

1.2 Scope of the Report

This report includes:

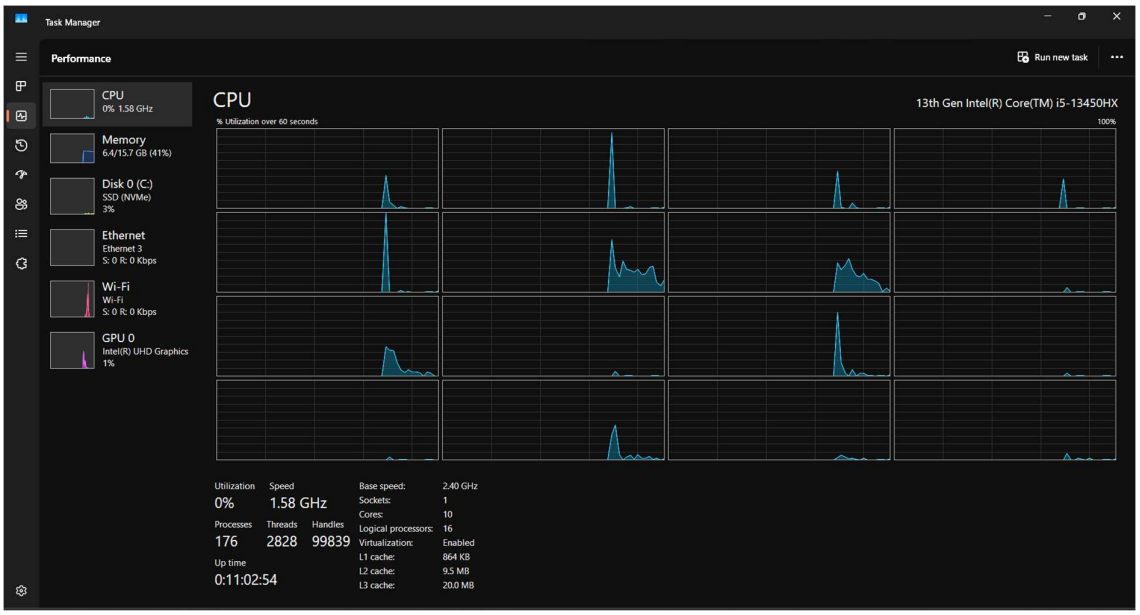
- System and software requirements
- Download and installation procedure
- Virtual machine configuration
- Post-installation verification
- Observations and challenges faced
- Security considerations related to legacy systems

System Requirements

2.1 Hardware Requirements

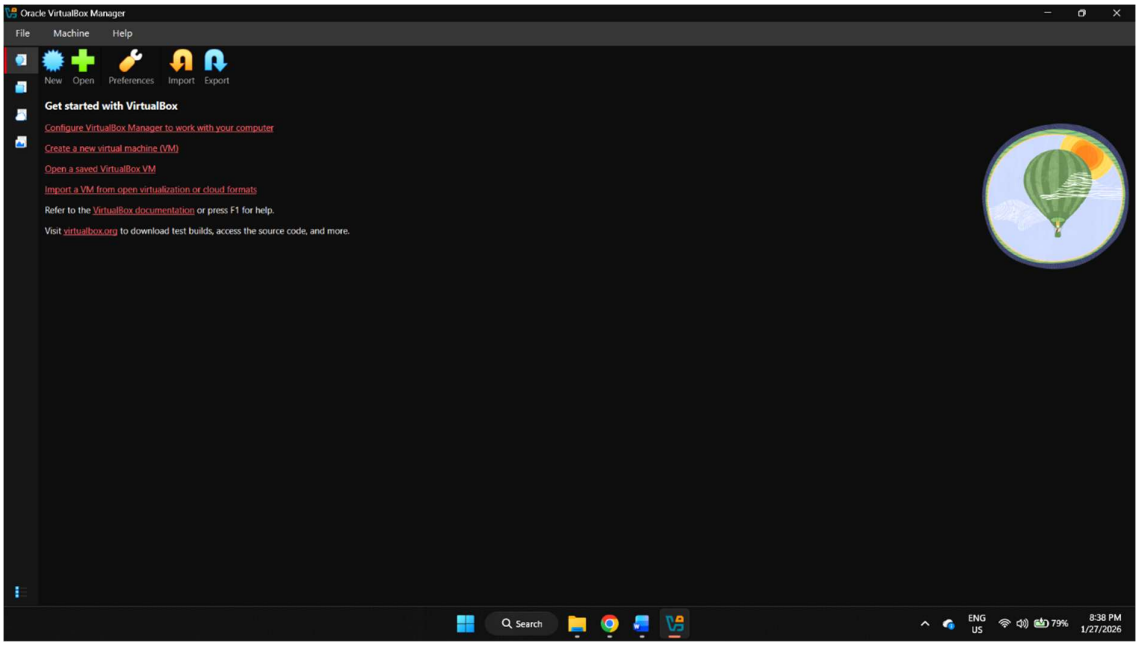
Minimum hardware requirements:

- Processor: Intel/AMD 64-bit processor
- RAM: Minimum 2 GB
- Storage: Minimum 25 GB free disk space
- Virtualization: Enabled in BIOS/UEFI



2.2 Software Requirements

- Host Operating System: Windows 10 / Windows 11
- Virtualization Software: Oracle VirtualBox
- Guest Operating System: Windows 7 ISO
- Internet Connection: Optional (limited use recommended)


Oracle VirtualBox Manager
File
Machine
Help
New
Open
Preferences
Import
Export
Get started with VirtualBox
Configure VirtualBox Manager to work with your computer
Create a new virtual machine (VM)
Open a saved VirtualBox VM
Import a VM from open virtualization or cloud formats
Refer to the VirtualBox documentation or press F1 for help.
Visit virtualbox.org to download test builds, access the source code, and more.
Search
ENG
US
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Download Procedure

3.1 Downloading Oracle VirtualBox

Steps followed:

1. Visited the official Oracle VirtualBox website
2. Selected the Windows host installer
3. Downloaded the installer package
4. Installed VirtualBox using default settings

3.2 Downloading the Operating System Image

Steps followed:

1. Obtained Windows 7 ISO for academic and learning purposes
2. Verified the ISO file integrity
3. Stored the ISO file locally for virtual machine installation

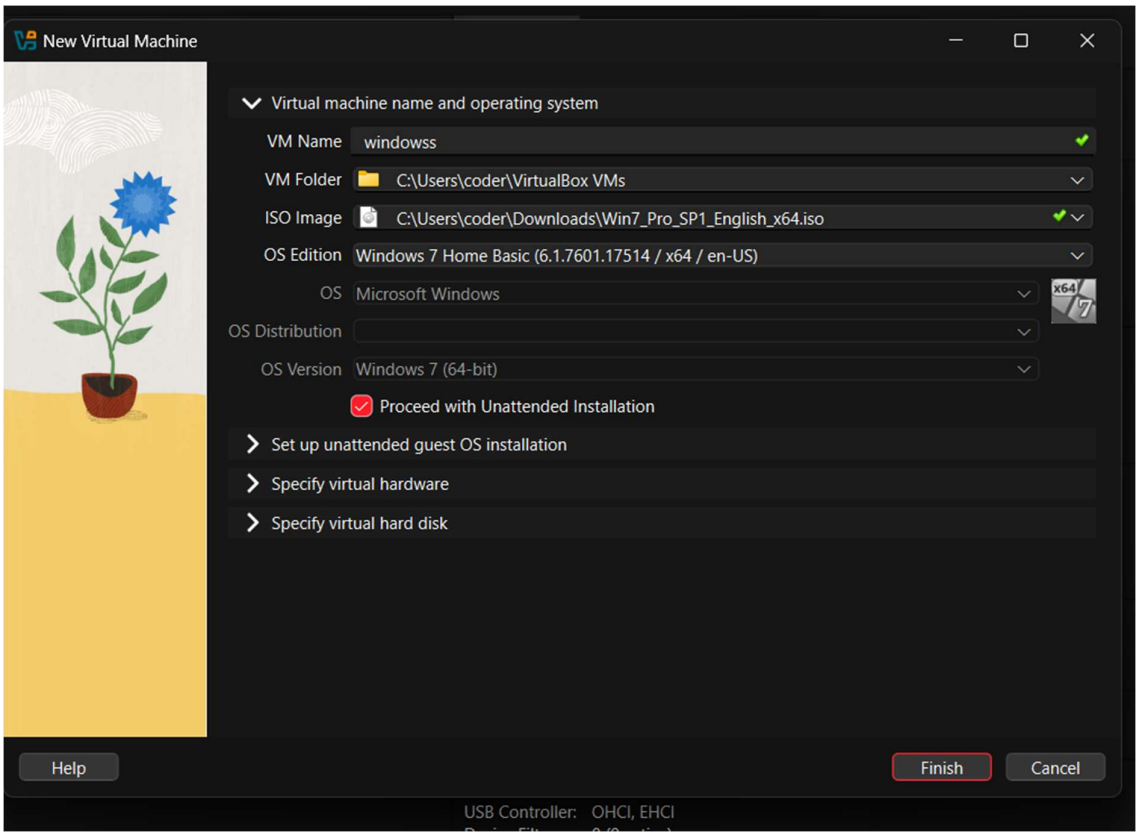
⚠️ *The operating system was used strictly for educational purposes in a controlled environment.*

Installation and Configuration

4.1 Virtual Machine Creation

Steps followed:

1. Opened Oracle VirtualBox
2. Clicked **New** to create a virtual machine
3. Named the virtual machine as **Windows 7**
4. Selected Type: Microsoft Windows
5. Selected Version: Windows 7 (64-bit)

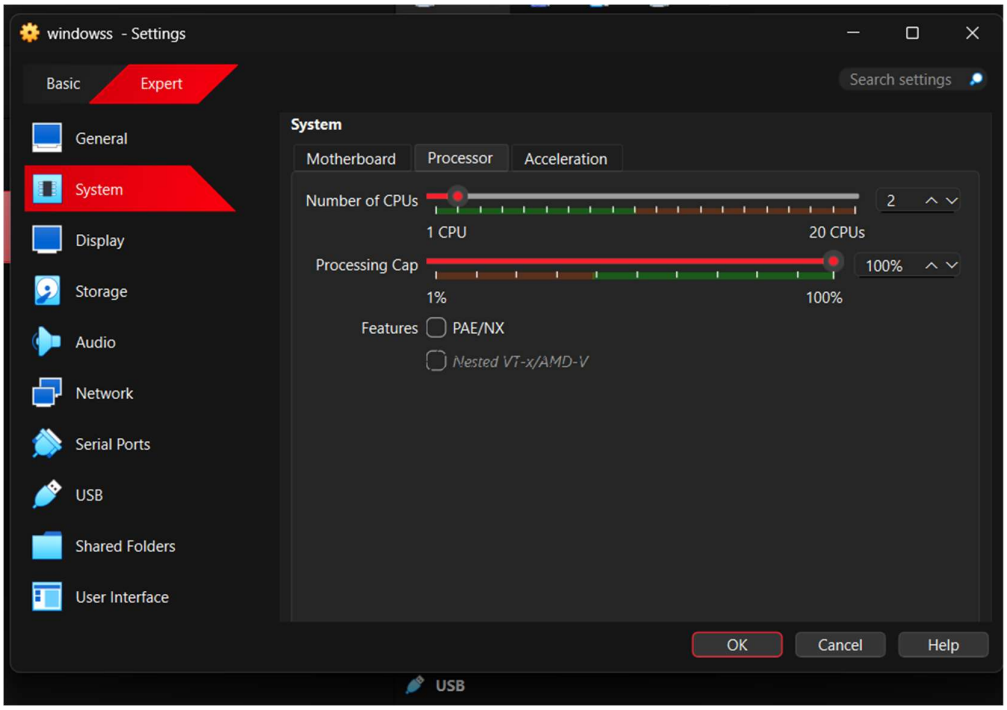


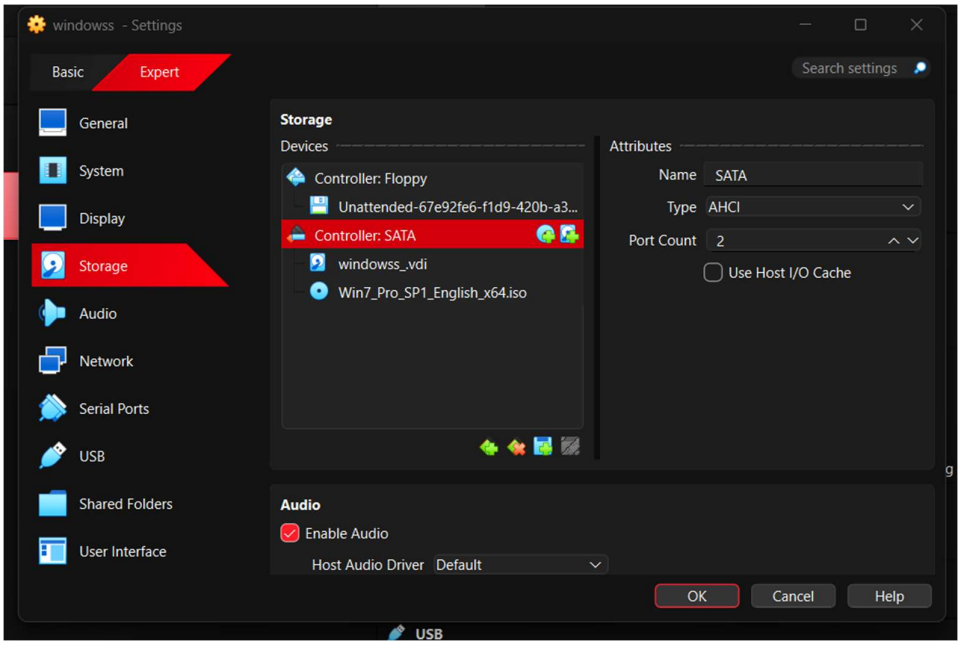
4.2 Resource Allocation (RAM, CPU, Storage)

Resources allocated:

- RAM: 2048 MB
- CPU Cores: 2
- Storage Type: VDI (Dynamically Allocated)
- Disk Size: 30 GB

These settings ensure stable performance within the virtual environment.

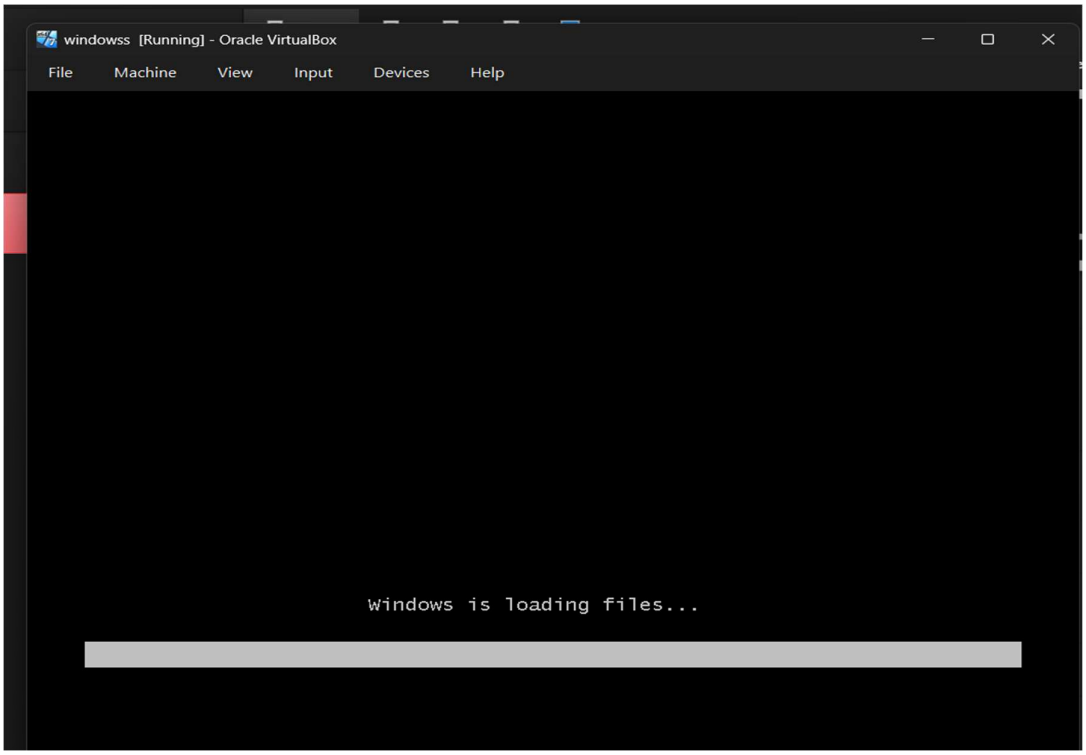


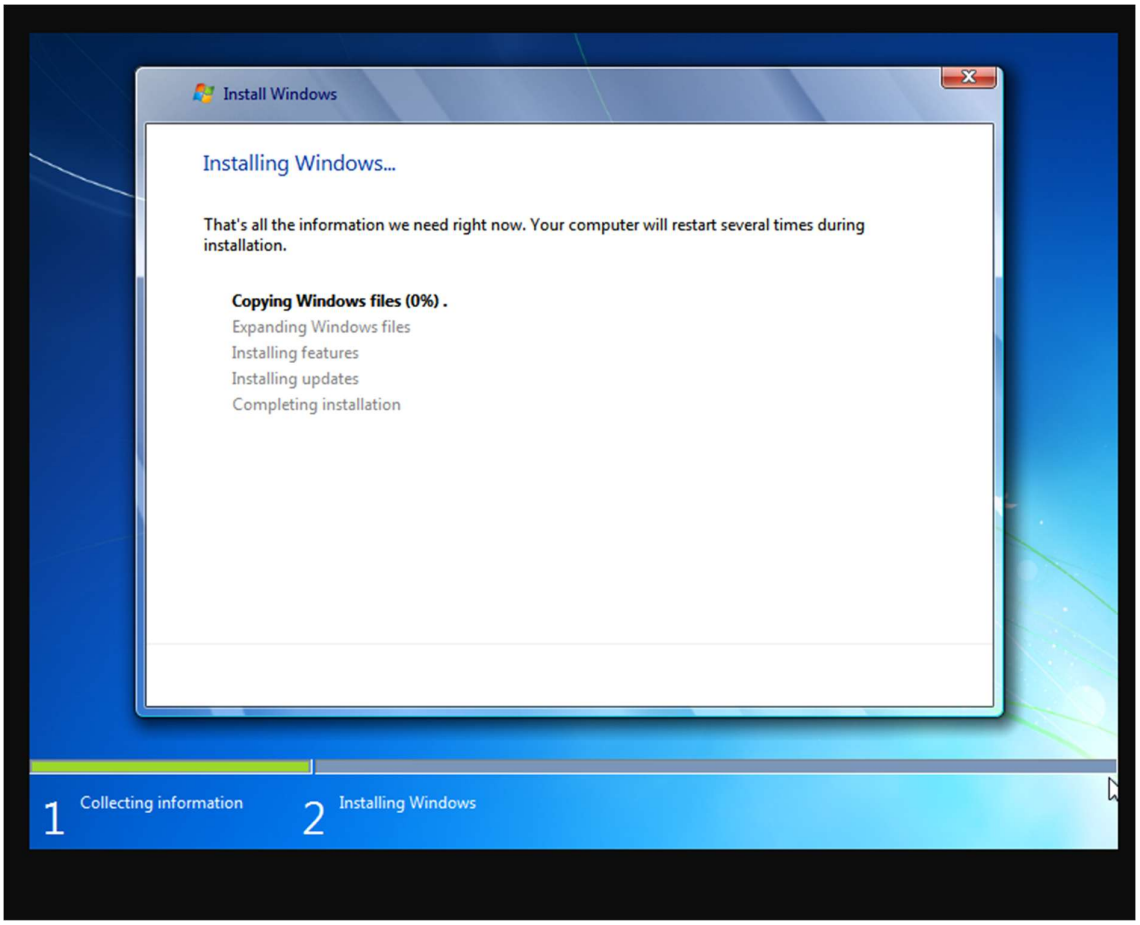


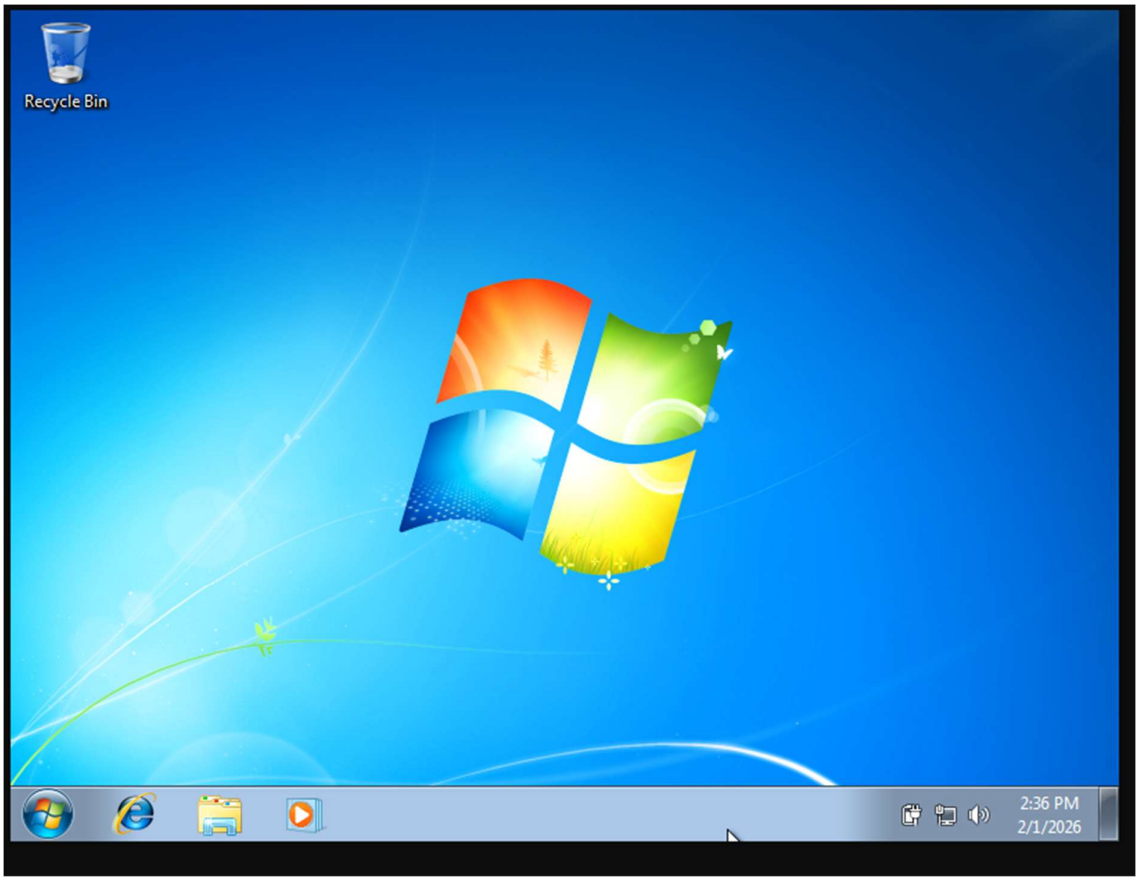
4.3 Operating System Installation Steps

Steps followed:

1. Attached Windows 7 ISO file to the virtual machine
2. Started the virtual machine
3. Followed Windows installation wizard
4. Selected language, time, and keyboard settings
5. Completed installation process
6. Rebooted into Windows 7 desktop


windowss [Running] - Oracle VirtualBox
File
Machine
View
Input
Devices
Help
Windows is loading files...


Install Windows
Installing Windows...
That's all the information we need right now. Your computer will restart several times during installation.
Copying Windows files (0%) .
Expanding Windows files
Installing features
Installing updates
Completing installation
1
Collecting information
2
Installing Windows


Recycle Bin
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Post-Installation Verification

5.1 Successful Boot Verification

The system booted successfully into the Windows 7 desktop environment without errors.

5.2 Network Connectivity Verification

Network connectivity was tested within the virtual environment.

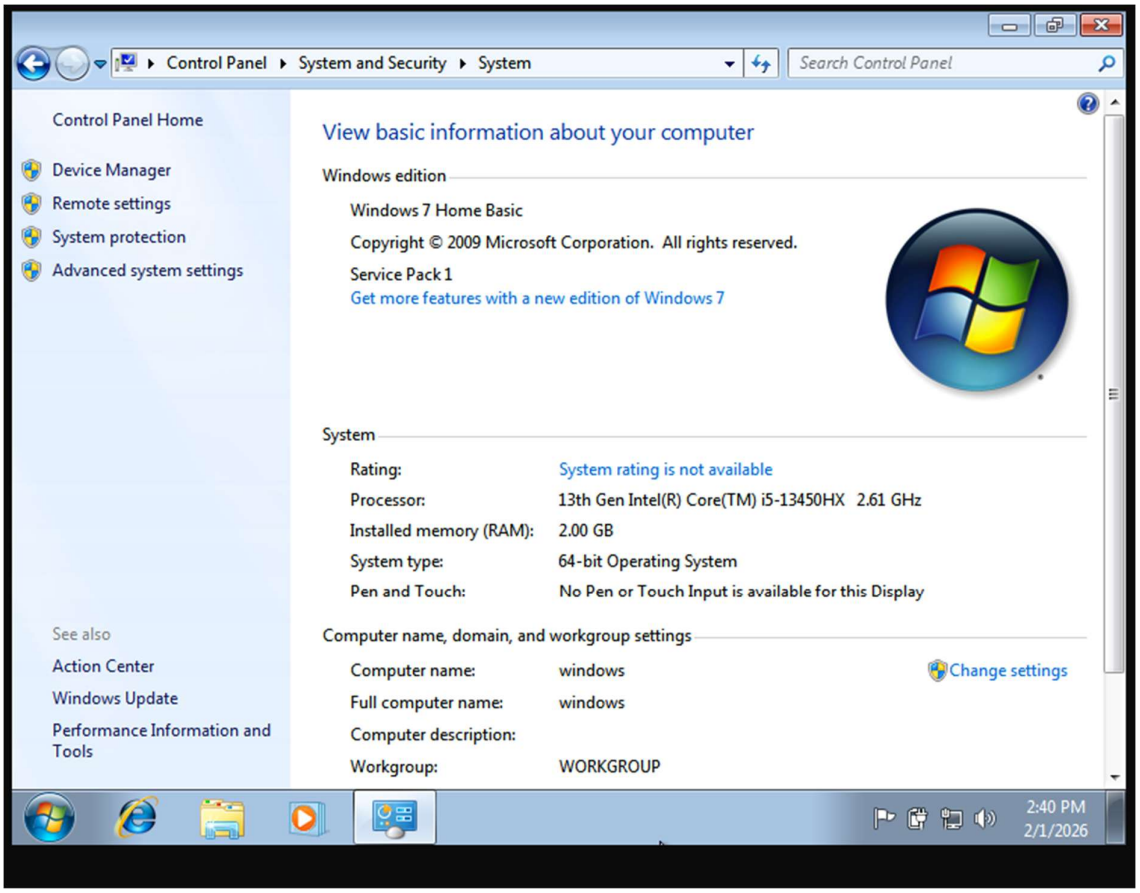
Verification method:

- Network status check
- Limited connectivity testing

5.3 System Information Verification

System information verified:

- Operating System: Windows 7
- System Type: 64-bit
- RAM and Processor Details


Control Panel ▸ System and Security ▸ System
Search Control Panel
Control Panel Home
Device Manager
Remote settings
System protection
Advanced system settings
View basic information about your computer
Windows edition
Windows 7 Home Basic
Copyright © 2009 Microsoft Corporation. All rights reserved.
Service Pack 1
Get more features with a new edition of Windows 7
System
Rating: System rating is not available
Processor: 13th Gen Intel(R) Core(TM) i5-13450HX 2.61 GHz
Installed memory (RAM): 2.00 GB
System type: 64-bit Operating System
Pen and Touch: No Pen or Touch Input is available for this Display
Computer name, domain, and workgroup settings
Computer name: windows
Change settings
Full computer name: windows
Computer description:
Workgroup: WORKGROUP
See also
Action Center
Windows Update
Performance Information and Tools
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Observations

- Windows 7 installation completed successfully
- System performance stable in virtual environment
- User interface is simple and familiar
- Suitable for studying legacy operating systems

Challenges Faced and Solutions

7.1 Errors Encountered

Issue	Cause
Installation slow	Limited system resources
Display resolution issue	Missing display drivers
Network not working	Driver compatibility

7.2 Troubleshooting Steps

Issue	Solution
Performance improved	Increased RAM
Display fixed	Installed Guest Additions
Network configured	Changed network adapter settings

Security Considerations

⚠️ **Important Security Notice**

- Windows 7 is an end-of-life operating system
- The system contains known vulnerabilities
- Installed only in an isolated virtual lab
- Not connected to public networks
- Used strictly for academic and learning purposes
- No real-world systems were affected

Conclusion

This report successfully documents the installation and configuration of Windows 7 in a virtual environment. The exercise provided valuable insights into legacy operating systems, virtualization technology, and the importance of secure system deployment.

References

- Oracle VirtualBox – https://www.virtualbox.org
- Microsoft Windows Documentation
- Cybersecurity Learning Resources