# Virtual Machines

# 3. Virtual Machines

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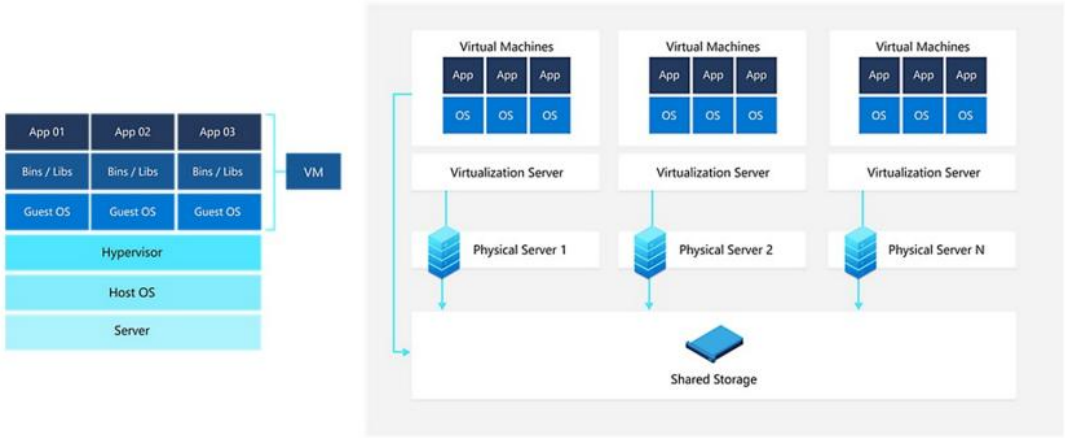
While the parts that make up your computer (called hardware) are physical and tangible, VMs are often thought of as virtual computers or software-defined computers within physical servers, existing only as code.

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**What are VMs used for?**

Here are a few ways virtual machines are used:

1. Building and deploying apps to the cloud.
2. Trying out a new operating system (OS), including beta releases.
3. Spinning up a new environment to make it simpler and quicker for developers to run dev-test scenarios.
4. Backing up your existing OS.
5. Running software or apps on operating systems that they weren't originally intended for.

**What are the benefits of using VMs?**

1. Cost saving
2. Agility and speed
3. Lowered downtime
4. Scalability
5. Security benefits

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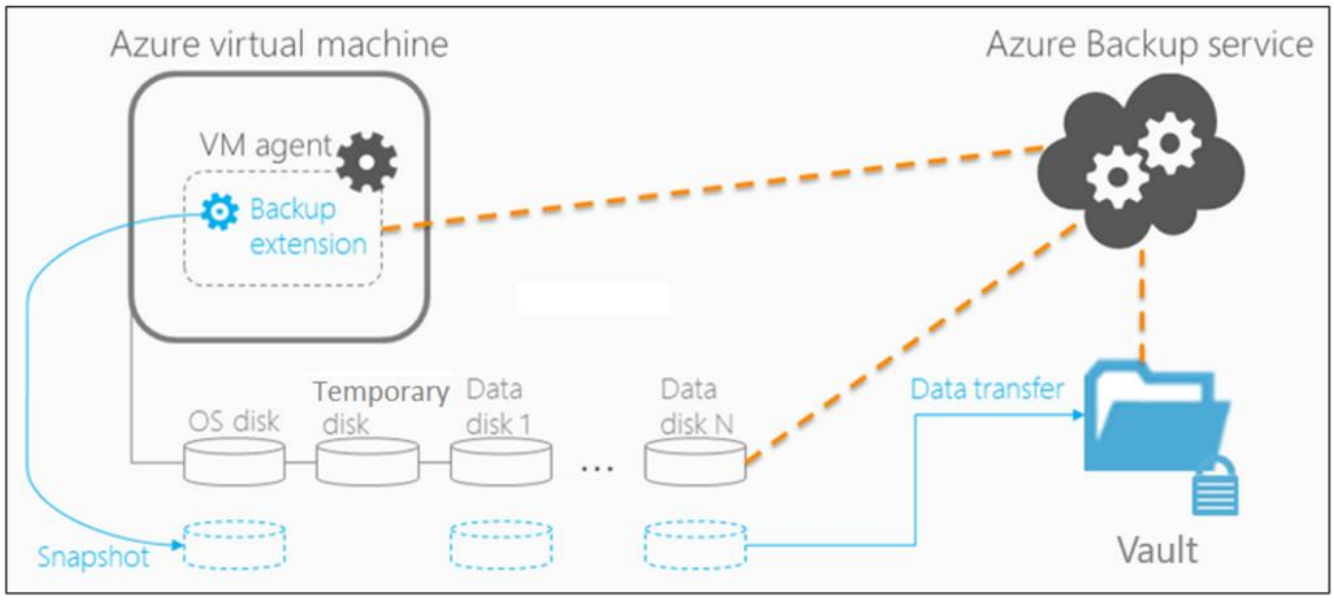
**Backup process-**

Here's how Azure Backup completes a backup for Azure VMs:

1. For Azure VMs that are selected for backup, Azure Backup starts a backup job according to the backup schedule you specify.
2. If you have opted for application or file-system consistent backups, the VM needs to have a backup extension installed to coordinate for the snapshot process. If you have opted for crash-consistent backups, no agents are required in the VMs.
3. During the first backup, a backup extension is installed on the VM if the VM is running.
4. After Backup takes the snapshot, it transfers the data to the vault.




**Backup costs –**

Billing doesn't start until the first successful backup finishes. At this point, the billing for both storage and protected VMs begins. Billing continues as long as any backup data for the VM is stored in a vault. If you stop protection for a VM, but backup data for the VM exists in a vault, billing continues.