

# IT Laptop and System Performance Guide

## Purpose

This guide provides baseline standards and troubleshooting steps to maintain laptop and workstation performance for all employees.

## Minimum Performance Standards

Device Tier	CPU	Memory	Storage	Notes
Standard	Intel i5 / Ryzen 5	16 GB	512 GB SSD	Default corporate build
Power User	Intel i7 / Ryzen 7	32 GB	1 TB SSD	Engineering / analytics

## Daily Performance Checklist

- Reboot at least once per week to clear memory fragmentation.
- Close unused applications and browser tabs.
- Verify disk space stays above 15% free.
- Install OS and security updates within 7 days of release.

## Common Causes of Slowness

- High CPU usage from background apps or antivirus scans.
- Low disk space or heavy disk I/O.
- Excessive browser extensions or cached data.
- Outdated drivers or pending OS updates.

## Troubleshooting Steps

Symptom	Action	Expected Result
System slow after login	Restart and disable startup apps	Boot time under 3 minutes
Fan noise / heat	Check CPU usage and clean vents	CPU < 60% during idle
App freezing	Update app and clear cache	App opens within 20 seconds

## Performance Metrics

CPU Utilization % = (Active CPU Time / Total Time) x 100. Disk I/O Queue > 2 for 5+ minutes indicates storage bottleneck.

## Approved Maintenance Tools

- Task Manager or Activity Monitor for process review.
- Disk Cleanup / Storage Sense for temporary files.
- Endpoint management tools for updates and compliance.

## **Battery Health**

Battery Health % = (Current Full Charge Capacity / Design Capacity) x 100. Replace battery if health < 70%.

## **Storage Management**

- Archive project files older than 12 months to approved storage.
- Avoid local storage of sensitive data; use encrypted drives.
- Purge Downloads and temp folders monthly.

## **Network Performance**

Latency (ms) = round-trip time to gateway. Target < 50 ms on corporate networks.

## When to Contact IT

- Persistent slowness after completing the checklist.
- Hardware errors (disk failure, memory errors).
- Repeated application crashes or blue screens.

## Replacement Criteria

Condition	Action
Device age > 4 years	Evaluate for replacement
Battery health < 70%	Replace battery or device
Storage failure SMART alert	Immediate replacement

## Version History

Version	Date	Description
1.0	2025-01-05	Initial performance guide
1.1	2026-02-01	Updated standards for power users