# Unit 4 – Misconceptions in Microservices and Cloud-Native Development

1. 1. “Microservices always result in better performance.”

Explanation: While microservices can provide scalability and flexibility, they can also introduce network overhead and complexities. Microservices should be chosen based on architectural needs, not just performance.

1. 2. “Containers are equivalent to virtual machines.”

Explanation: Containers share the host OS, making them more lightweight than VMs. They offer isolation and portability, but they don't provide the same level of security or resource isolation as VMs.

1. 3. “Kubernetes is only for large-scale applications.”

Explanation: Kubernetes can benefit applications of various sizes. It provides features like scaling, load balancing, and automation that are valuable for applications of all scales.

1. 4. “Containerization eliminates the need for orchestration.”

Explanation: While containers make application deployment easier, container orchestration tools like Kubernetes are still crucial for managing complex containerized applications, ensuring high availability, and scaling.

1. 5. “Microservices can only be implemented with certain programming languages.”

Explanation: Microservices can be implemented using various programming languages. The choice of language depends on the specific service's requirements and the team's expertise, and microservices can communicate through well-defined APIs.