

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- Outdated drivers or pending OS updates.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