Cloud Computing

Cloudlytics

Definition

- What is cloud ?
  - Defining it through industry standard terms

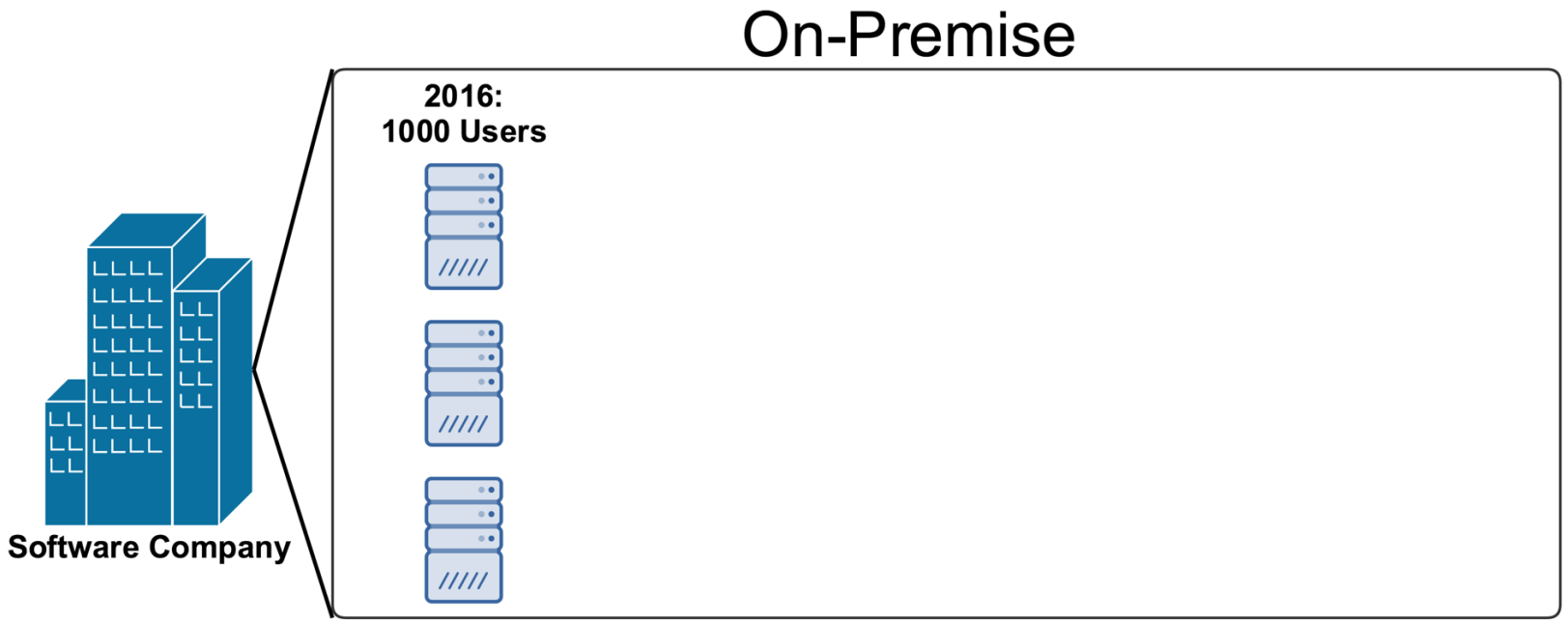
Essential Characteristics

- On demand self service
  - Comparison of traditional environment and cloud environment
- Broad network access

Essential Characteristics

- Resource pooling
- Rapid Elasticity

Common **Enterprise**
Uses of Cloud Services



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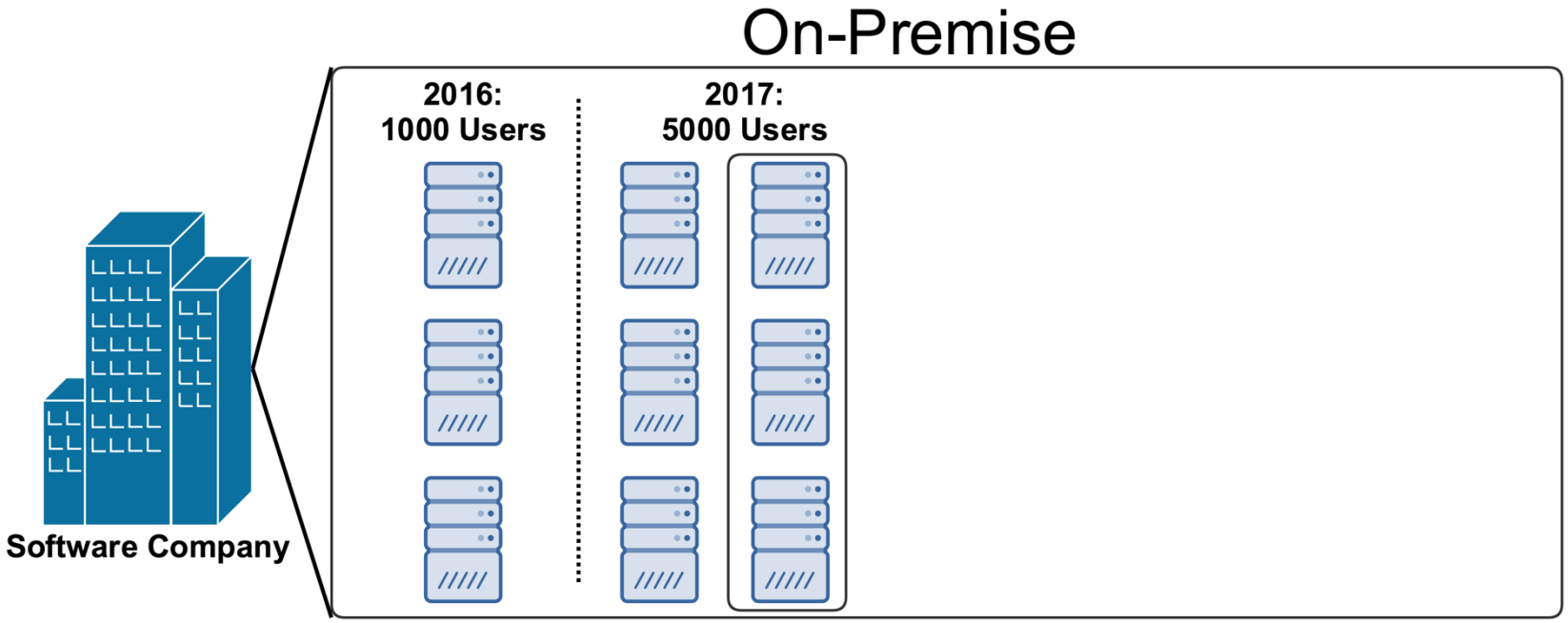

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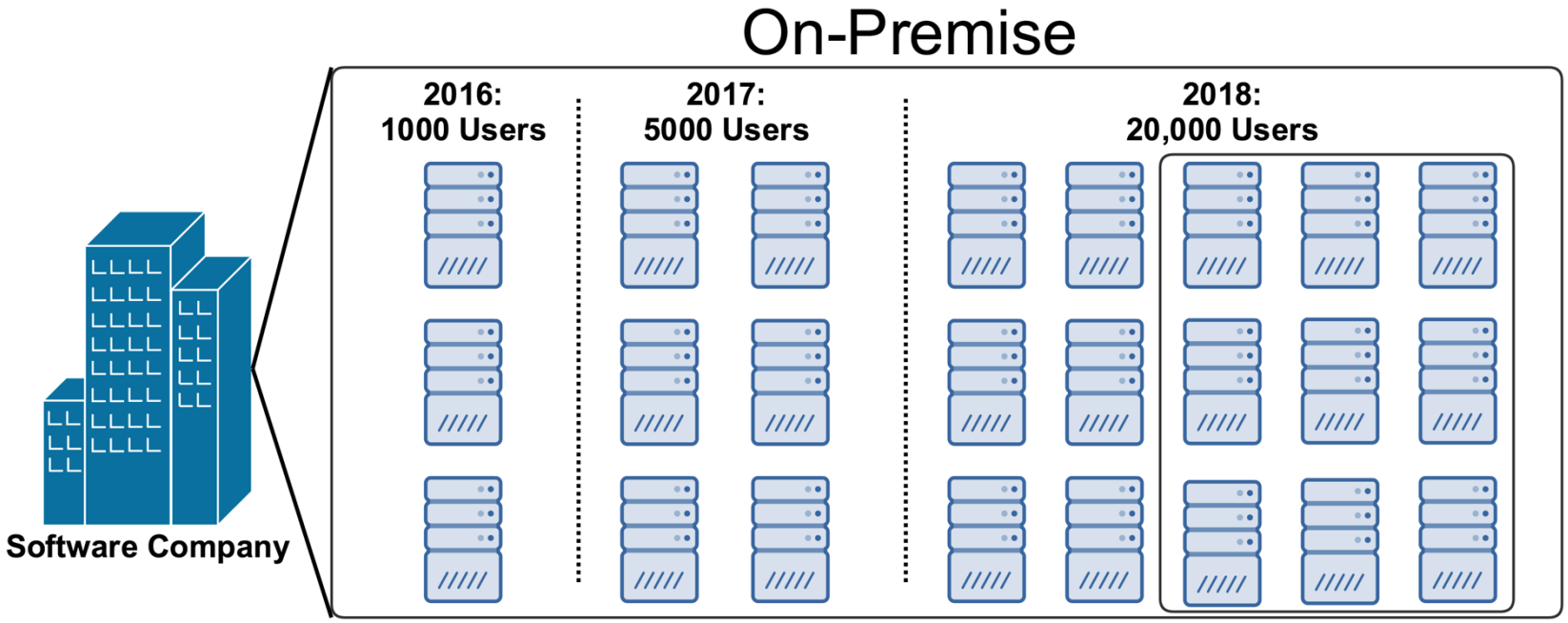

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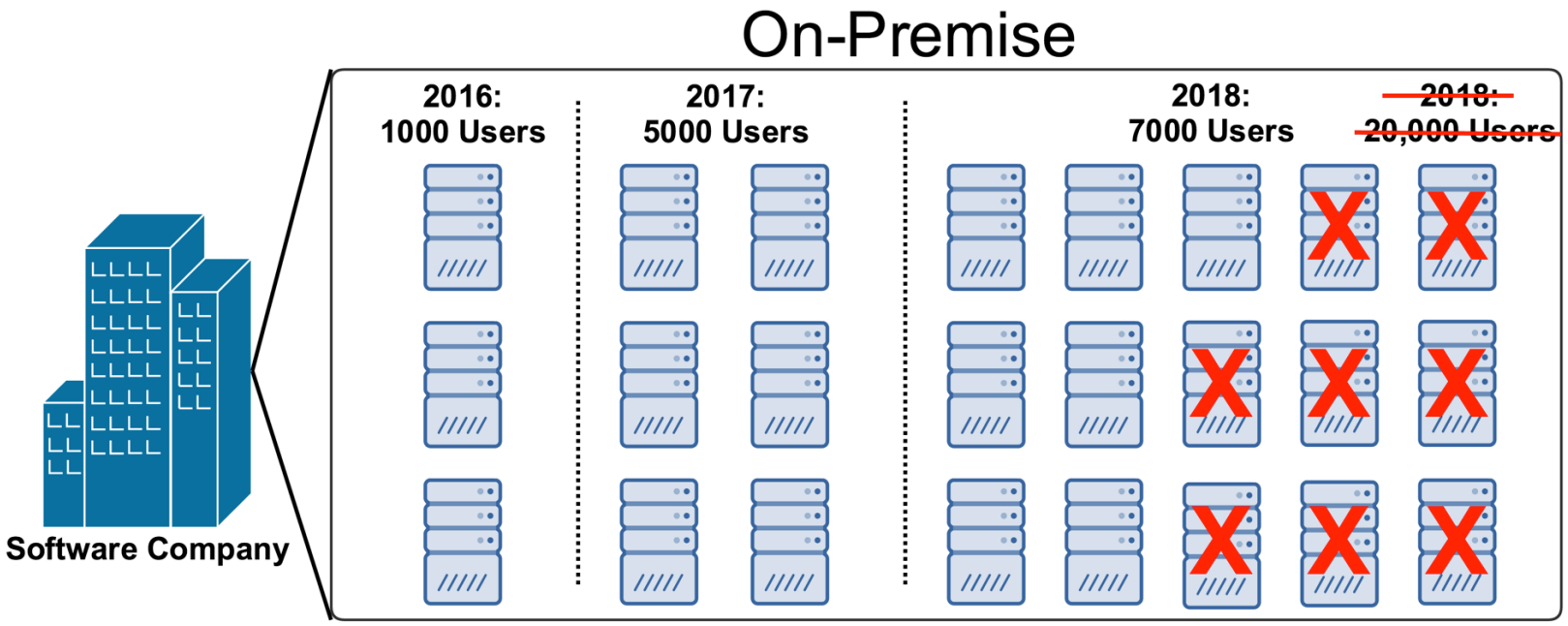

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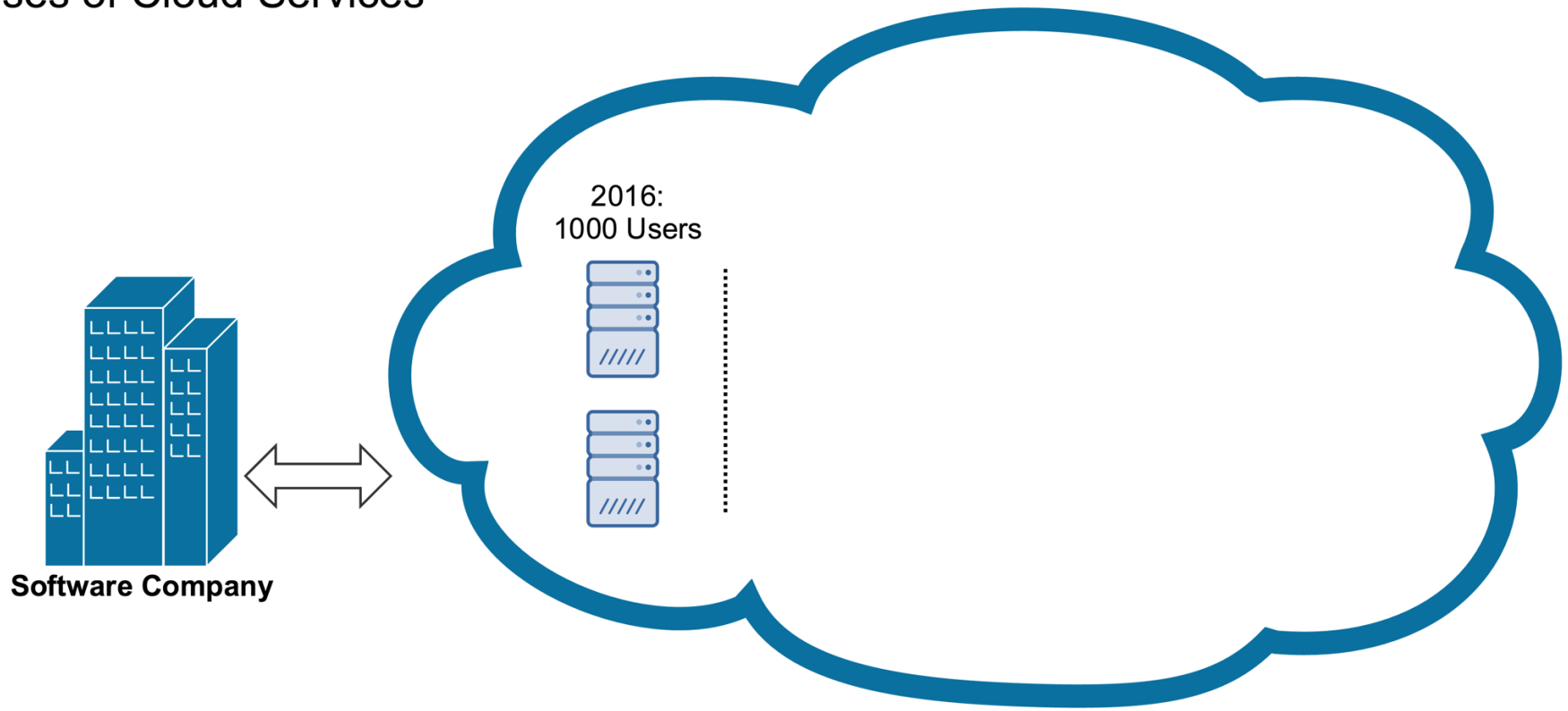

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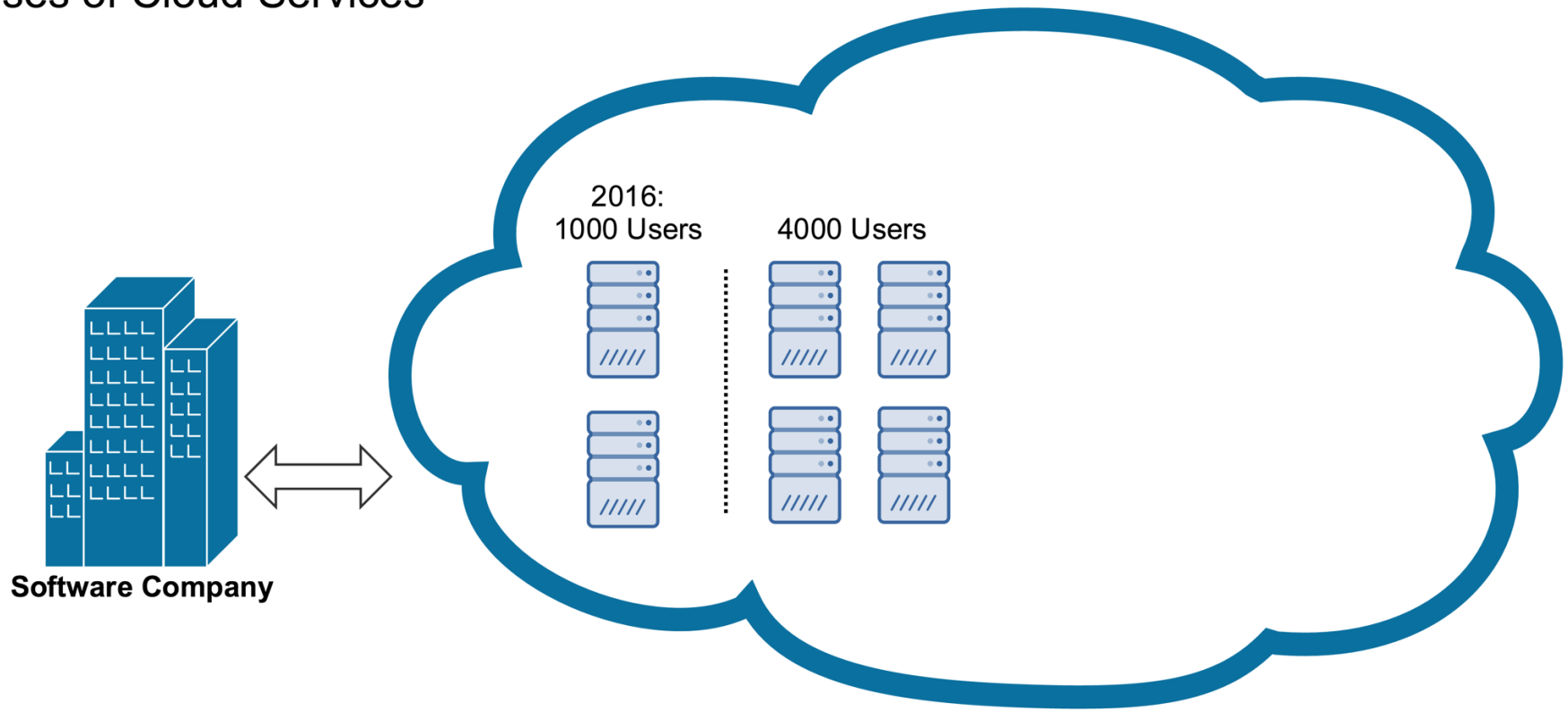

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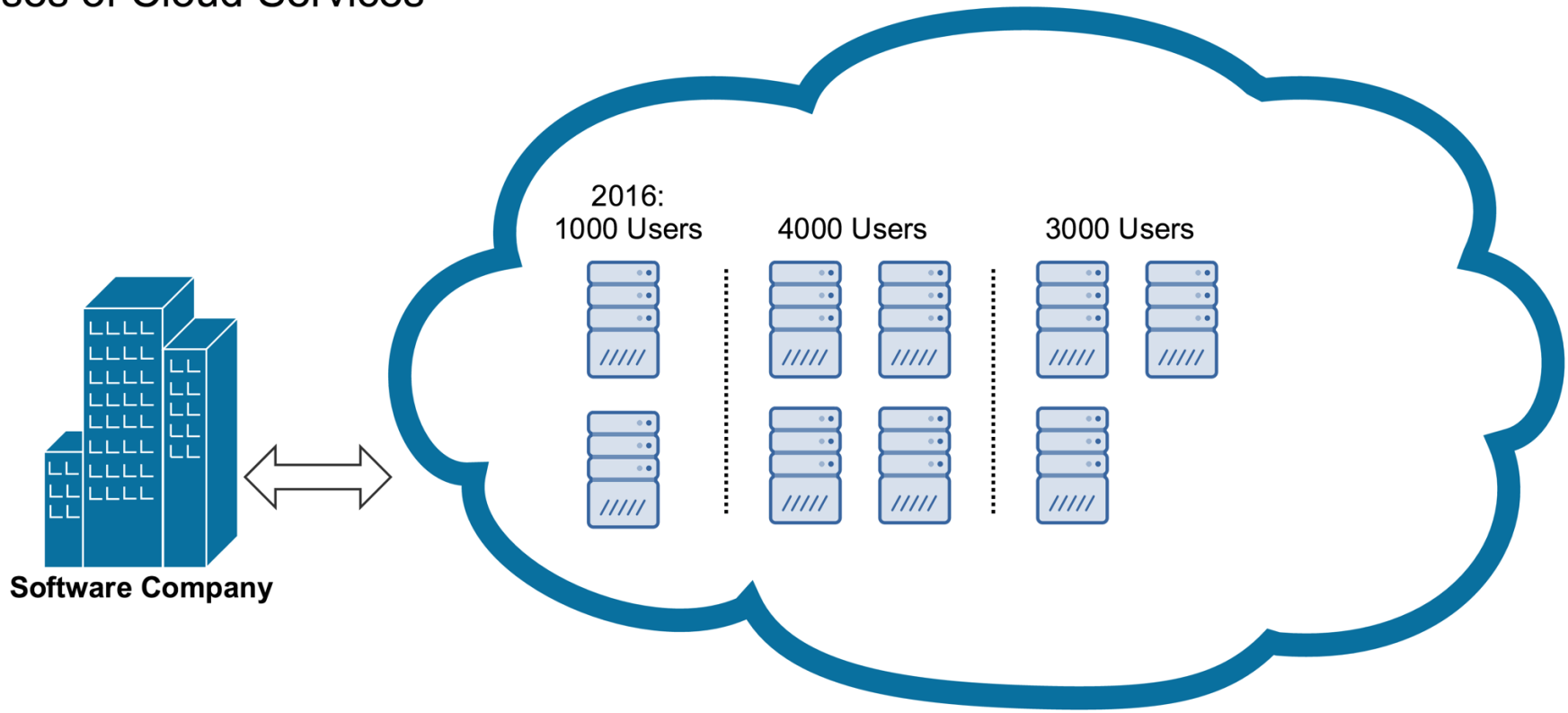

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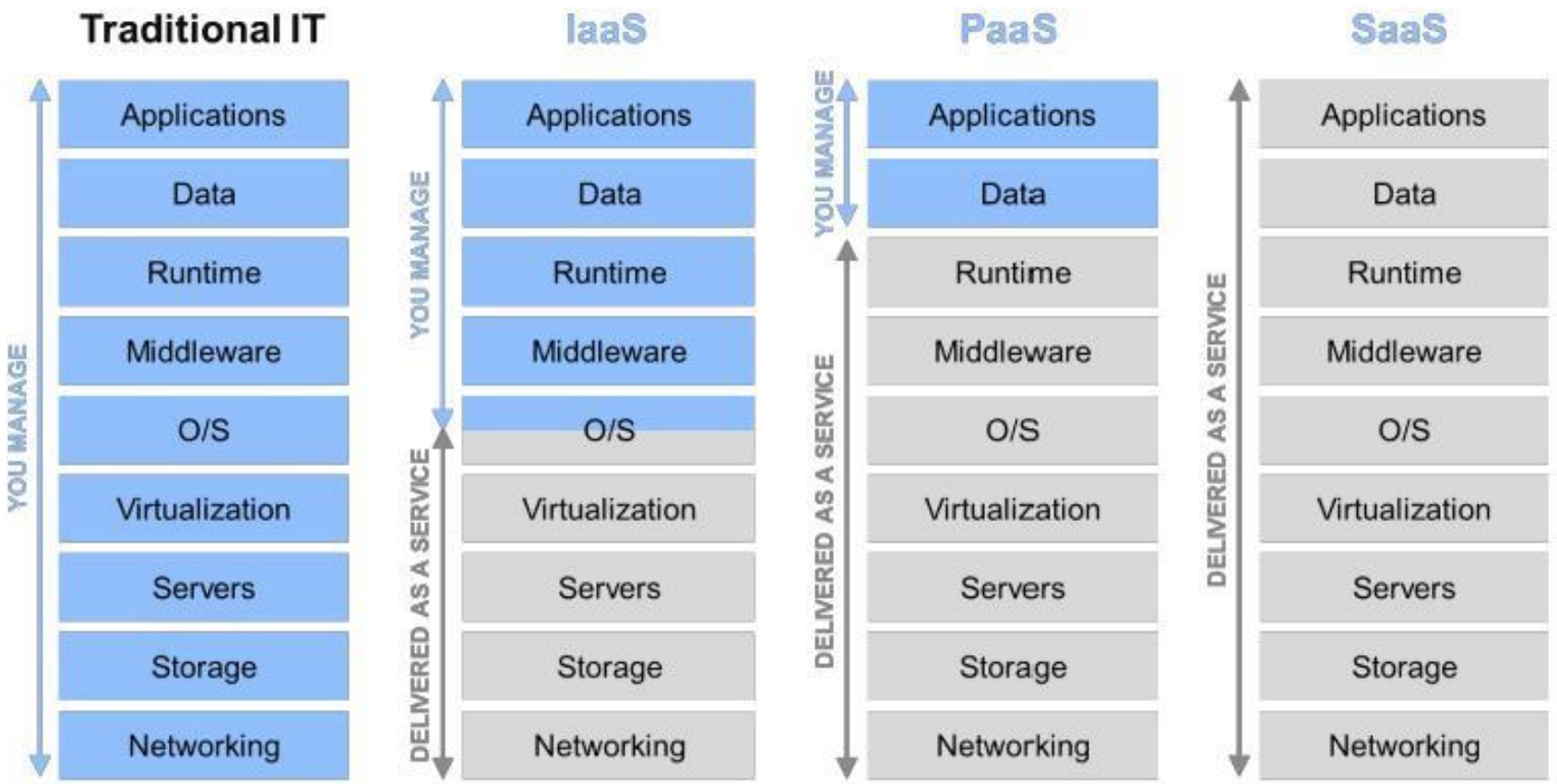
Why Cloud ?

- Business media says 73% of the companies are going for cloud
- Understanding the TCO
- 80 – 20 rule
- Direct cost-comparisons between the Cloud and on-premise are difficult, calculations of in-house costs fail to take into account:
    - The direct costs that accompany running a server: power, floor space, storage, and IT operations to manage those resources.
    - The indirect costs of running a server: network and storage infrastructure and IT operations to manage the general infrastructure.
    - The overhead costs of owning a server: procurement and accounting personnel, not to mention a critical resource in short supply: IT management and its attention.

Service models or Cloud Stack



Source: Microsoft.

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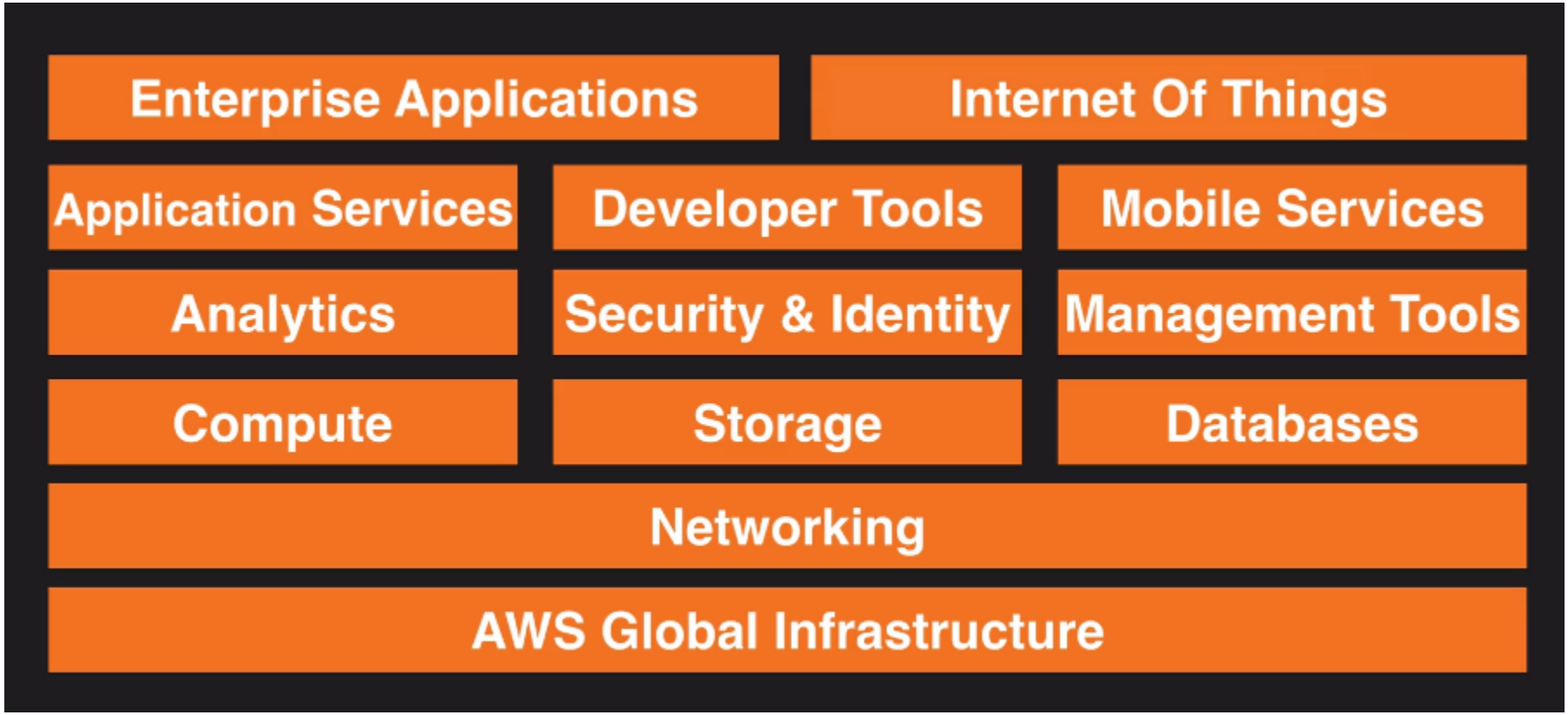
Deployment Models

- Private Cloud
- Community Cloud
- Public Cloud
- Hybrid Cloud
  - Virtual private cloud
  - Cloud Burst

Why learn AWS ?

- Fastest growing cloud computing platform on the planet
- Largest public cloud computing platform on the planet
- More and more organizations are outsourcing their IT to AWS
- The AWS certifications are the most popular certifications right now
- The safest place to be in IT right now
- Gartner report

AWS Platform



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S3 – Simple Storage Service

- S3 is object based storage i.e. it allows you to upload files
- Files can be from 1B to 5TB
- There is unlimited storage
- Files are stored in buckets
- Bucket names are unique globally

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S3

- S3 is simple key value store
  - Key (name of the object)
  - Value (data)
- Amazon guarantees 99.99% availability for S3
- Amazon guarantees 11 9's of durability for S3
- Secure data using ACL and Bucket policies

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EC2 – Elastic Compute Cloud

- Backbone of AWS
- Provides resizable compute capability in cloud
- You pay for the capacity you use

Amazon EC2

Family	Speciality	Use case
D2	Dense Storage	Fileservers/Data Warehousing/Hadoop
R4	Memory Optimized	Memory Intensive Apps/DBs
M4	General Purpose	Application Servers
C4	Compute Optimized	CPU Intensive Apps/DBs
G2	Graphics Intensive	Video Encoding/ 3D Application Streaming
I2	High Speed Storage	NoSQL DBs, Data Warehousing etc
F1	Field Programmable Gate Array	Hardware acceleration for your code.
T2	Lowest Cost, General Purpose	Web Servers/Small DBs
P2	Graphics/General Purpose GPU	Machine Learning, Bit Coin Mining etc
X1	Memory Optimized	SAP HANA/Apache Spark etc

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Thank you