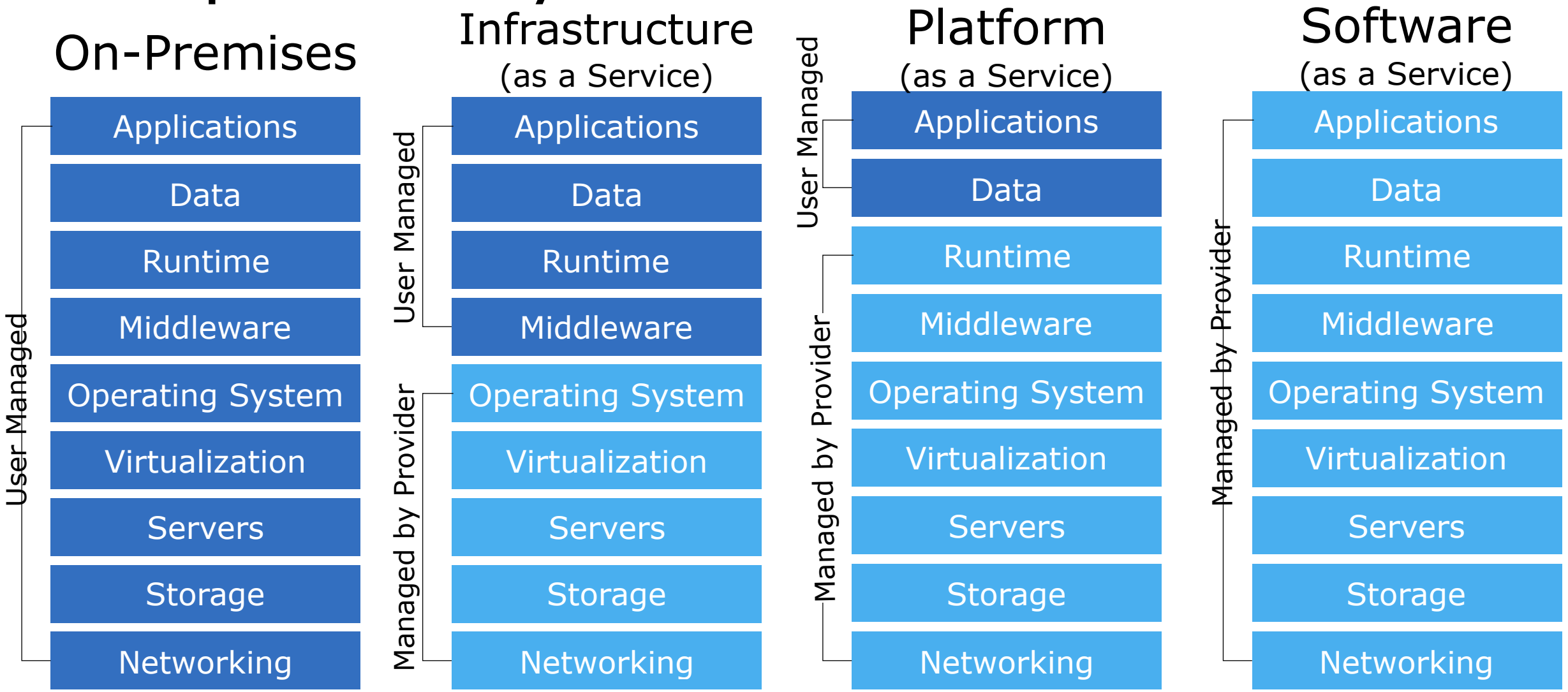
Survey of Cloud Computing and Azure Foundation

Cloud Computing Services

Topics

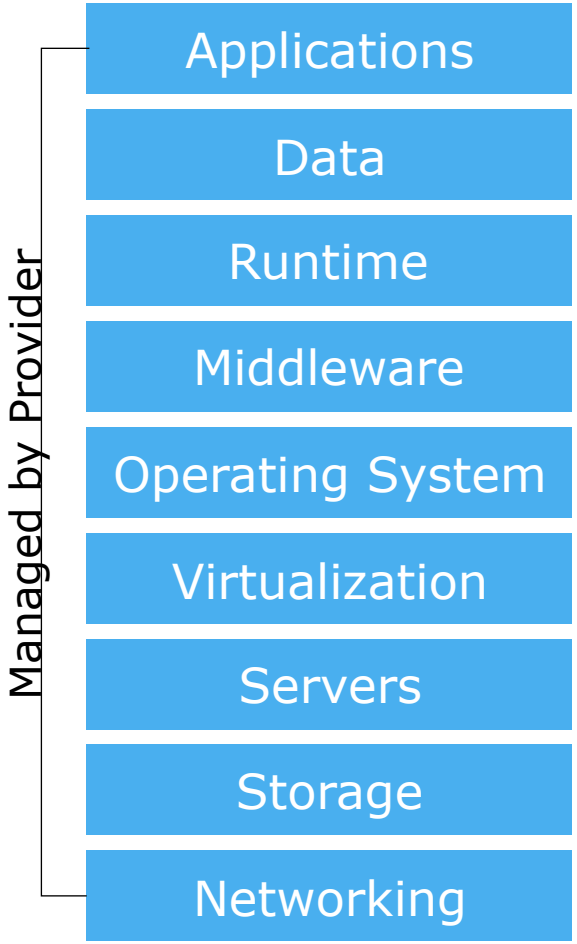
Software (as a service) Cloud Service
Platform (as a service) Cloud Service
Infrastructure (as a service) Cloud Service
Other Types of Cloud Services

Service Model Division of Responsibility



Software as a Service (SaaS)

- Cloud service vendor is responsible for software, hardware, and infrastructure
- Customers can reduce their upfront and ongoing maintenance costs and instead pay for services like a utility
- Customers do not have as much freedom to customize the service and can only change parameter settings as provided by the cloud vendor



Salesforce.com as an SaaS

Online salesforce automation and CRM

The following are sales points advertised by Salesforce:

- No vendor lock-in
- No large up-front investment
- No maintenance headaches
- No steep learning curve
- No outdated solutions

Microsoft Office 365

Microsoft Office Suite on the Web

Flexible environment to collaborate and work together

- Multiple environments
  - Desktop, tablet and mobile phones
- Work anywhere, anytime, any device
- Concurrent edits

GoToMeeting, WebEx, Skype

Most SaaSs have their roots on the desktop

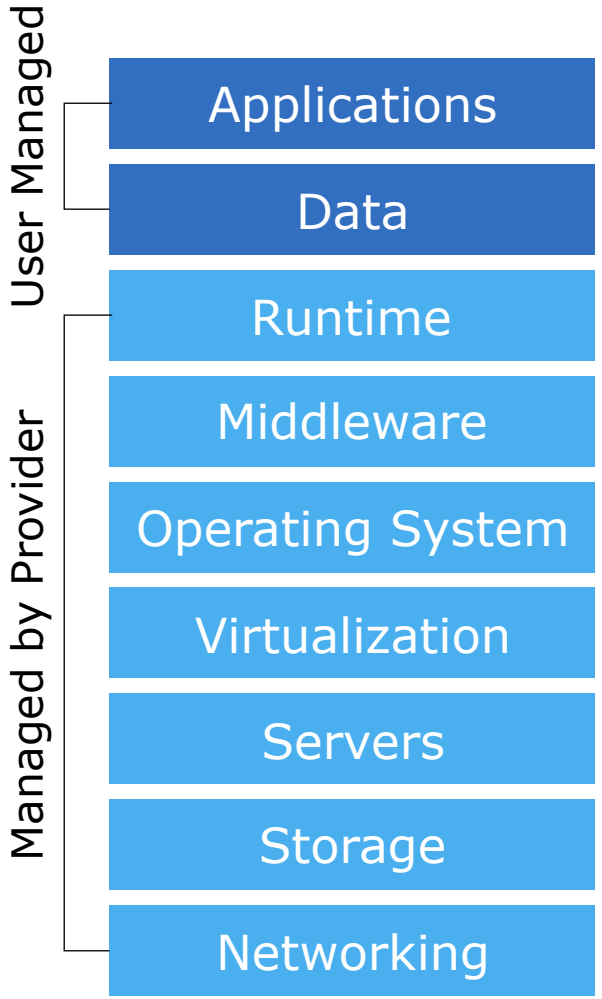
- Modern versions of old utilities
  - Think old TelCos
  - Services charged like utilities

Storage – SaaS or IaaS?

- Backup storage services such as Google Drive, Box, and OneDrive should be considered SaaS; user is not responsible for the backup software
- Storage services such as Azure Blobs and Amazon S3 are considered IaaS

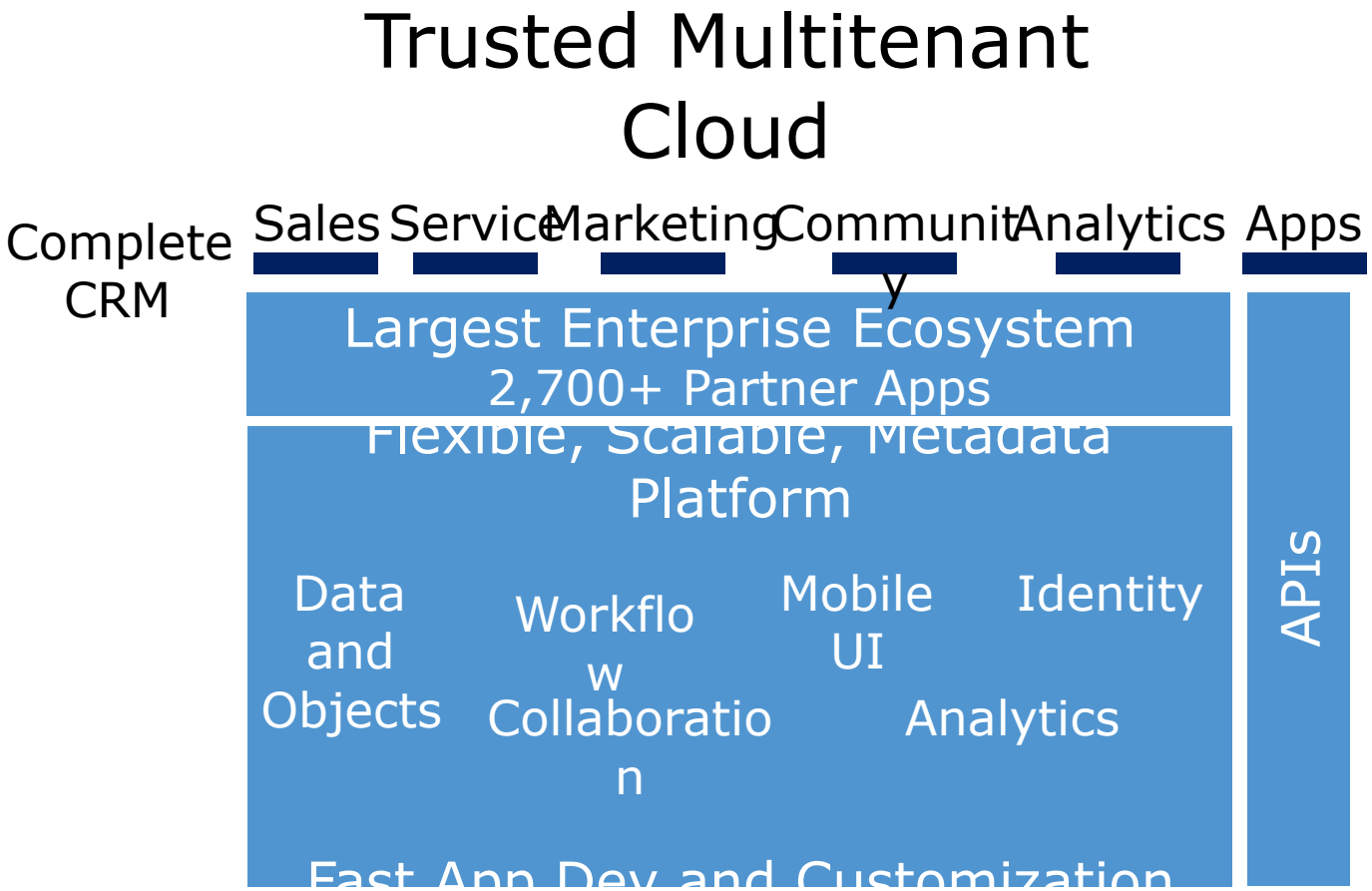
Platform as a Service (PaaS)

- Cloud vendor responsible for everything necessary to deliver a platform
- End-user responsible for maintaining the solutions and data created
- End-user NOT responsible for maintaining and updating platform
- PaaS end-users are often SaaS vendors

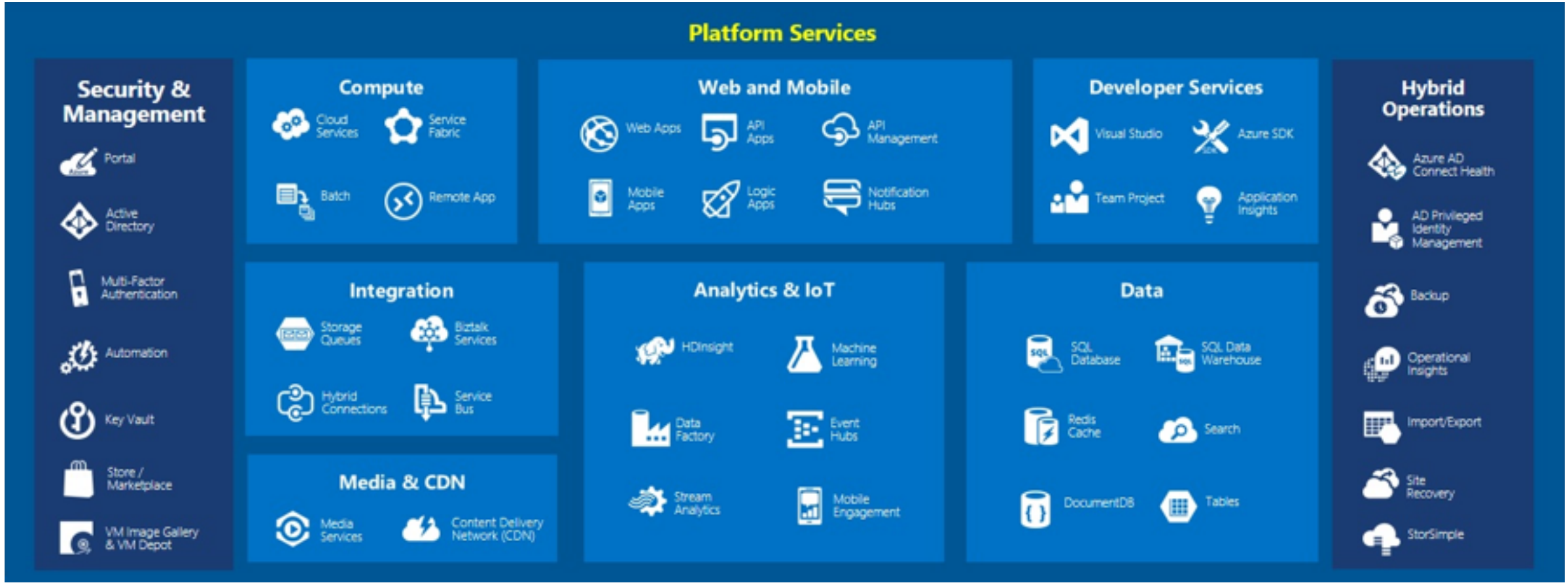


Salesforce.com as a PaaS (?)

- Multi-tenant cloud
  - Multiple user have shared resources as well as dedicated resources
- Metadata-driven architecture
  - All customizations (code, configuration, apps) are specified and saved as metadata
- API-to-CRM engine

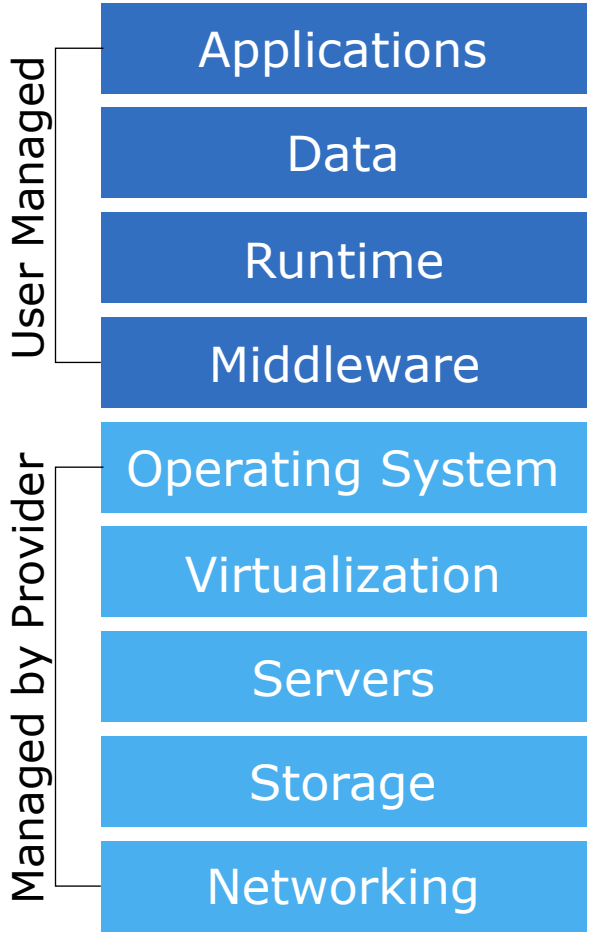


Azure Platform Services

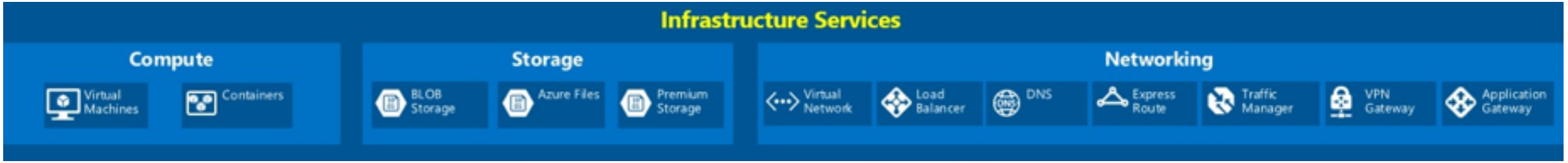


Infrastructure as a Service (IaaS)

- Cloud vendor responsible for underlying hardware and operating system
- Provides user with the most flexibility
- User can customize underlying hardware and operating system
- Can be susceptible to vendor failure
  - AWS glitch in Sept. of 2015 brought down major services such as Netflix

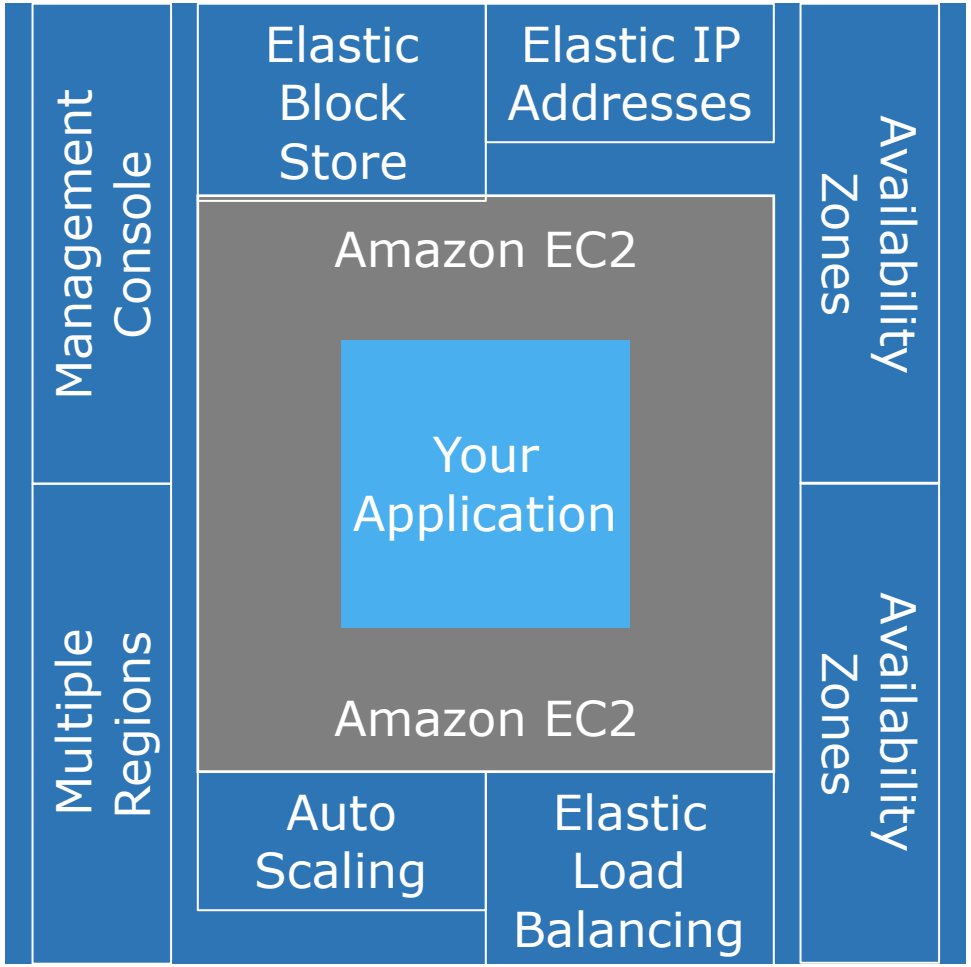


Azure Infrastructure Services



AWS EC2 and S3

- Amazon Elastic Cloud Computing
  - Resizable and elastic compute capacity in the cloud
  - Abundant community images
- Amazon Simple Storage Service
  - Online file storage web service
  - Accessible through REST, SOAP. and BitTorrent
- Elastic load balancing
- Automatic scaling

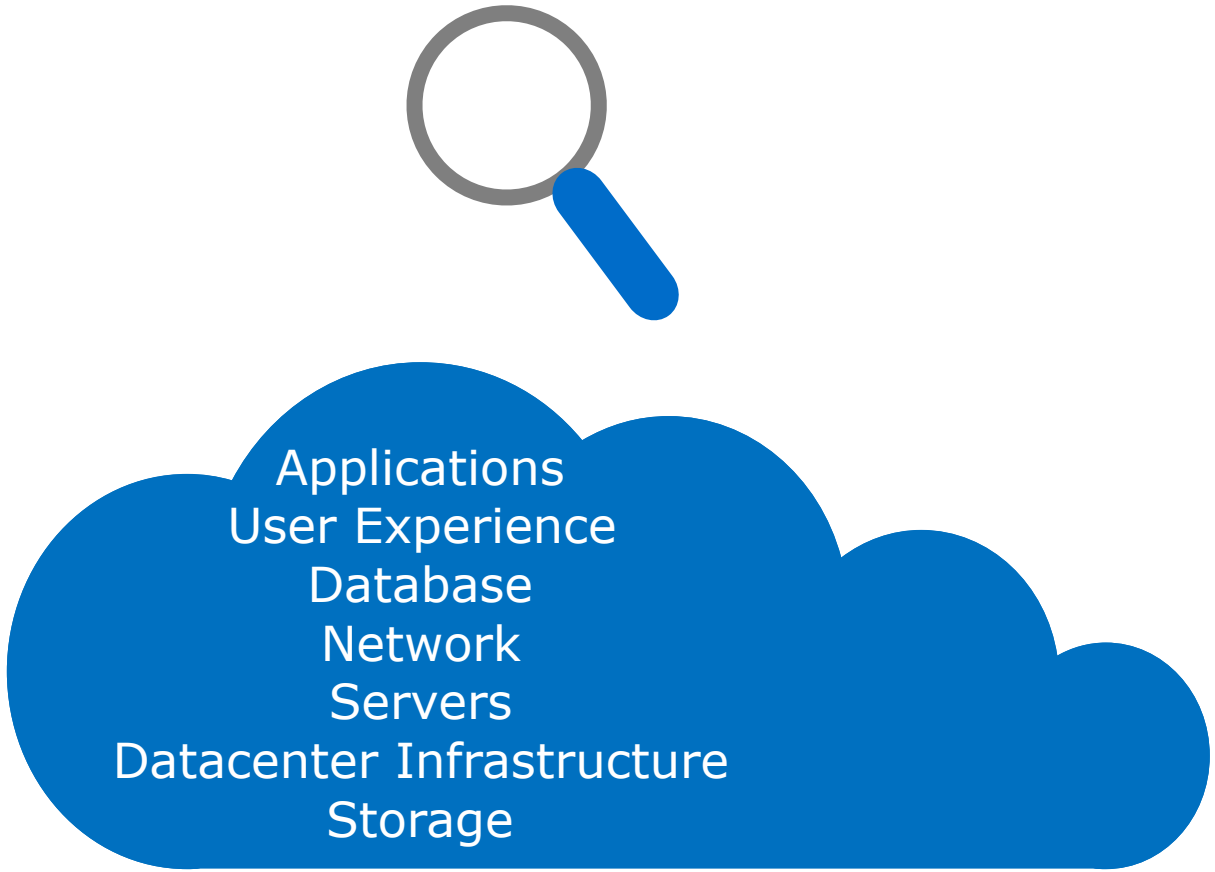


Desktop (as a service) Cloud Service

- Provides and manages a virtual desktops
- Allows smaller companies who find Virtual Desktop Infrastructure (VDI) to be cost prohibitive to deliver similar services
- Quickly deploy new solutions across the entire enterprise located in multiple regions

Monitoring (as a service) Cloud Service

- Consists of tools and applications meant to monitor certain aspects of an application, server, system, or any other IT component
- State monitoring is the most common service
  - The state of a component is constantly evaluated and results are displayed in real time



Metal (as a service) Cloud Service

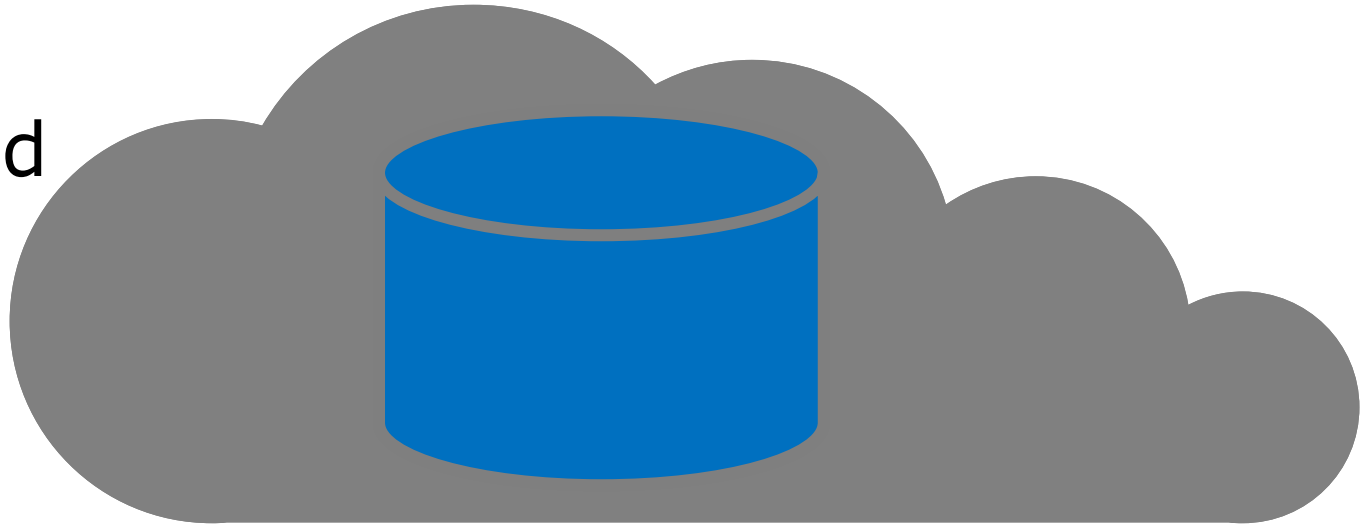
- A bare metal provisioning system to rapidly deploy physical servers
- *Flexibility* of cloud computing with *power* of actual physical servers
- Serves as a layer underneath IaaS

Communication (as a service) Cloud Service

- Includes enterprise communication solutions such as VoIP (Voice over IP), instant messaging (IM) and video conferencing tha can be leased
- Vendor is responsible for all hardware and software and offers guaranteed Quality of Service

Database (as a service) Cloud Service

- Cloud-based approach to the storage and management of structured and unstructured data
- Rather than offering raw storage platforms, this service offers functionality of database platforms such as SQL Server, MySQL, Oracle, and NoSQL



Summary

In this lesson, you have learned:

- Service Models
  - IaaS, PaaS, SaaS
- Move towards XaaS (Everything as a Service)
  - Database
  - Desktop
  - Communications
  - Metal
  - Monitoring