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## Non-Technical Summary

A simulated security assessment was conducted on a vulnerable virtual machine to evaluate its ability to withstand real-world cyberattacks. The test uncovered a serious flaw in the Samba service, which allowed remote attackers to gain full system control. Using standard penetration testing tools, the vulnerability was successfully exploited, and administrative access was achieved. Remediation steps, including service upgrades and configuration hardening, were implemented and verified through follow-up scanning. This exercise demonstrates the critical need for timely software patching, regular vulnerability assessments, and secure system configurations to reduce exposure and prevent unauthorized access, data breaches, and potential operational disruptions.