

What is a Virtual Machine? | Microsoft Azure

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- A virtual machine (VM) is a software-based, or virtual version of a physical computer. It functions identically to a real computer, running an operating system and applications effectively. VMs allow multiple operating systems to run on a single physical machine, providing benefits like improved resource utilization, isolation of applications, enhanced security, and the ability to test and develop software in isolated environments.
- VMs are software emulations of physical computers, while virtual desktops are user interfaces that allow access to a desktop environment hosted on a remote server. The key difference is that VMs emulate entire computers, whereas [virtual desktops](#) provide remote access to a desktop environment.
- An example of a VM is VMware Workstation, which allows users to run multiple operating systems like Windows, Linux, and macOS on a single physical computer. This lets developers test software in different environments without needing separate hardware.
- VMs are generally safe as they provide isolation between the host system and the VM, reducing the risk of malware spreading. However, their safety depends on proper configuration, regular updates, and security practices. VMs can still be vulnerable to attacks if not managed correctly, so it's essential to follow best practices for security.
- Yes, you can run a VM on your phone. Specialized apps will allow you to access and manage VMs remotely, providing a similar experience to running them on a computer.
- Yes, a VM takes up storage on the host system. The amount of storage depends on the size of the virtual hard disk, the operating system, and any installed applications. VMs can be configured to dynamically allocate storage as needed or use a fixed amount of storage.

Source: <https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-a-virtual-machine/>