
# Cloud Computing

# Deployment Model

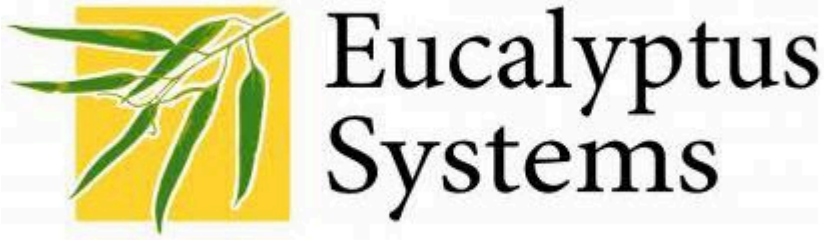
- There are four primary cloud deployment models :
  - -Public Cloud
  - -Private Cloud
  - -Community Cloud
  - -Hybrid Cloud

# Public Clouds

- Public clouds are owned by cloud service providers who charge for the use of cloud resources.
- Basic characteristics:
  - -Homogeneous infrastructure, Common policies
  - -Shared resources and multi-tenancy
  - -Leased or rented infrastructure
  - -Economies of scale
- **AWS/EC2** (Amazon)
- **Azure**(Microsoft)
- **Google Cloud Platform**.
- **Rackspace.**

# Private Clouds

- The cloud infrastructure belongs to and is operated by only one organization.
- Basic characteristics :
  - -Heterogeneous infrastructure; Customized policies
  - -Dedicated resources
  - -In-house infrastructure; End-to-end control
- Examples include:





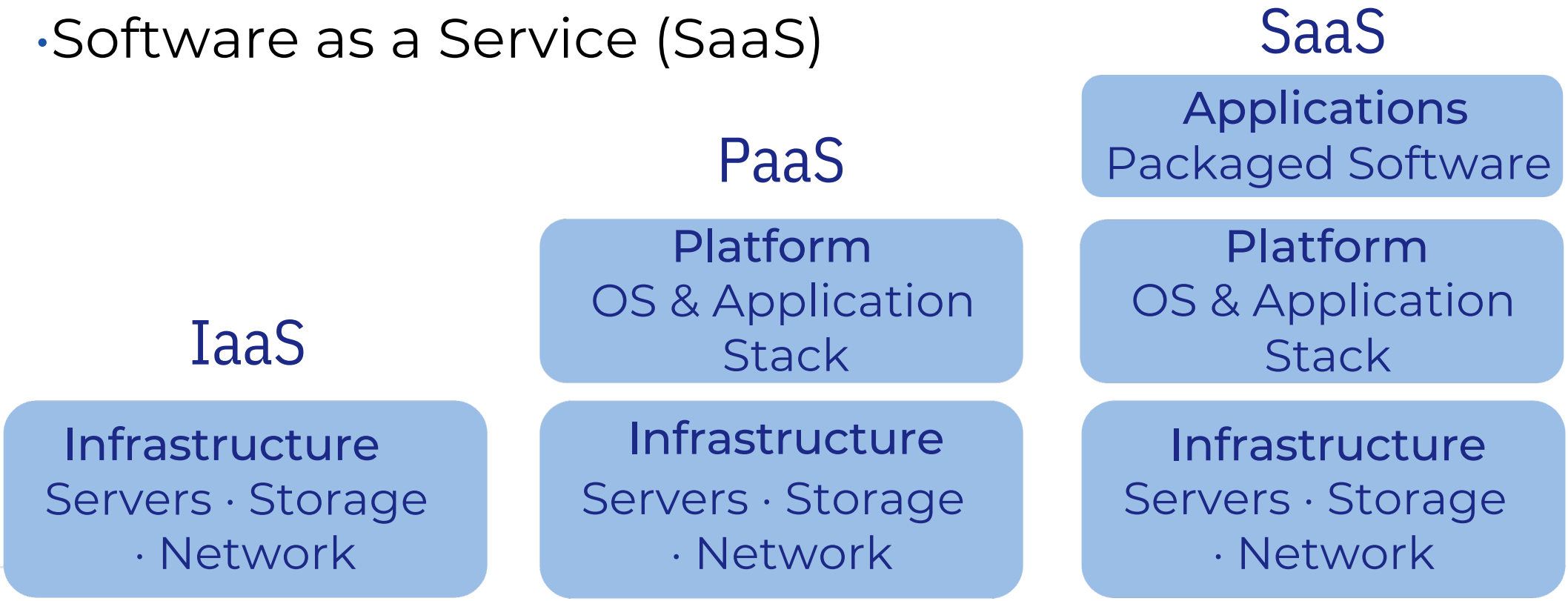
# Other types of Clouds

- Community cloud
  - -The cloud infrastructure is shared by several organizations and supports a specific community that has shared concerns (e.g., mission, security requirements, policy, and compliance considerations).

- Hybrid cloud
  - -The cloud infrastructure is a composition of two or more clouds (private, community, or public) that remain unique entities but are bound together by standardized or proprietary technology that enables data and application portability.

# IaaS, PaaS and SaaS

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)



# Conclusions

- Cloud computing has enabled an explosion in large-scale computing services and applications.
- Clouds provide services at three main levels: IaaS, PaaS, SaaS.
- New programming models enable easier development of large-scale applications.

- Hadoop is the open-source enabling technology for Big Data
  - -Hadoop is rapidly becoming the operating system for the Data Center