Deep Learning Hands on Lab

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Topics

Cloud Computing
Virtual Machine
Data Science VM
Hands on Lab (MNIST dataset)

What do you think Cloud Computing is?

Cloud Computing NIST Definition

Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model is composed of five essential characteristics, three service models, and four deployment models.

National Institute of Standards and Technology

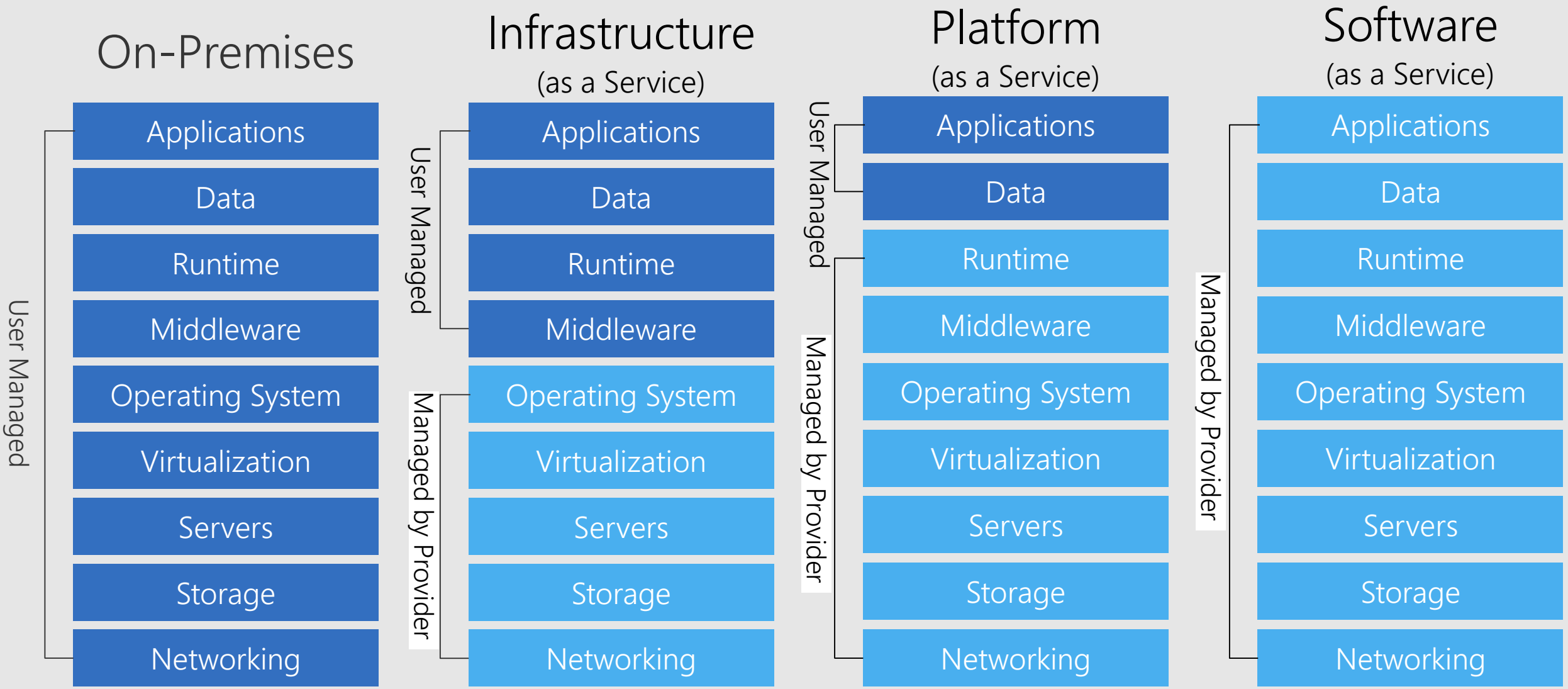
Five Key Cloud Characteristics

- On-demand self-service
- Ubiquitous network access
- Location-independent resource pooling
- Rapid elasticity
- Pay for what you use

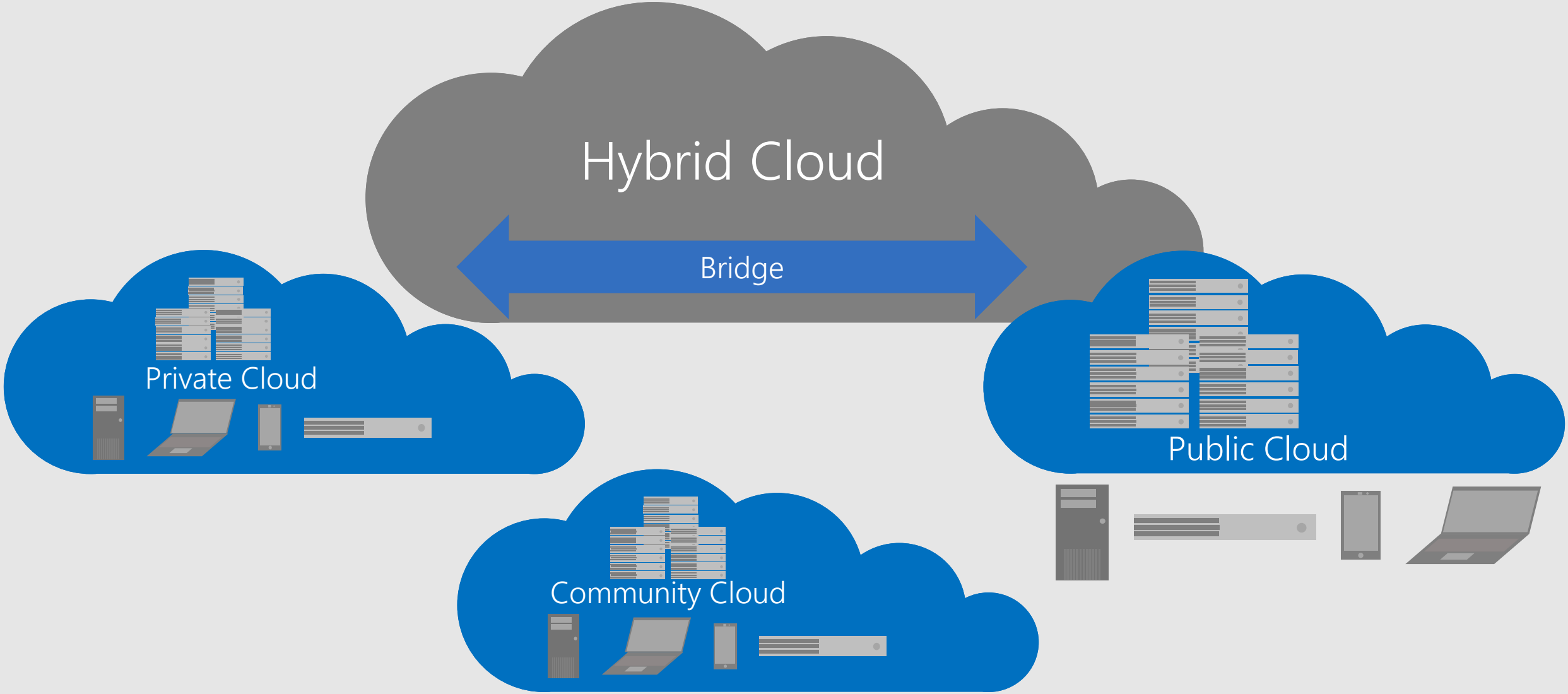
Cloud Computing Service Models

Model	Description
Software as a Service (SaaS)	Consume it End-User Applications delivered as a service, rather than by on-premises software
Platform as a Service (PaaS)	Build on it Application platform or middleware provided as a service on which developers can build and deploy custom applications
Infrastructure as a Service (IaaS)	Migrate to it Computing, storage, or other IT infrastructure provided as a service, rather than as a dedicated capability

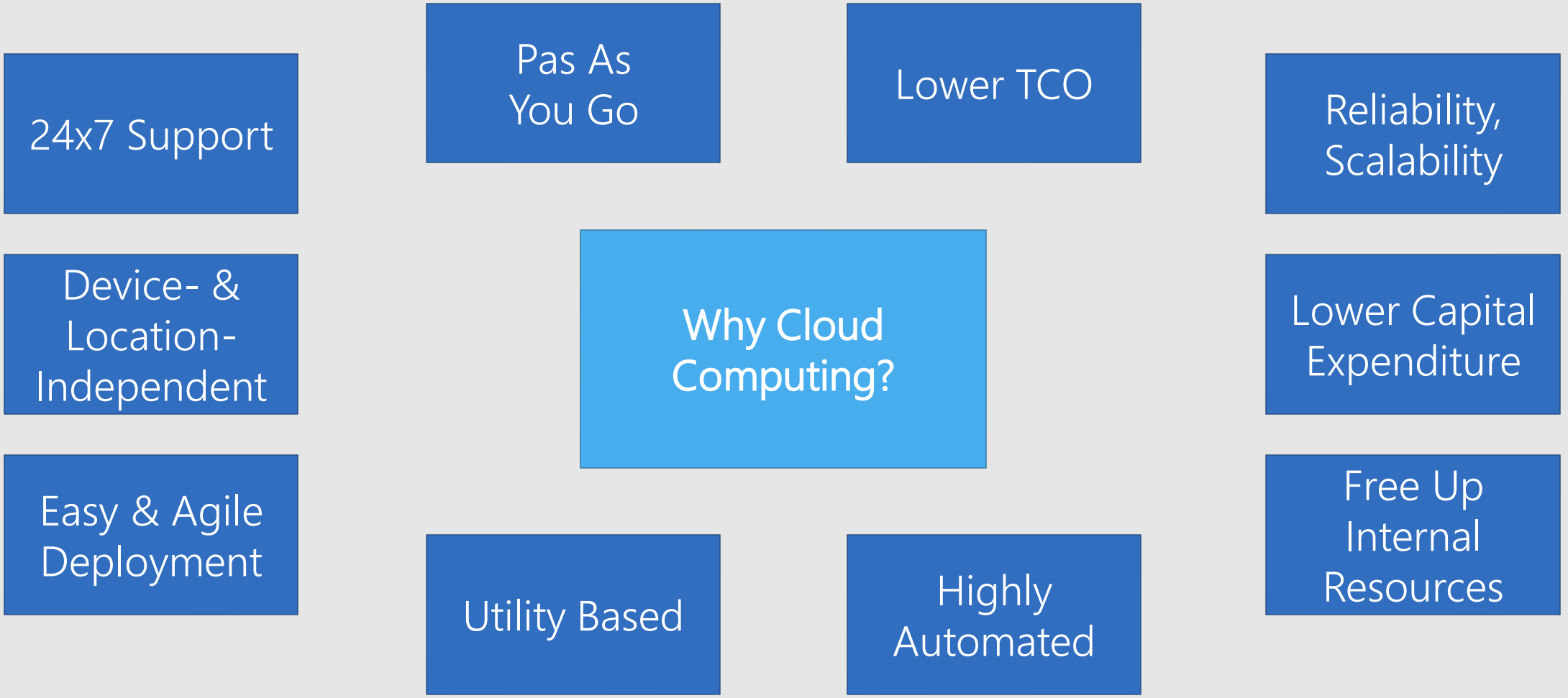
Service Model Division of Responsibility



Cloud Deployment Model

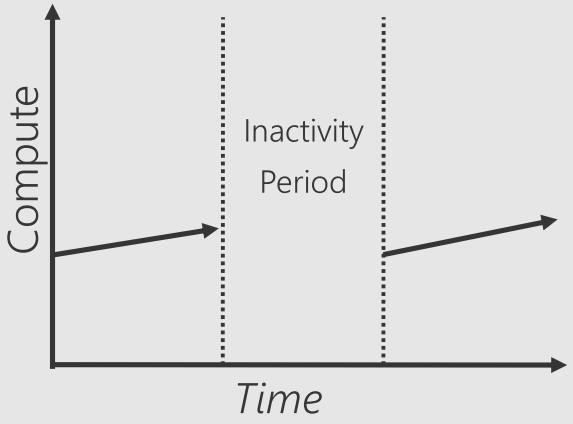


Why Cloud Computing?

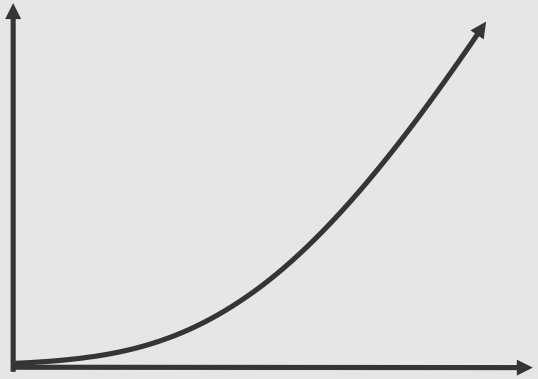


Typical Computing Pattern

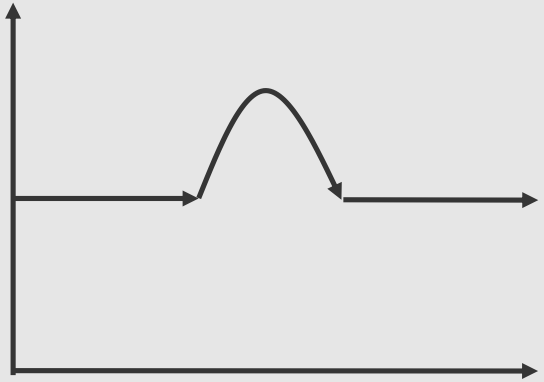
On and Off



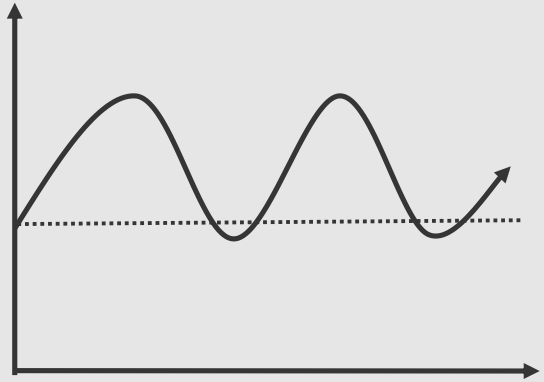
Rapid Growth



Unpredictable Bursting



Predictable Bursting



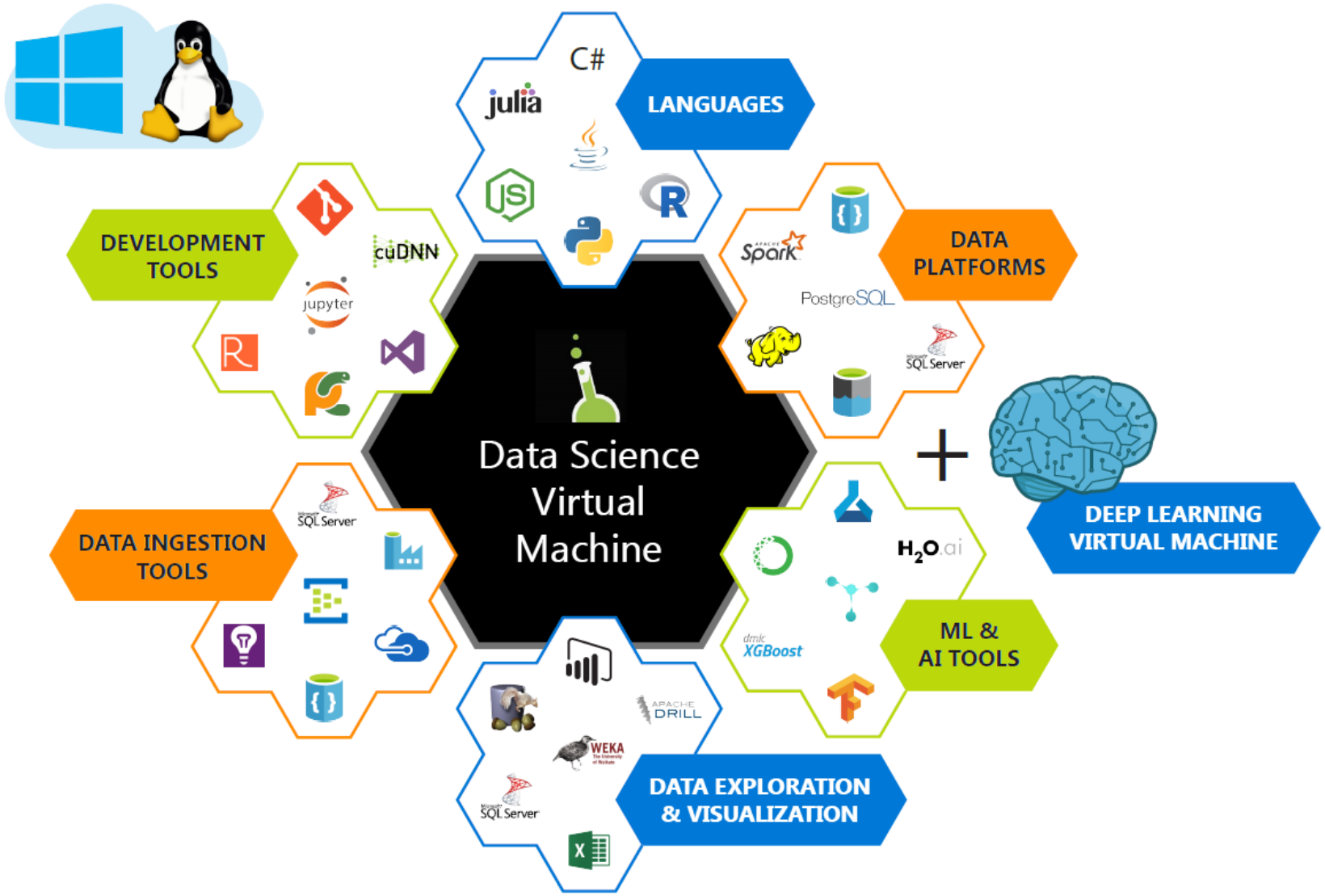
Azure Services

Azure Data Science Virtual Machine (DSVM)

Microsoft

Data Science Virtual Machines (DSVM)

Pre-Configured environments in the cloud for Data Science & AI Modeling, Development & Deployment.



Data Science Virtual Machines (DSVM)

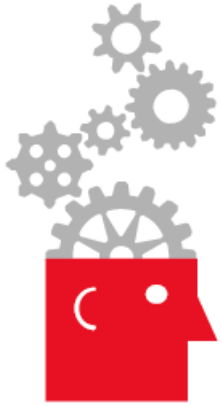
Editions

DSVM – Windows Server 2016

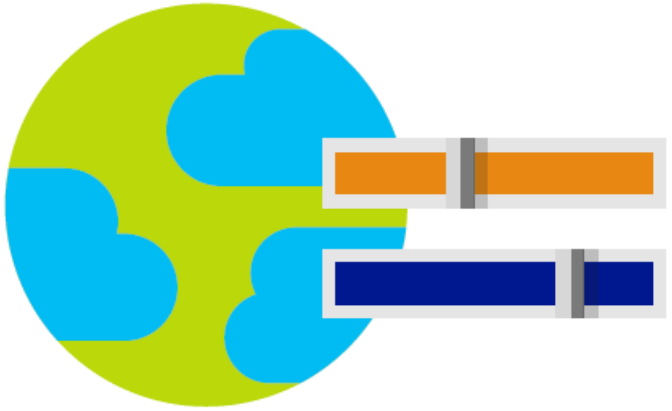
DSVM – Linux – Ubuntu

Deep Learning Virtual Machines

Analytics desktop in the cloud



Data science training and education



On-demand elastic capacity

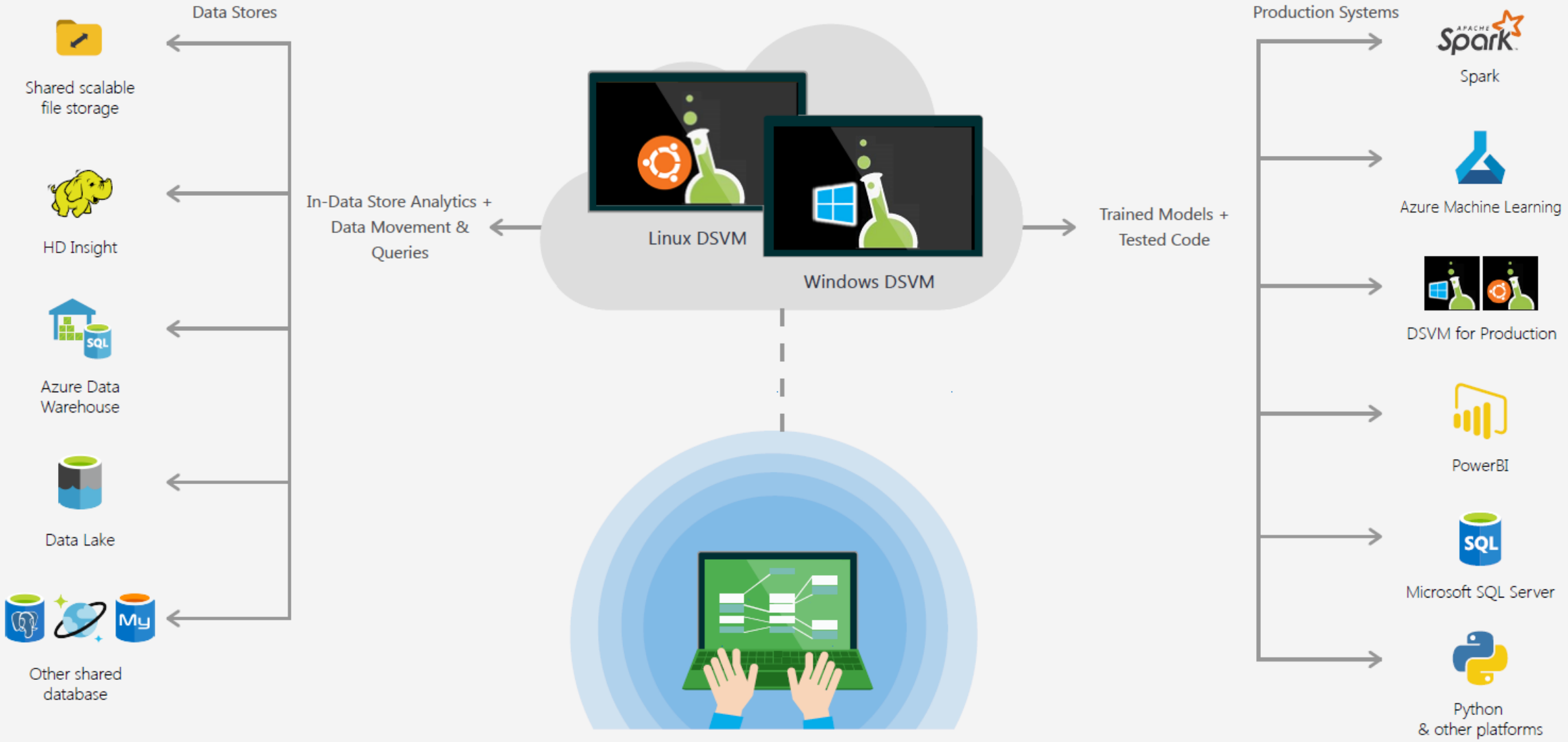
Why Data Science VMs ?

Examples & Templates
to get started

Deep Learning with GPUs

Highly Parallelized scalable AI
Training with Azure Batch

End-to-End AI Development Workflow using Data Science Virtual Machines (DSVM)



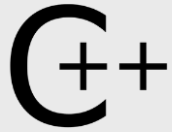
Tools and services for any developer, any app

Windows

Linux

iOS

Android



Clojure CoffeeScript Go Groovy Java Objective-C Perl PHP Ruby Rust Swift

Hands on Lab

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