

SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution

Coimbatore-35



Department of Computer Science and Engineering

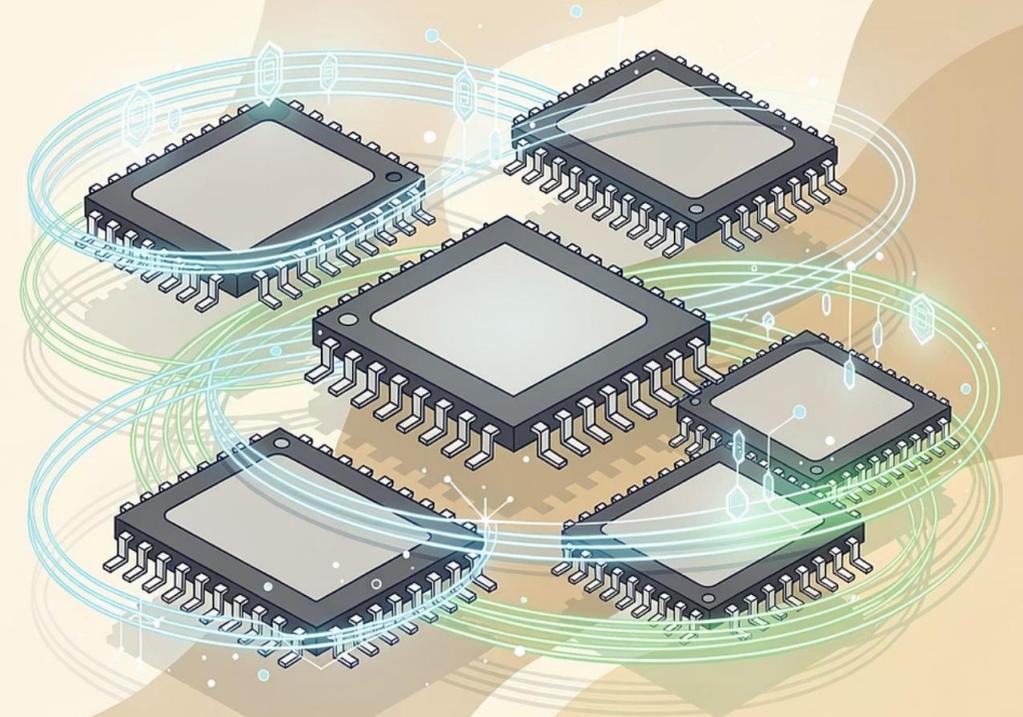
23CST206-OPERATING SYSTEMS AND VIRTUALIZATION

B.E- CSE /IV SEMESTER

UNIT – V HYPERVISOR

Topic 2:Type 1

TYPE 1



Understanding Type 1 Virtualization

Cloud Environments

Scalable and on-demand computing resources

Enterprise Environments

Business settings with complex IT needs



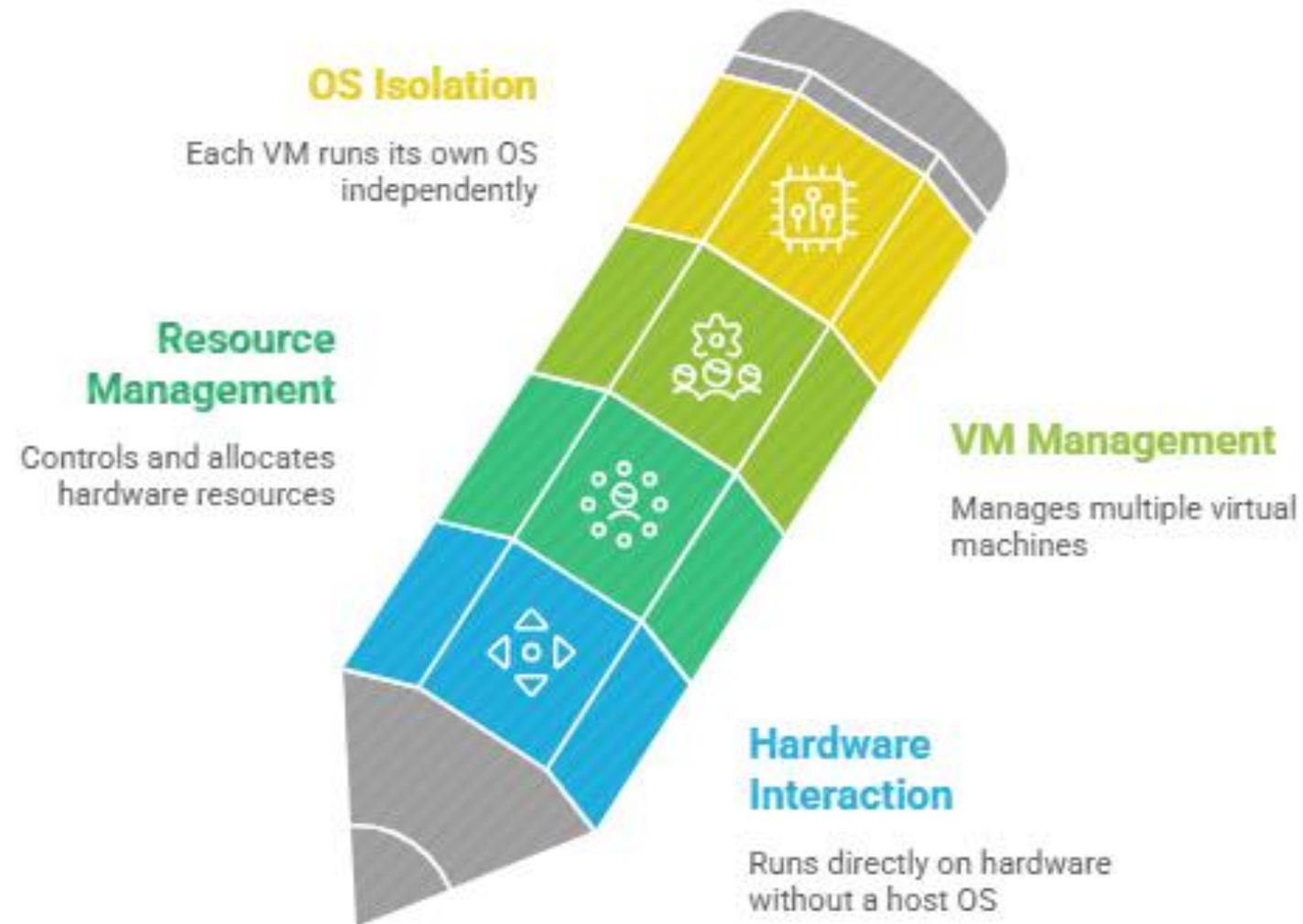
Hypervisor

Software that creates and manages virtual machines

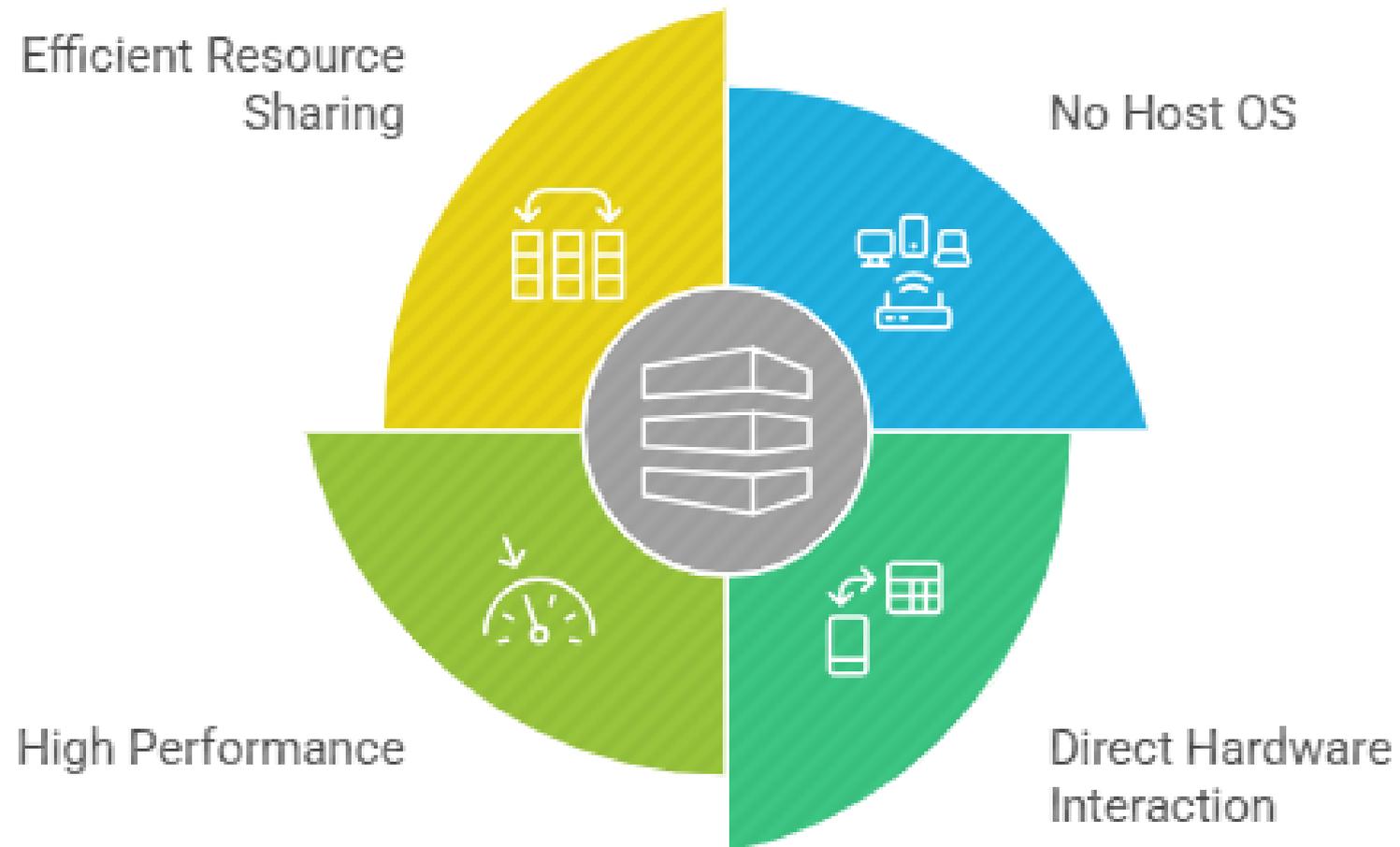
Physical Hardware

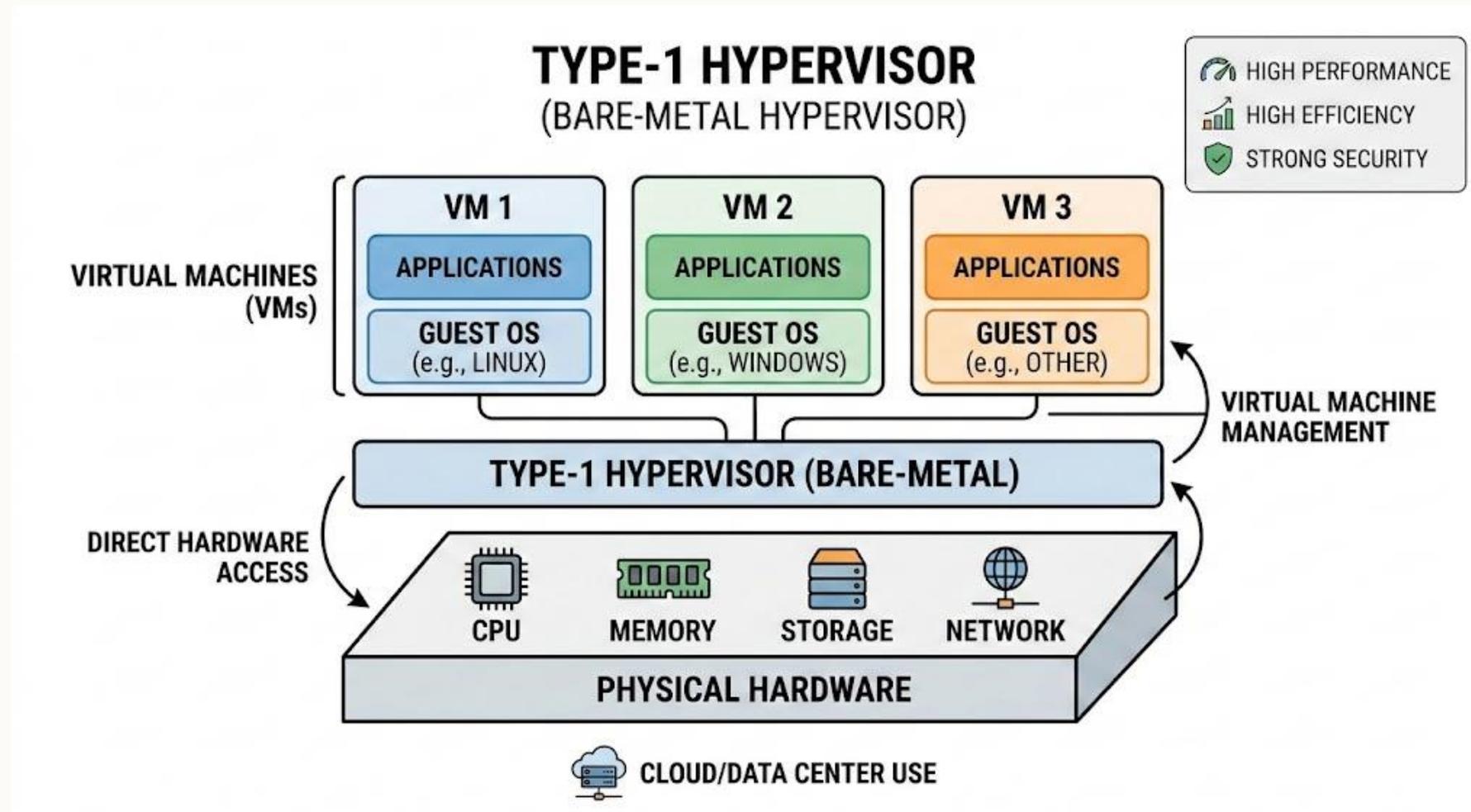
The actual computer components

Understanding Hypervisors

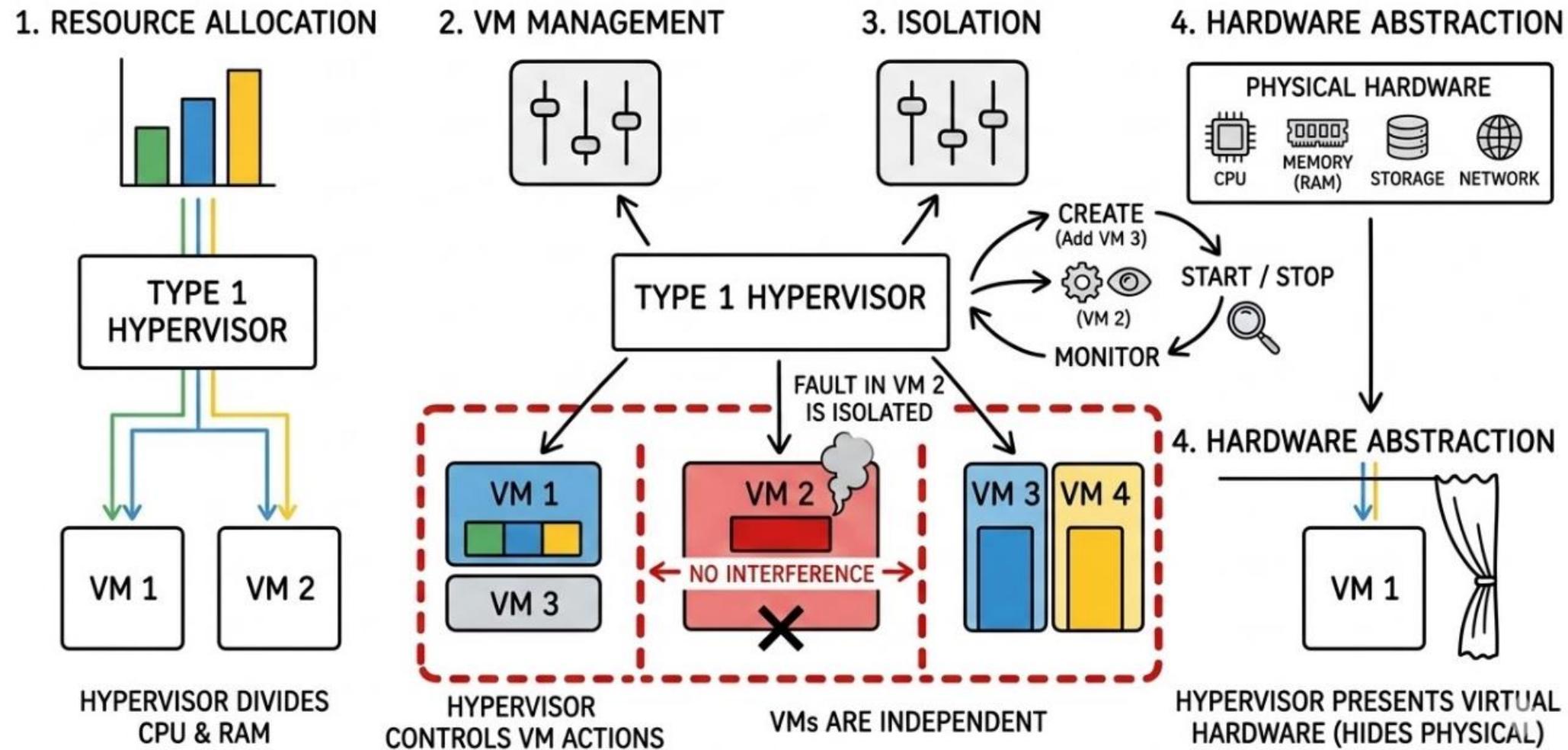


Benefits of Bare-Metal Virtualization

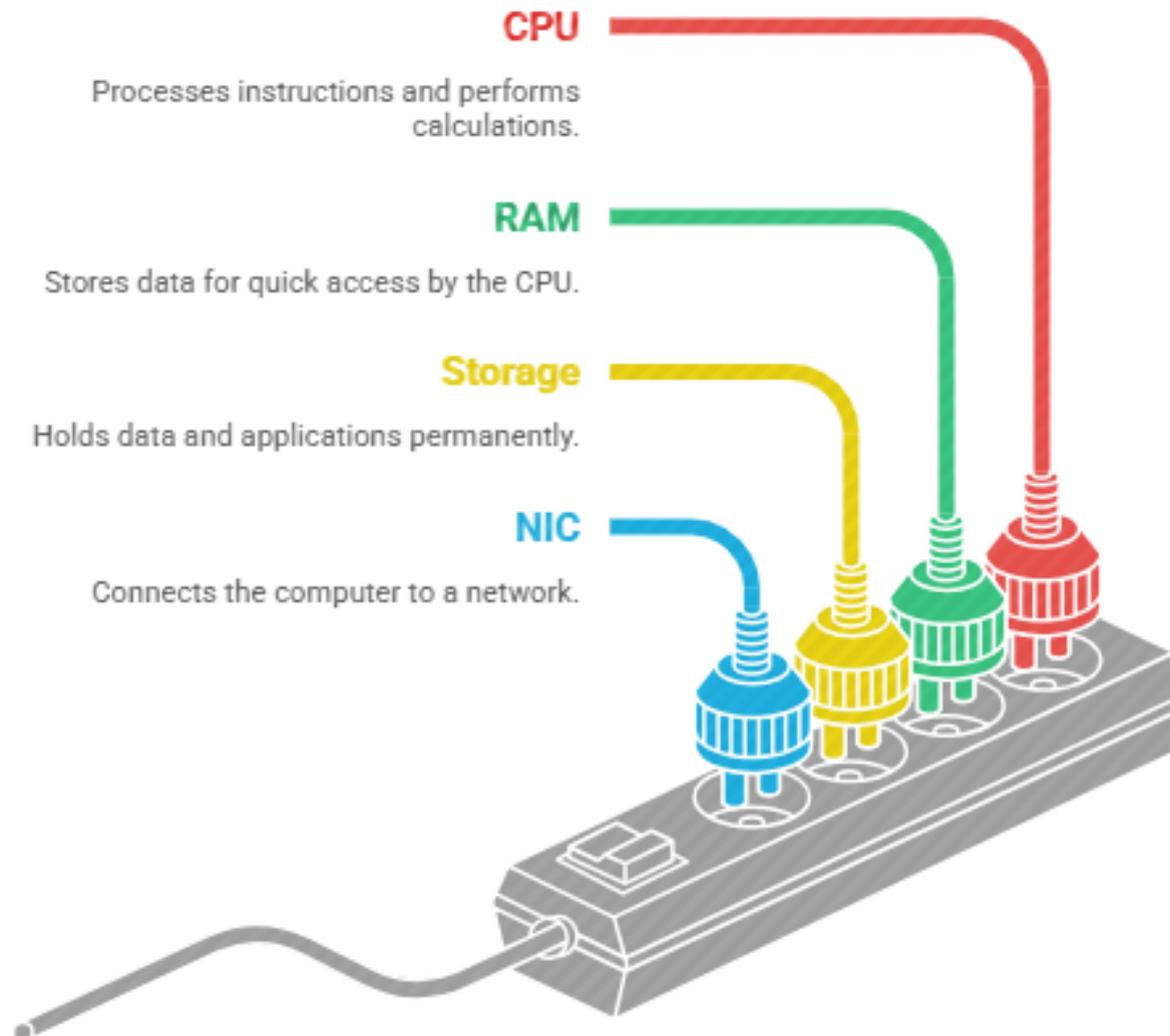




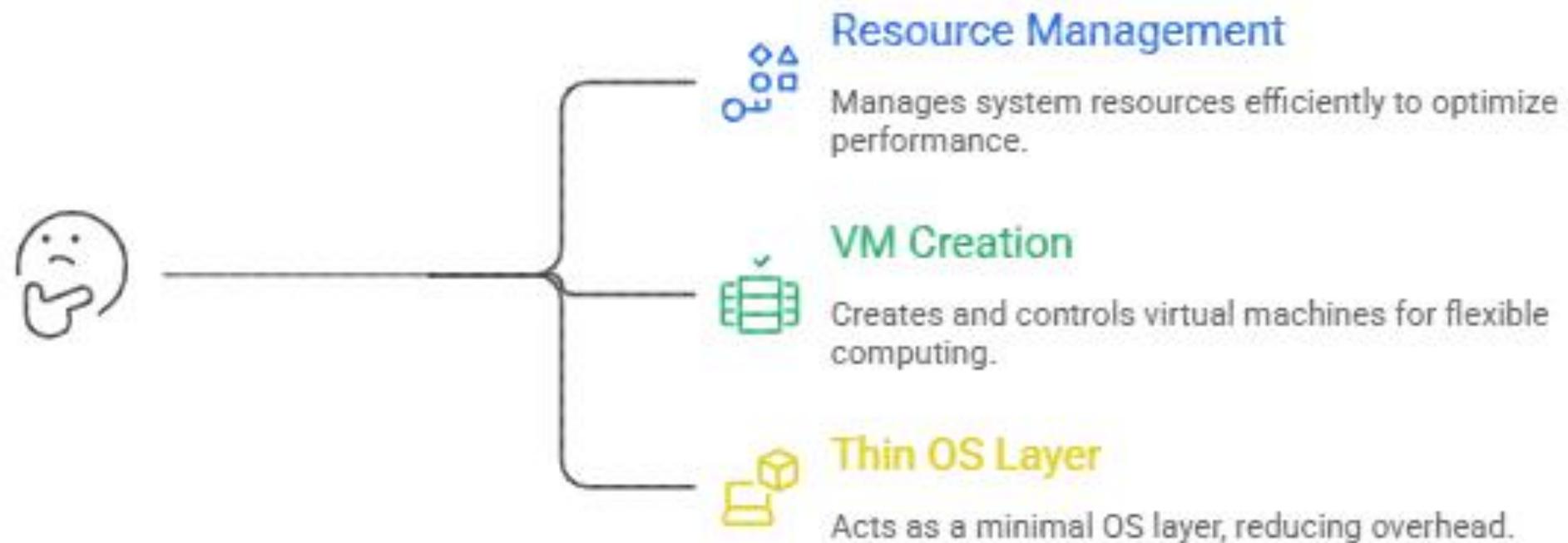
HOW TYPE 1 HYPERVISOR WORKS (for student notes)



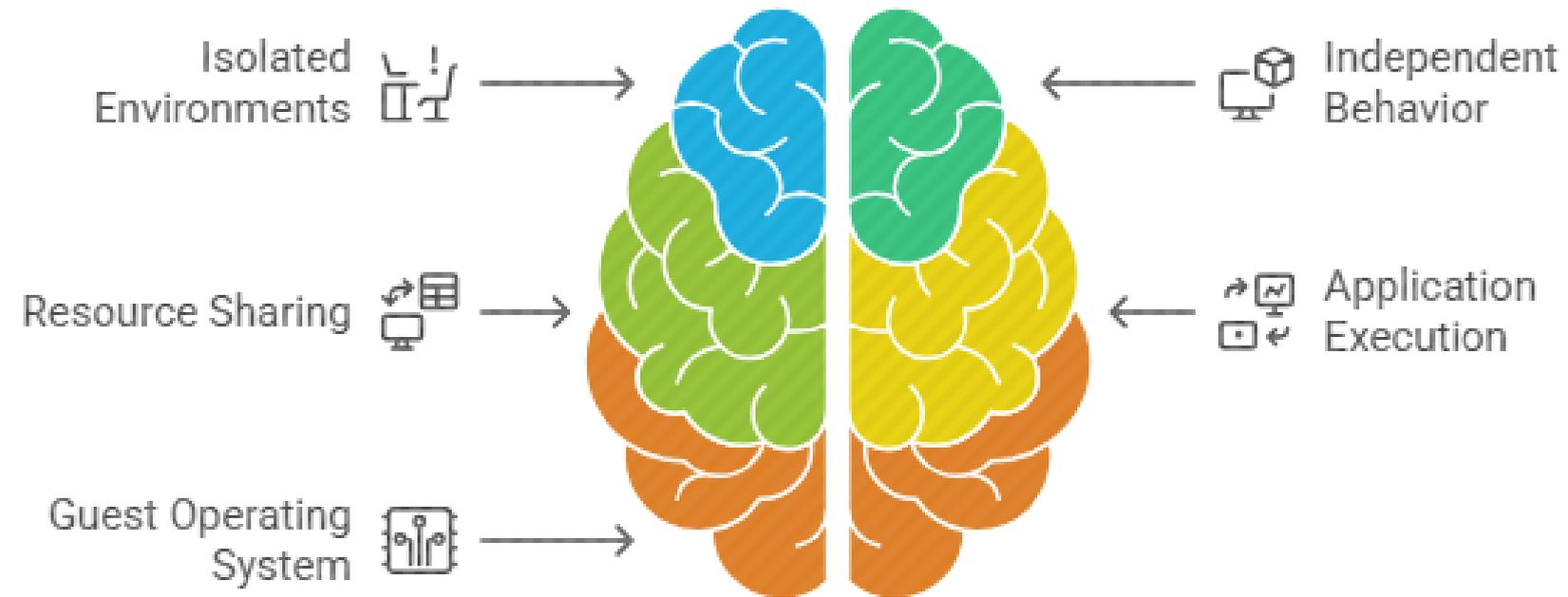
Physical Hardware Components



What is the role of the hypervisor layer?



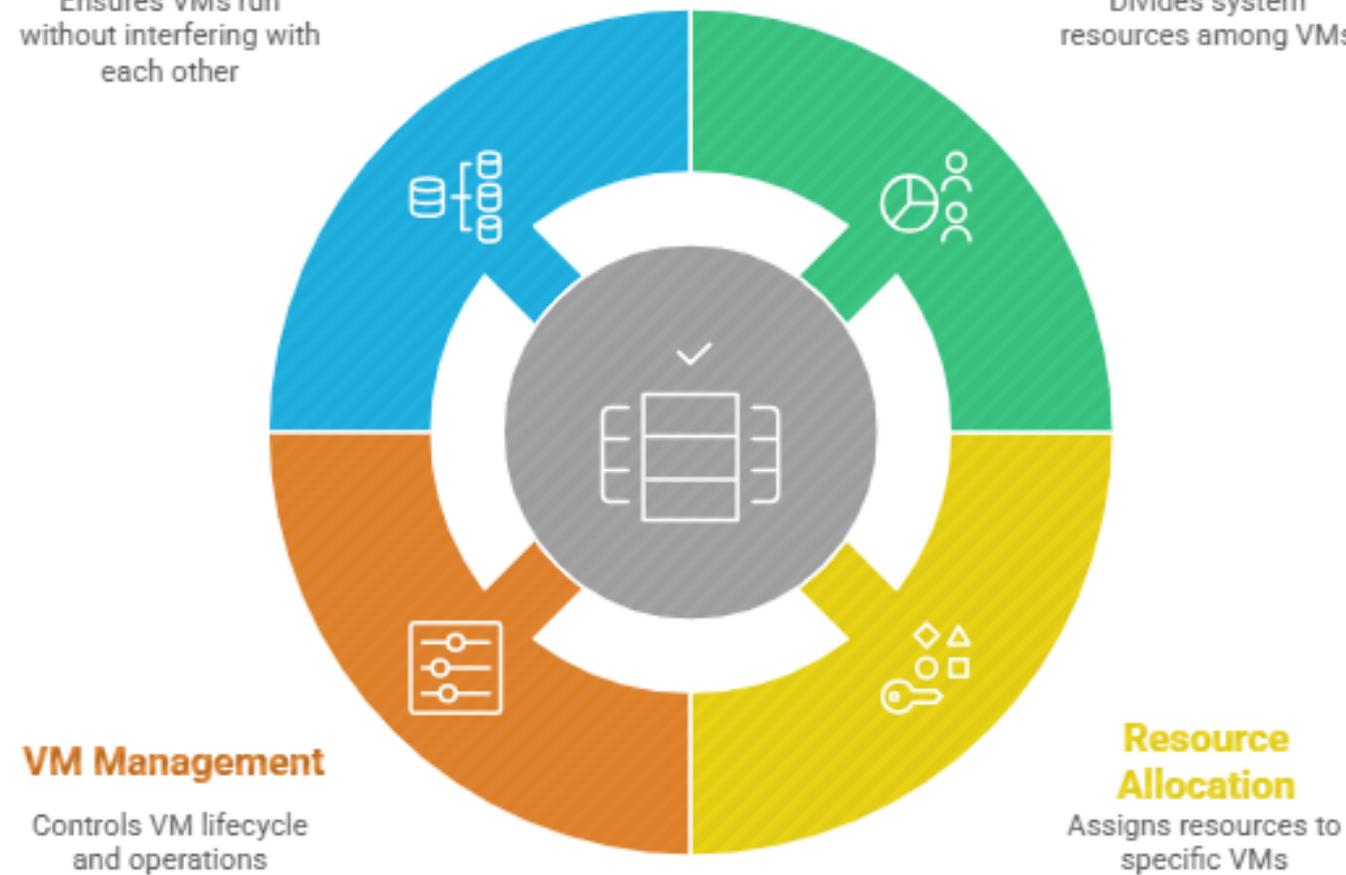
Understanding Virtual Machines



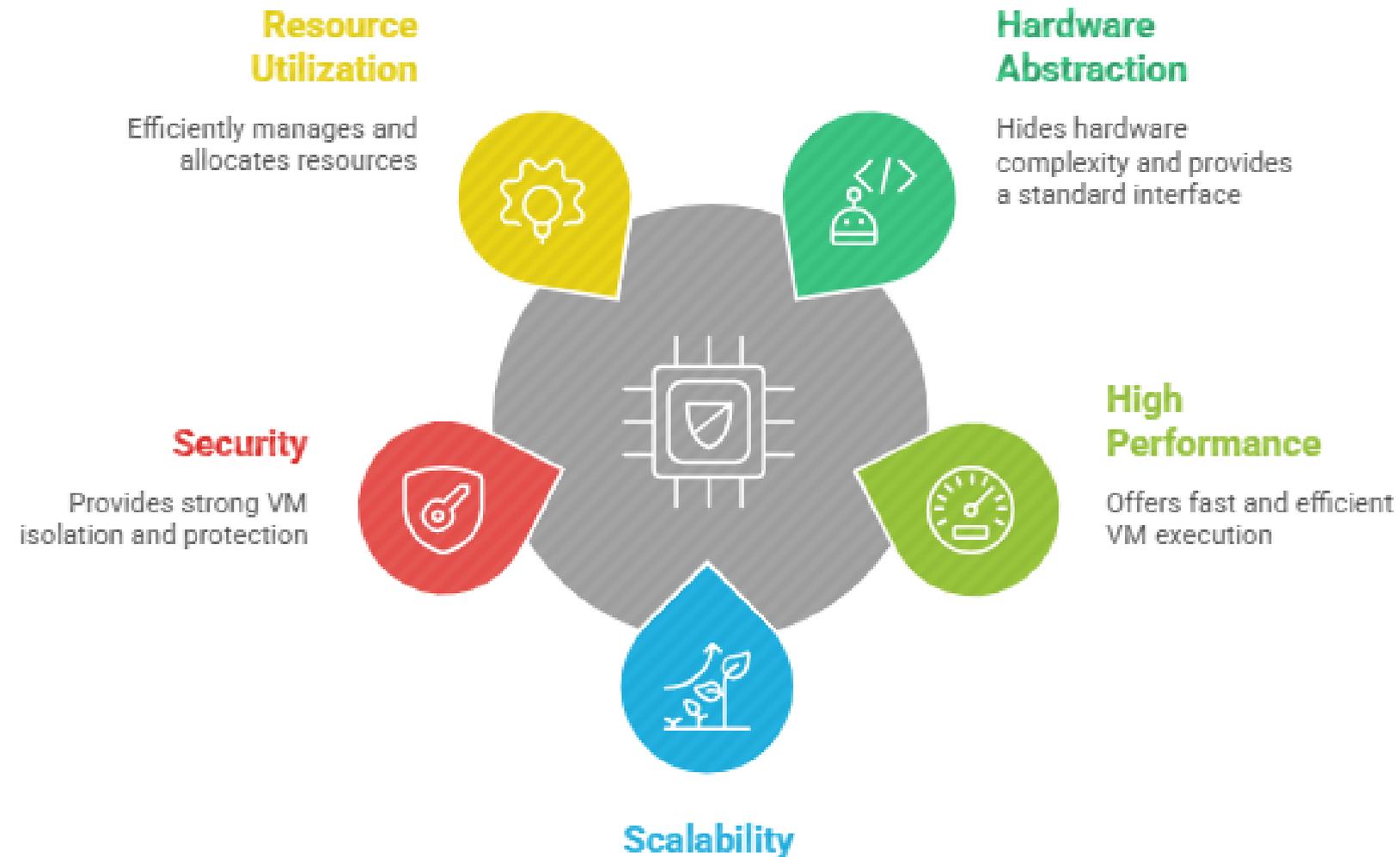
Type 1 Hypervisor Functions

Independent Execution
Ensures VMs run without interfering with each other

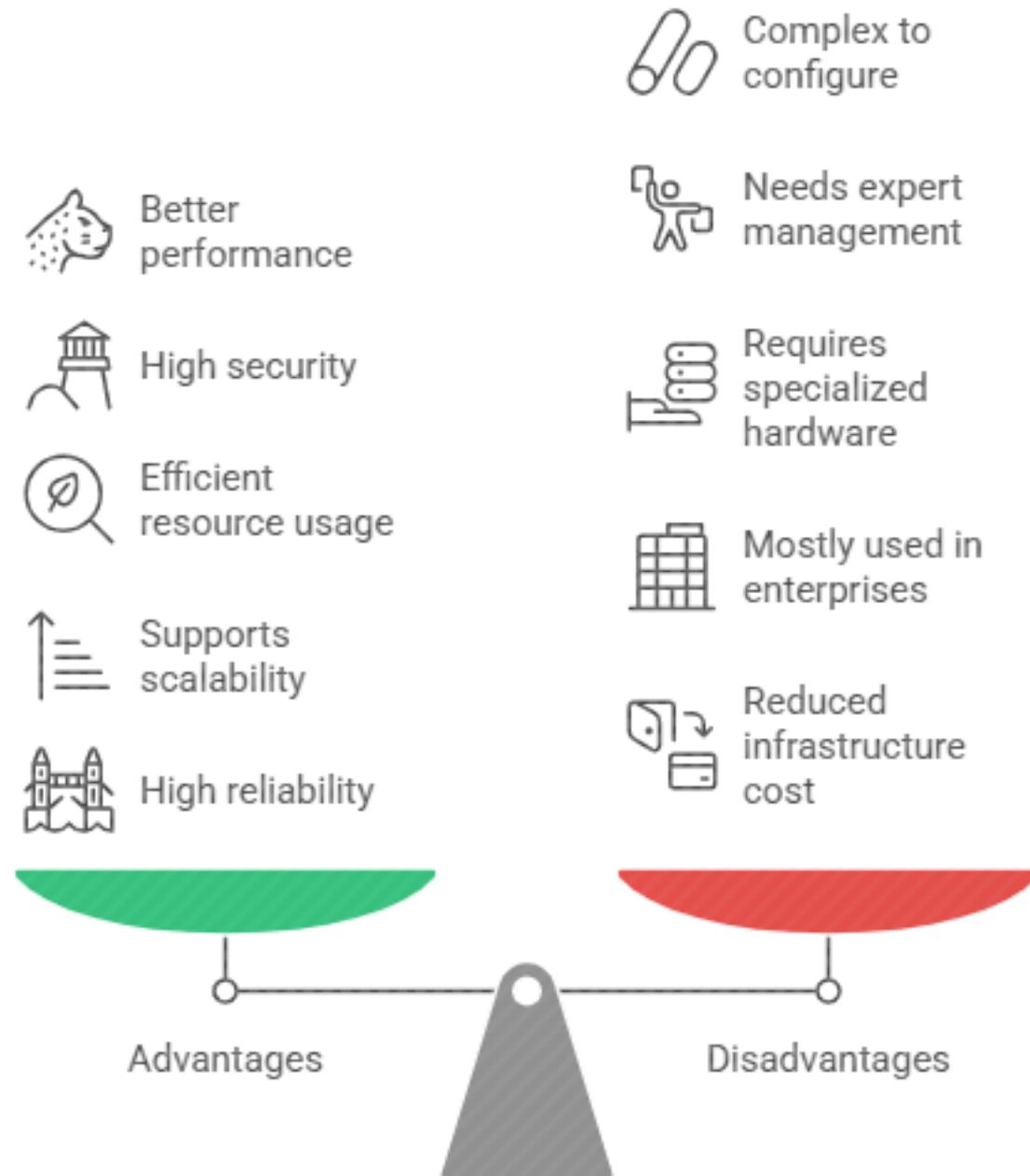
Resource Division
Divides system resources among VMs



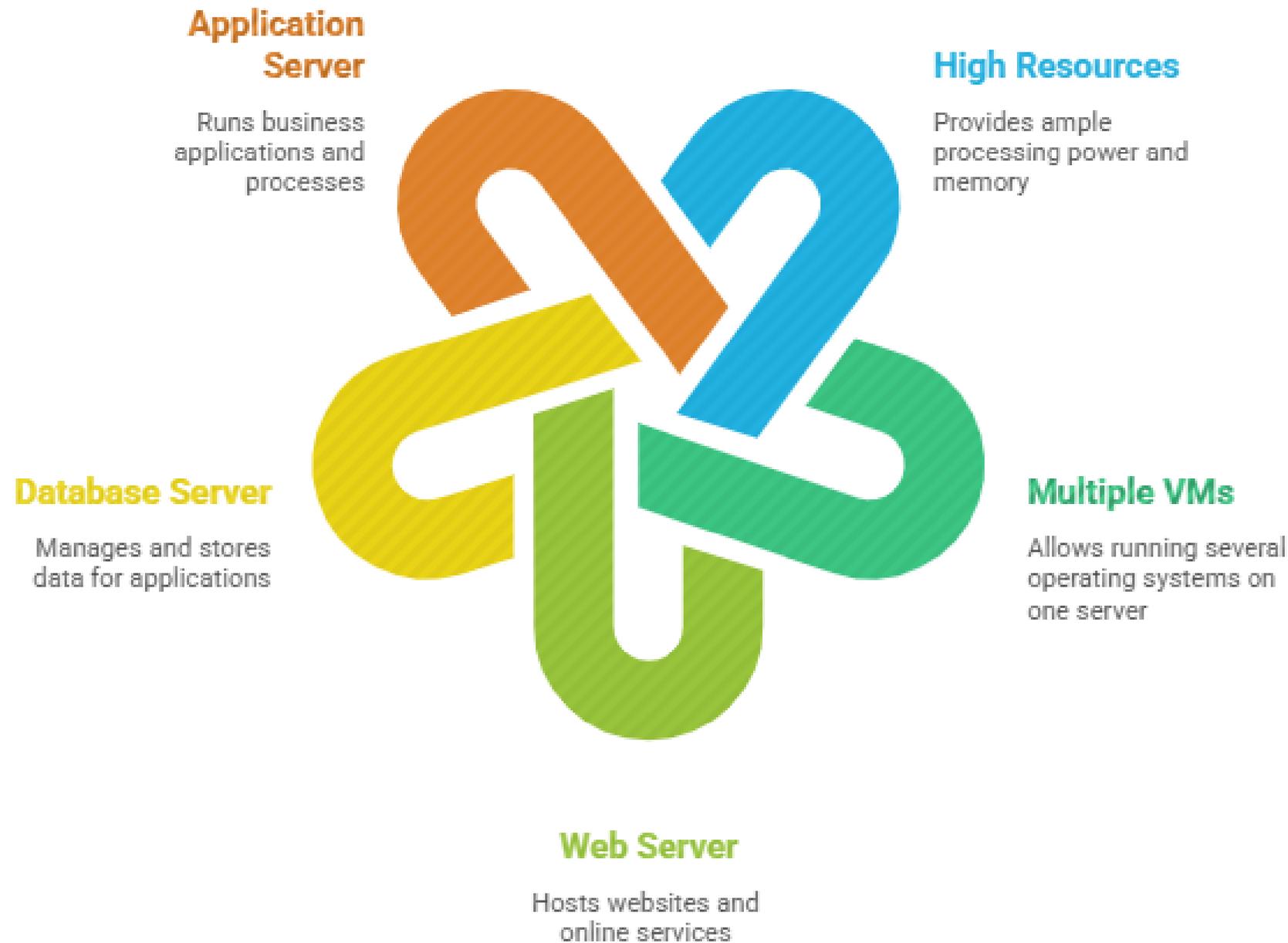
Benefits of Type 1 Hypervisors



Balancing the Pros and Cons of Virtualization



Server Virtualization Overview



PROBLEM STATEMENT

Inefficient Hardware Utilization due to Single OS per Server



EMPATHY

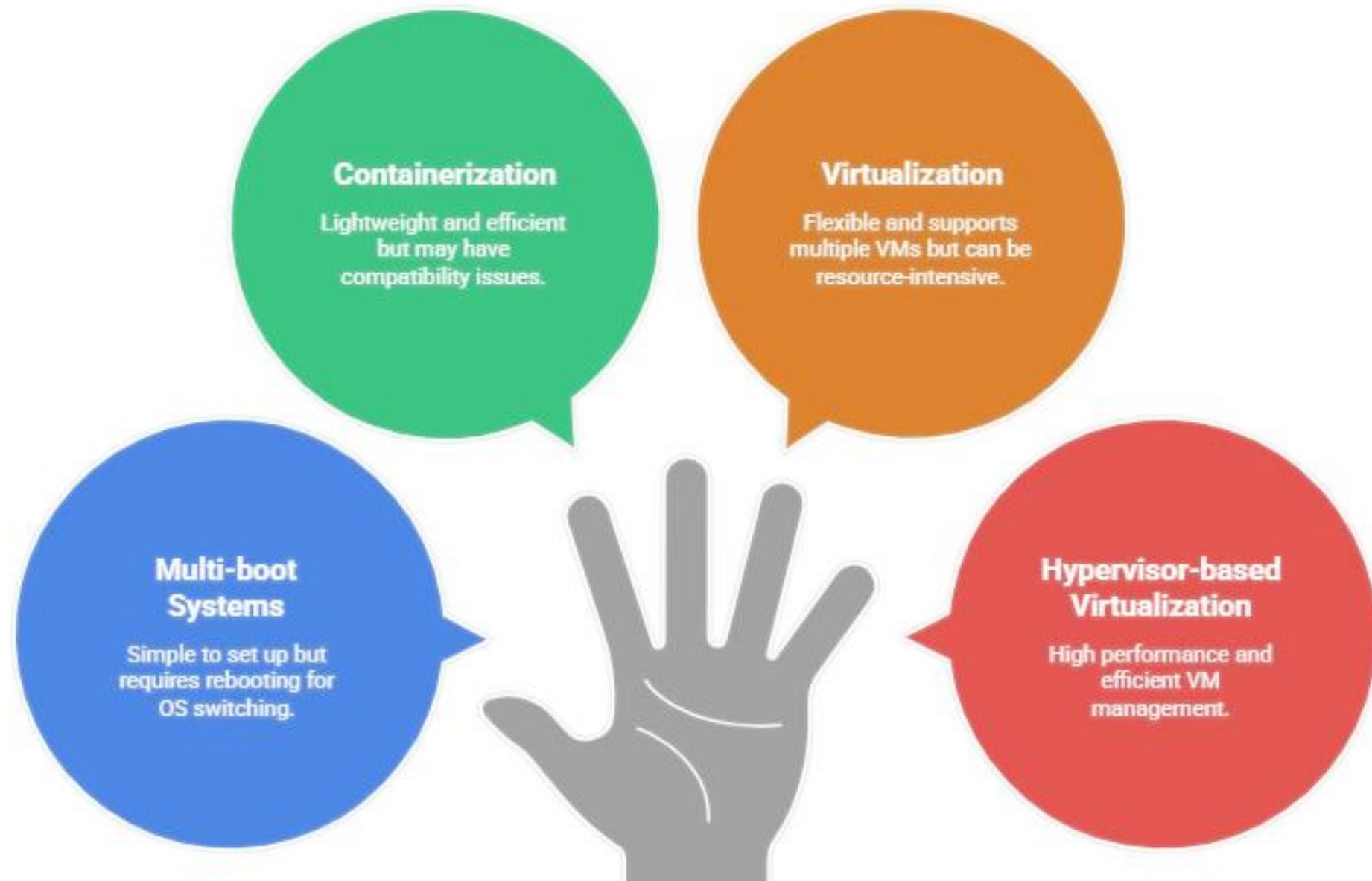
Inefficient Data Center Resource Management



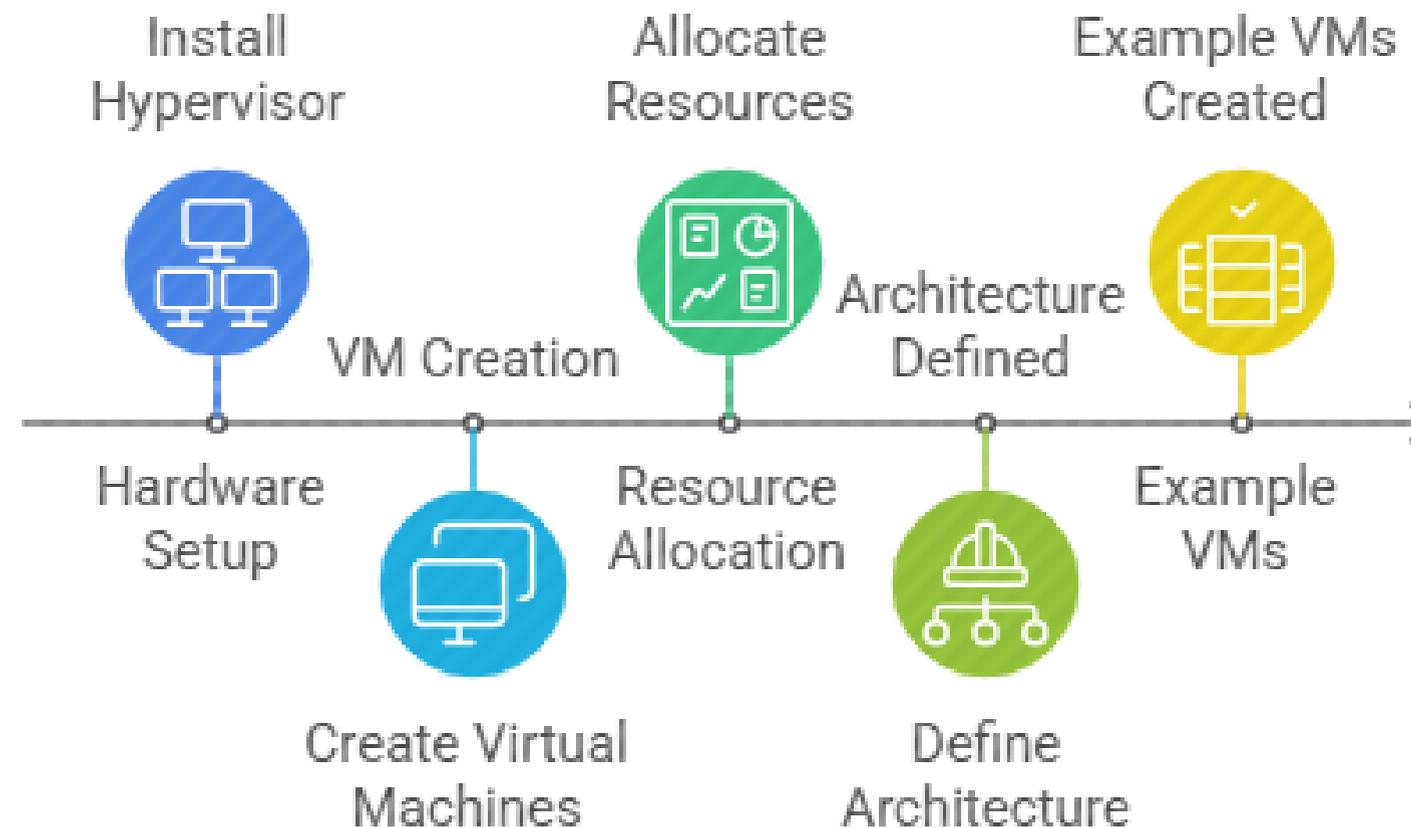
Optimizing Hardware Resource Utilization



Which solution should be chosen for managing multiple operating systems?



Prototype Stage in Solution Development



Test Stage Cycle



