CAPABILITY CLOUD
Introduction to Cloud Computing

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Tech Leadership Session Map

Covered Trends

- Cloud
- Mobile
- AI
- Health
- Security

Covered Capabilities / Skills

Shape & implement the innovation case

- Business Consulting
- Lean and Agile Organisations
- Product & Service Design

Develop the product

- Software & Systems Architecture
- Software Development Frontend
- Software Development Backend
- Embedded Software Development
- Security
- Data Analytics
- Safety and Regulatory
- Electronics Development
- Mechanics Development

Manage the project, the team, its tools and artifacts

- Team Collaboration
- Project Infrastructure
- Project Management

Assess the quality

- Quality Assurance
- Assessments

Life cycle setup and operation support

- Product Support
- DevOps
- Manufacturing

Covered Offerings

AI – Artificial Intelligence

COP – Collaboration / Portals

DiCo – Digital Consulting

ENT – Enterprise

SYS – Systems

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My passion is helping clients in achieving the greatest possible success by providing technological leadership.

Dr. Milan Milanović

Lead Software Architect

milan.milanovic@zuehlke.com

https://milan.milanovic.org

@milan_milanovic

milanmilanovic

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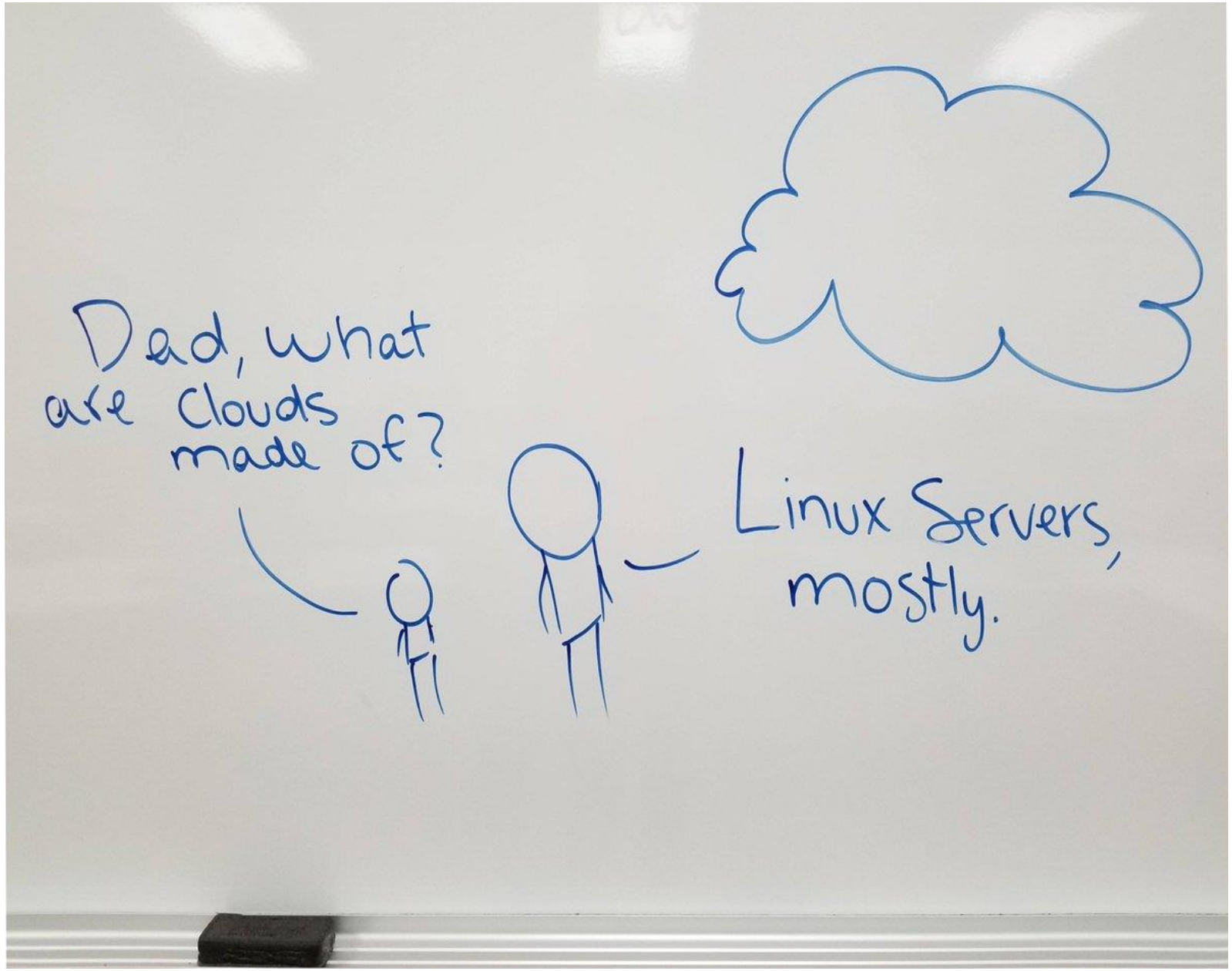
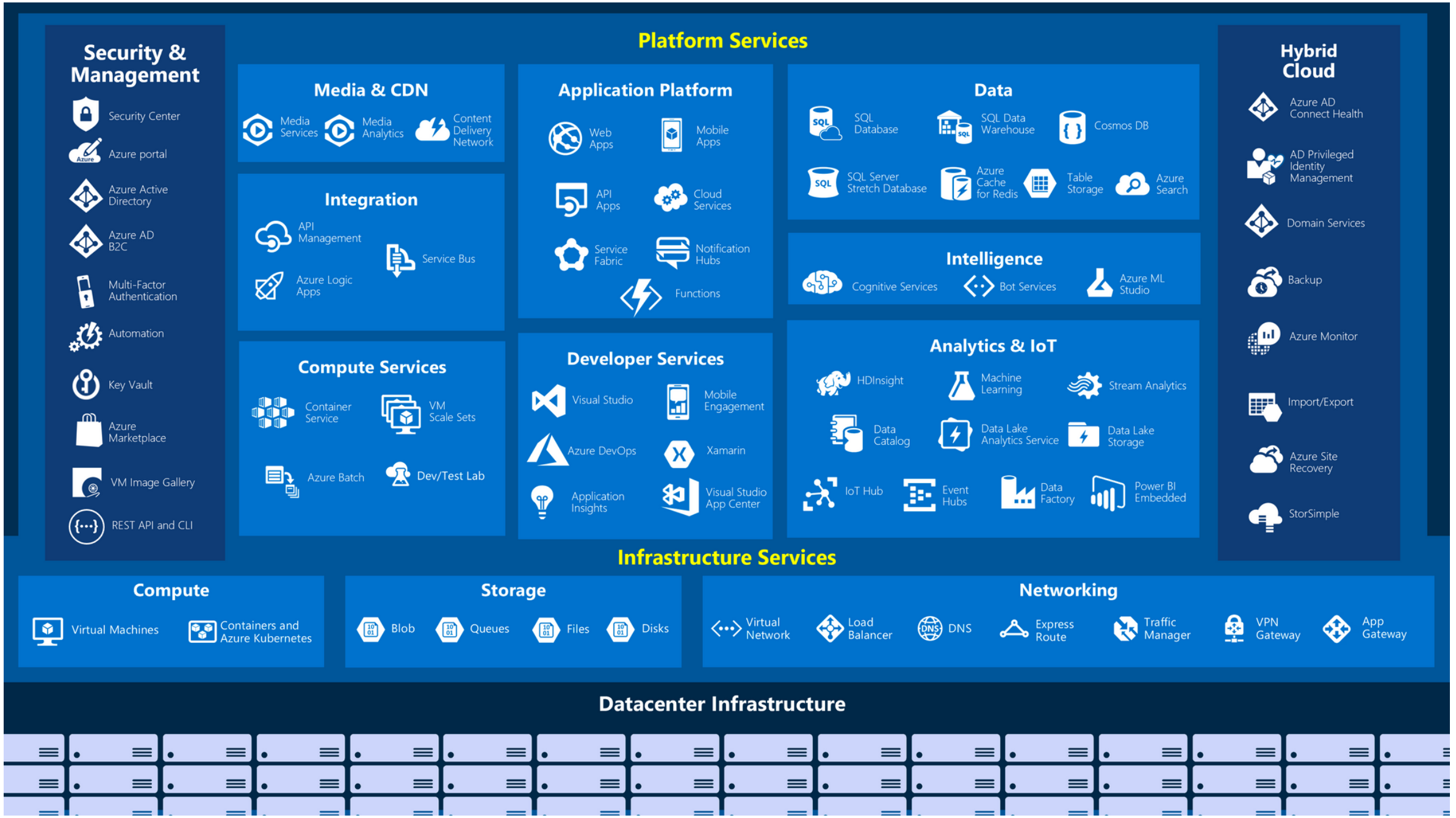

Dad, what are Clouds made of?
Linux Servers, mostly.

THERE IS NO CLOUD
IT'S JUST SOMEONE
ELSE'S COMPUTER


Platform Services
Security & Management
Security Center
Azure portal
Azure Active Directory
Azure AD B2C
Multi-Factor Authentication
Automation
Key Vault
Azure Marketplace
VM Image Gallery
REST API and CLI
Media & CDN
Media Services
Media Analytics
Content Delivery Network
Integration
API Management
Service Bus
Azure Logic Apps
Compute Services
Container Service
VM Scale Sets
Azure Batch
Dev/Test Lab
Application Platform
Web Apps
Mobile Apps
API Apps
Cloud Services
Service Fabric
Notification Hubs
Functions
Developer Services
Visual Studio
Mobile Engagement
Azure DevOps
Xamarin
Application Insights
Visual Studio App Center
Data
SQL Database
SQL Data Warehouse
Cosmos DB
SQL Server Stretch Database
Azure Cache for Redis
Table Storage
Azure Search
Intelligence
Cognitive Services
Bot Services
Azure ML Studio
Analytics & IoT
HDInsight
Machine Learning
Stream Analytics
Data Catalog
Data Lake Analytics Service
Data Lake Storage
IoT Hub
Event Hubs
Data Factory
Power BI Embedded
Hybrid Cloud
Azure AD Connect Health
AD Privileged Identity Management
Domain Services
Backup
Azure Monitor
Import/Export
Azure Site Recovery
StorSimple
Infrastructure Services
Compute
Virtual Machines
Containers and Azure Kubernetes
Storage
Blob
Queues
Files
Disks
Networking
Virtual Network
Load Balancer
DNS
Express Route
Traffic Manager
VPN Gateway
App Gateway
Datacenter Infrastructure

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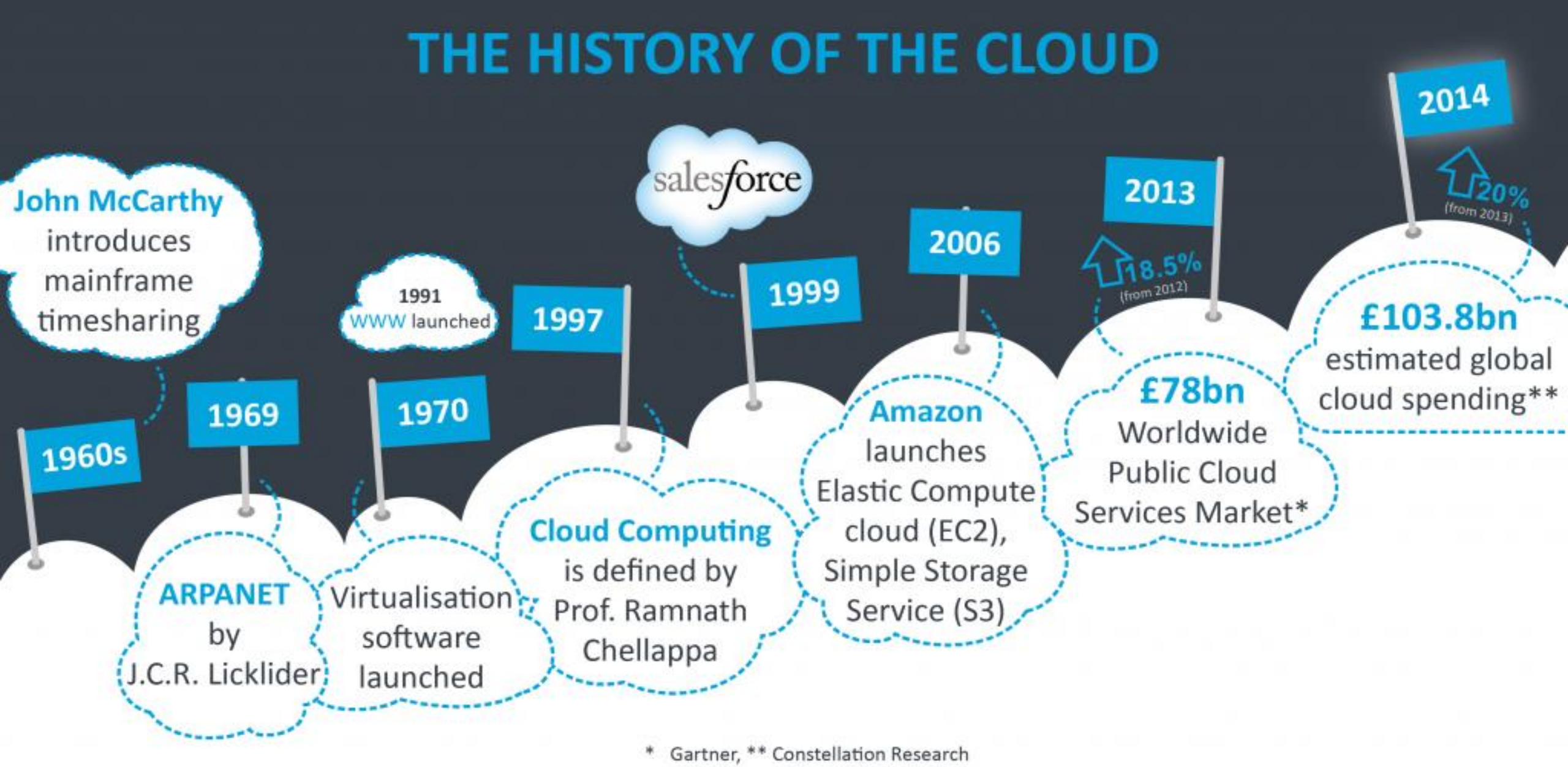
THE HISTORY OF THE CLOUD



* Gartner, ** Constellation Research

Microsoft plans to build up to 100 new data centres each year

Tech giant is slated to add data centres in at least 10 more countries this year alo

Leon Spencer (Channel Asia)
21 April, 2021 16:57

Ahmed Mazhari (Microsoft)

FOLLOW US

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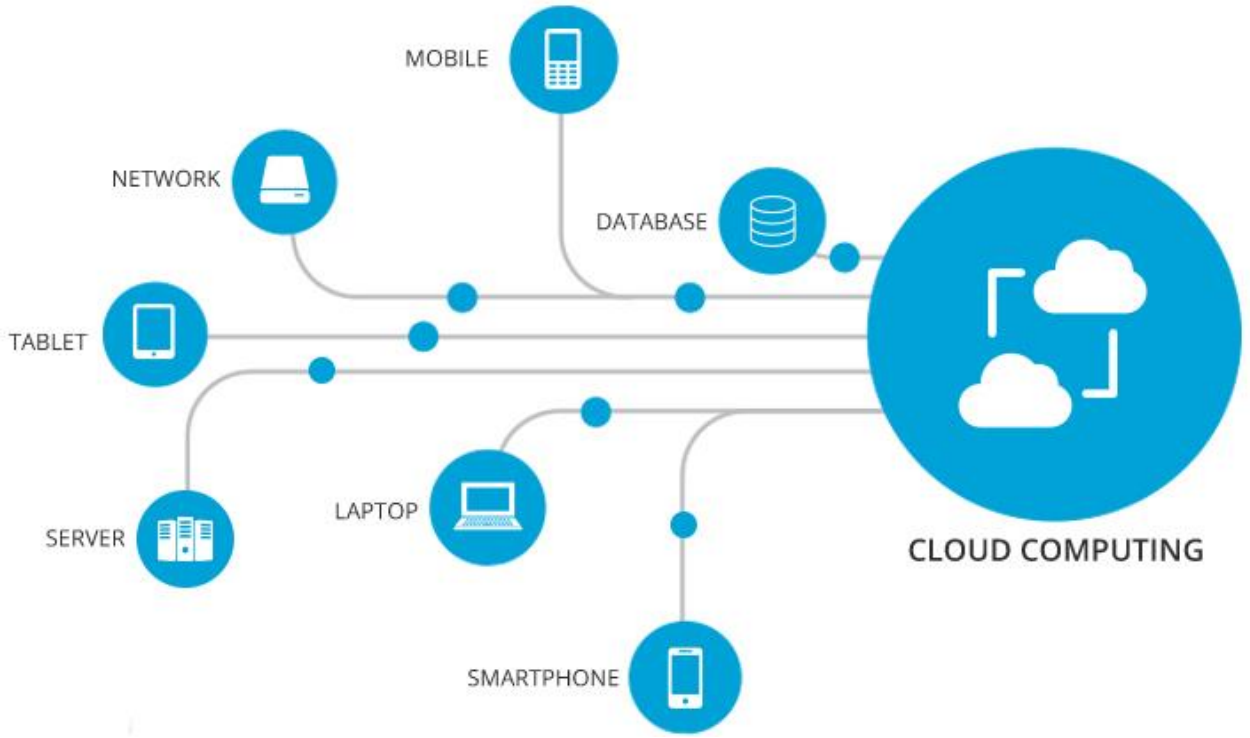
West US 2
West Central US
West US
West US 3
Central US
North Central US
East US
East US 2
South Central US
East US 3
Canada East
Canada Central
Mexico Central
Chile Central
Brazil South
Norway East
Sweden Central
West Europe
UK South
North Europe
UK West
Denmark East
Poland Central
Austria East
France Central
Italy North
Germany West Central
Switzerland North
Spain Central
Greece Central
Israel Central
Qatar Central
UAE North
South Africa North
China North 3
China North
China North 2
Korea Central
Korea South
Japan East
Japan West
China East 2
China East
East Asia
Taiwan North
West India
Central India
South India
Malaysia West
Southeast Asia
Indonesia Central
Australia East
New Zealand North
Australia Central
Australia Southeast
Available region
Availability Zones available
Announced Availability Zones
Announced region with Availability Zones

What is Cloud Computing?

"The huge interconnected network of servers designed to deliver computing resources without a sense of location."



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Uses of cloud computing

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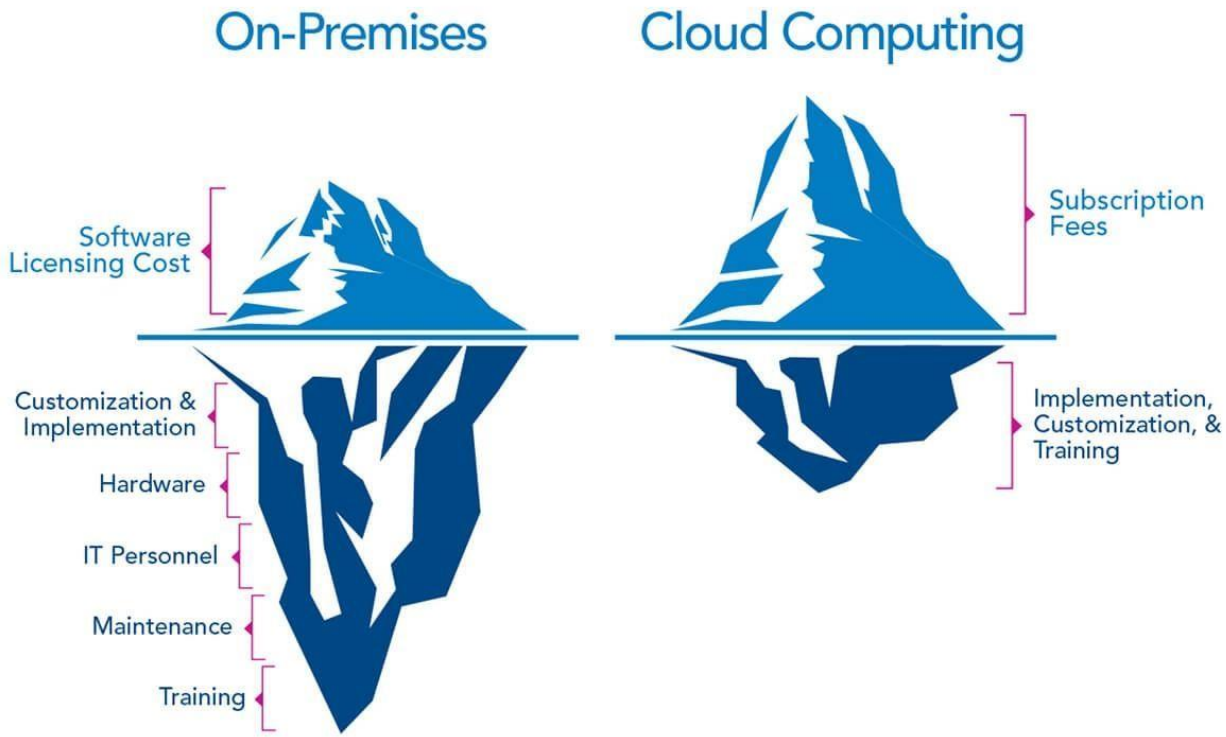
Benefits of Cloud Computing

- Cost
- Speed
- Scalability
- Productivity
- Performance
- Reliablity



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Risks

- Costs
- Dependency
- Locked-in
- Support
- Security

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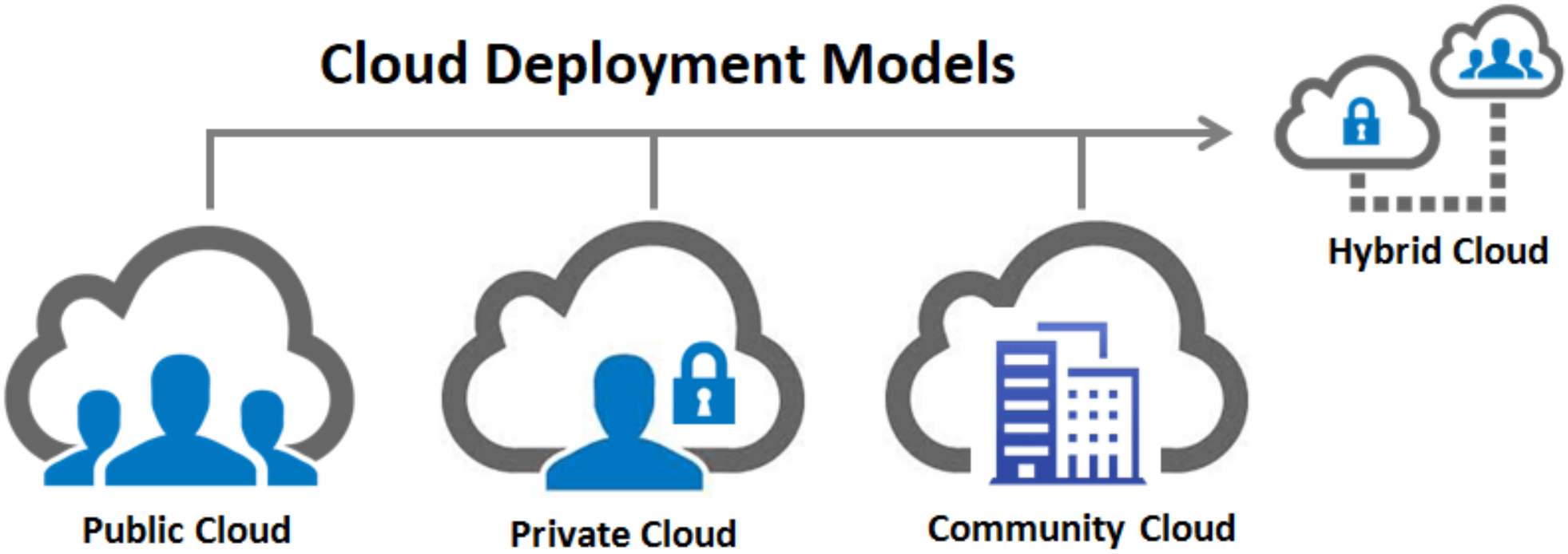
Different Cloud Deployment Models



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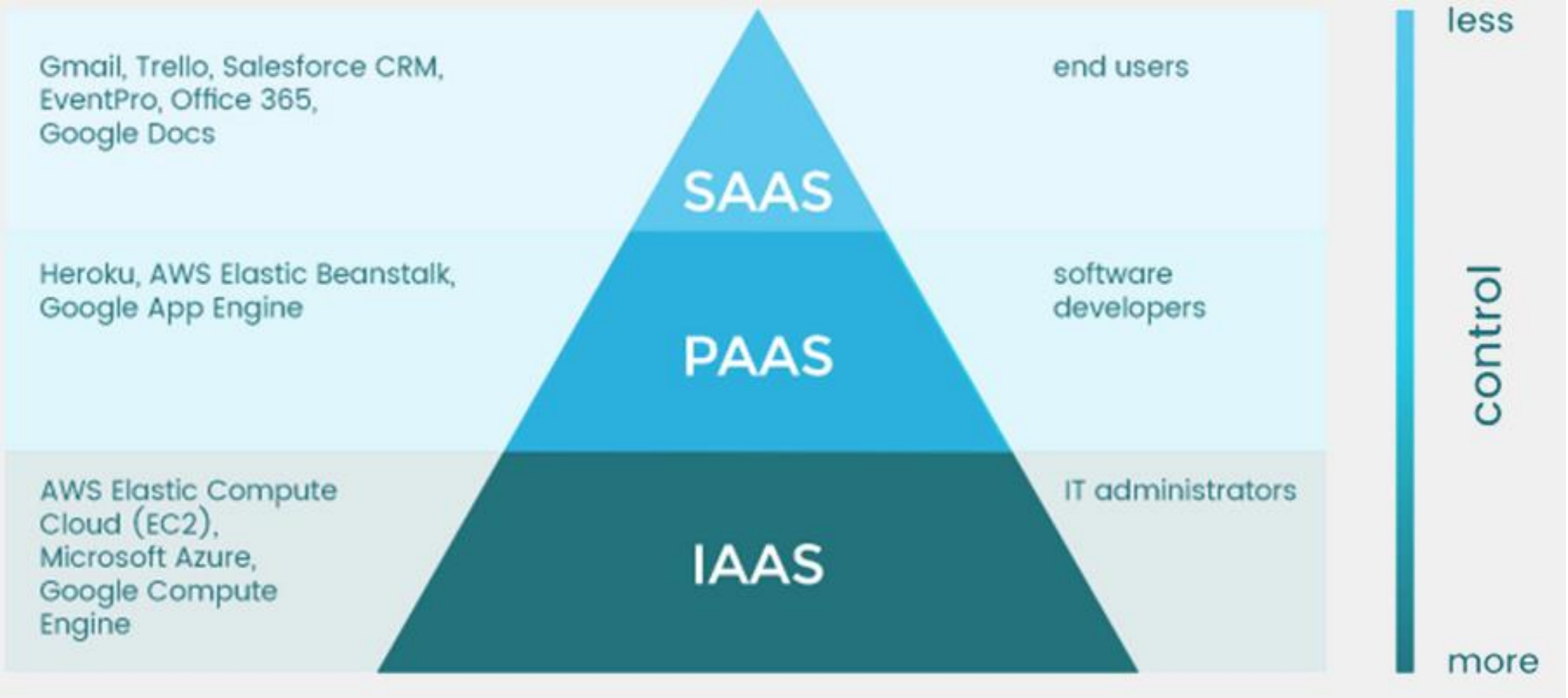
Types of Cloud Computing Services



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Pizza as a Service 2.0

http://www.paulkerrison.co.uk

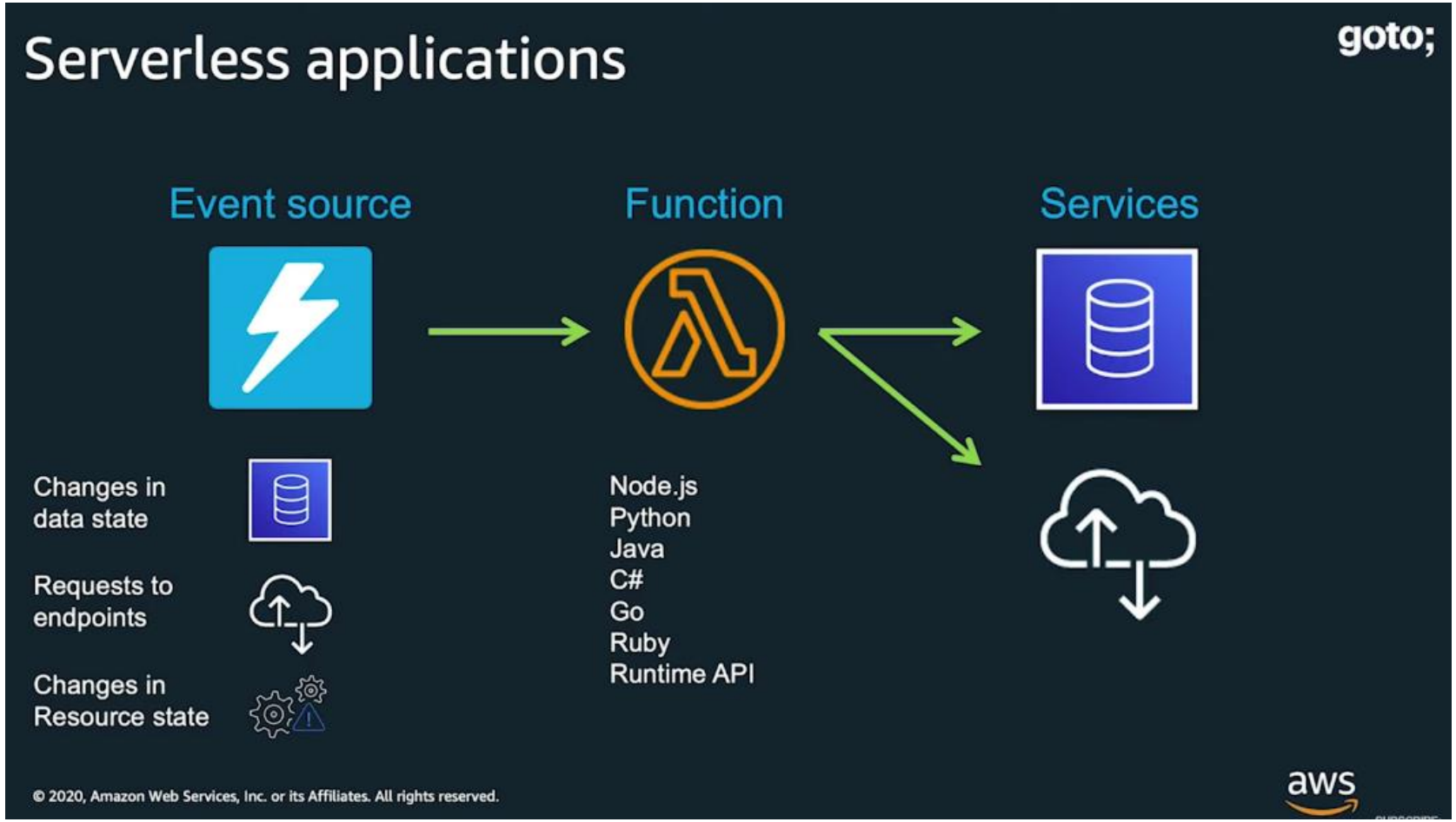
Tradition On-Premises (legacy)	Infrastructure as a Service (IaaS)	Containers as a Service (CaaS)	Platform as a Service (PaaS)	Function as a Service (FaaS)	Software as a Service (SaaS)
Conversation	Conversation	Conversation	Conversation	Conversation	Conversation
Friends	Friends	Friends	Friends	Friends	Friends
Beer	Beer	Beer	Beer	Beer	Beer
Pizza	Pizza	Pizza	Pizza	Pizza	Pizza
Fire	Fire	Fire	Fire	Fire	Fire
Oven	Oven	Oven	Oven	Oven	Oven
Electric / Gas	Electric / Gas	Electric / Gas	Electric / Gas	Electric / Gas	Electric / Gas
Homemade	Communal Kitchen	Bring Your Own	Takeaway	Restaurant	Party

- Configuration
- Functions
- Scaling...
- Runtime
- OS
- Virtualisation
- Hardware

You Manage

Vendor Manages

Serverless


Serverless applications
goto;
Event source
Function
Services
Changes in data state
Requests to endpoints
Changes in Resource state
Node.js
Python
Java
C#
Go
Ruby
Runtime API
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aws

Major Cloud Service Providers

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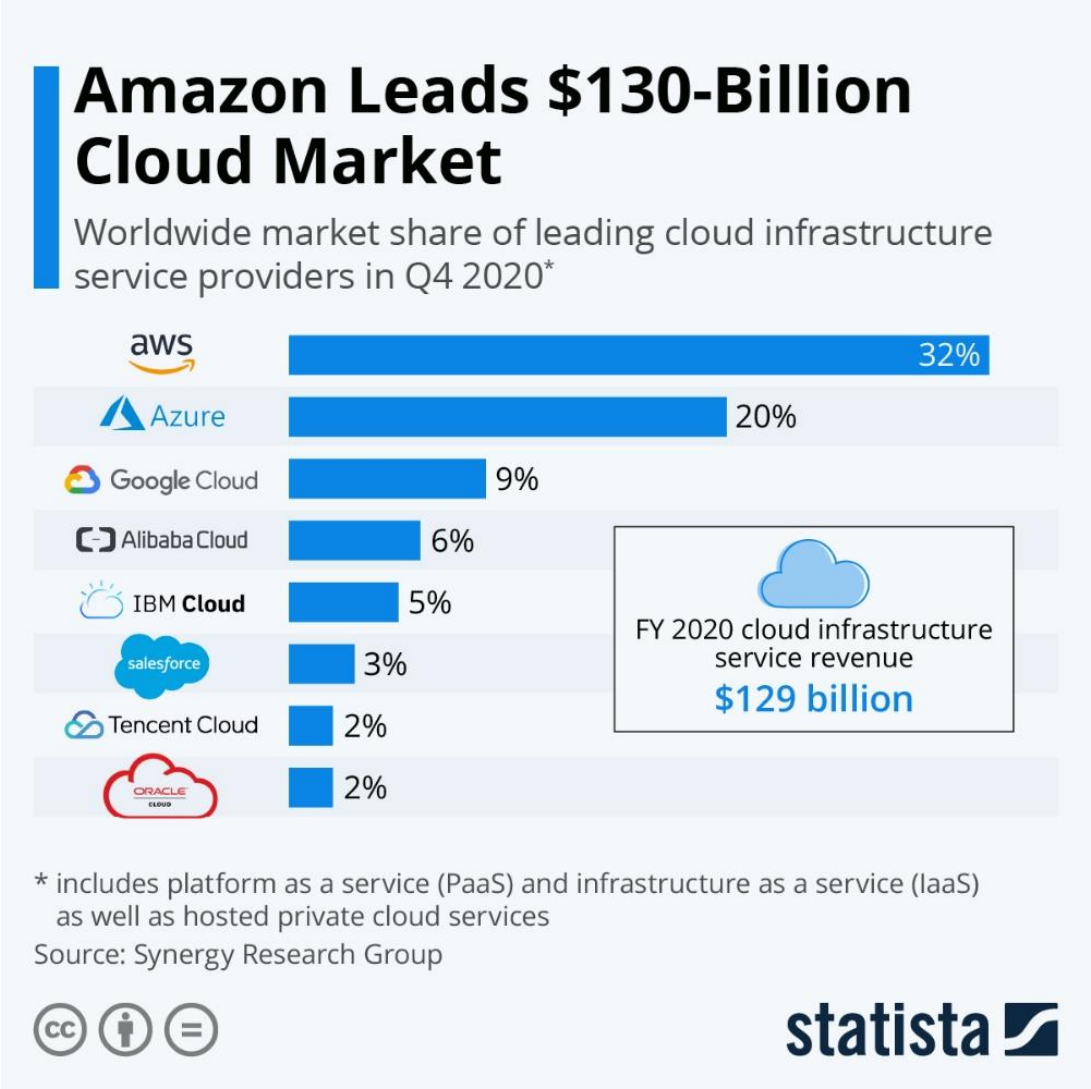
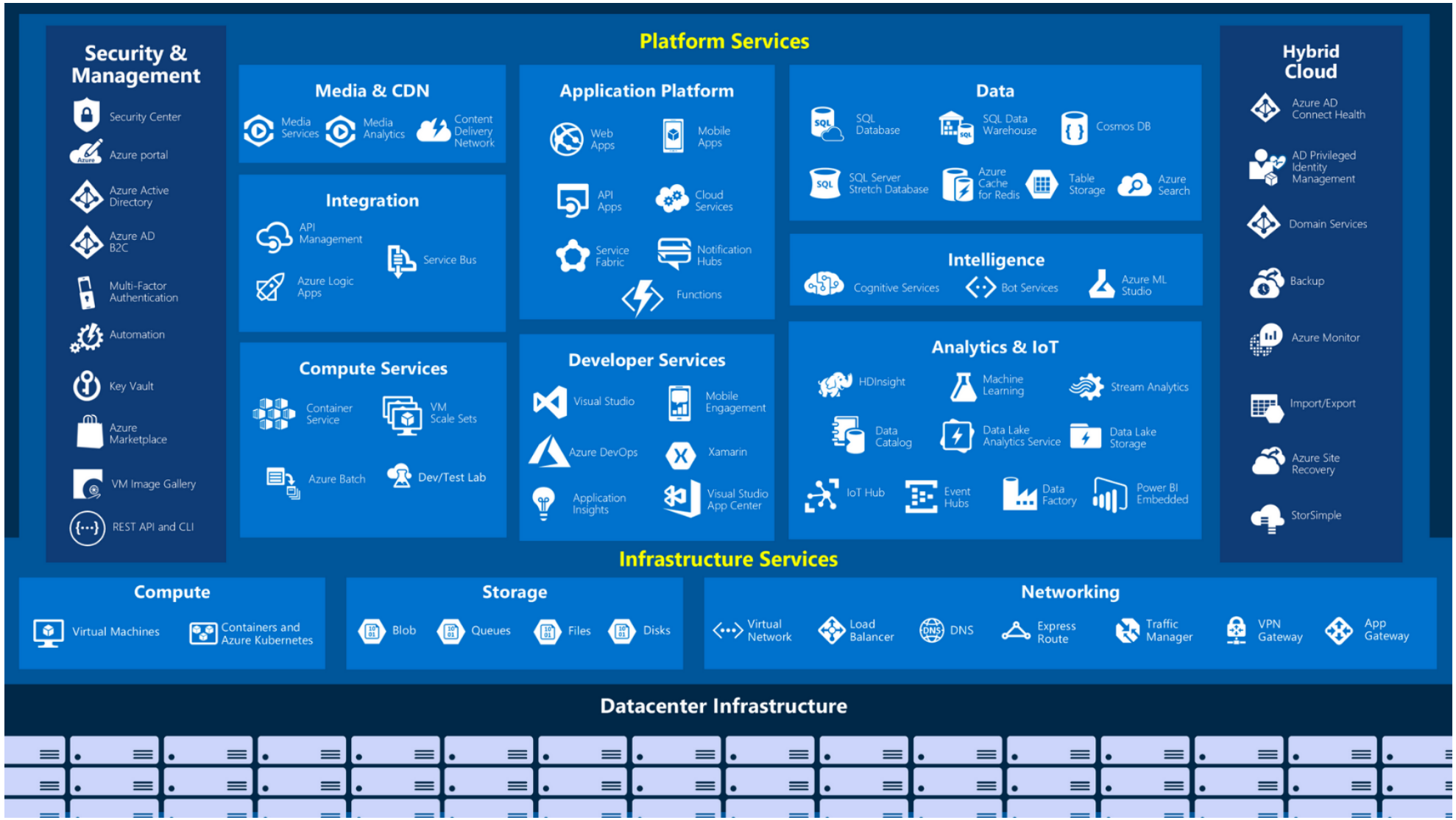
Cloud Service Providers Landscape



Core Cloud Services



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Computing

AMAZON	GOOGLE	MICROSOFT
Virtual Machines - including scaling		
• Amazon EC2 • Amazon Lightsail	• Compute Engine	• Virtual Machines • Virtual Machine Skill Sets
Virtual Machine Containers - i.e. Docker containers		
• Amazon EC2 Container Registry • Amazon EC2 Container Service	• Container Engine • Container Registry	• Azure Container Service • Azure Container Registry
Web Application Support - ranging from supporting a ready-made application support platform to full PaaS application creation and management		
• AWS Elastic Beanstalk	• App Engine	• App Service
Event Handling - Serverless functions that can respond to specific event signals		
• AWS Lambda	• Cloud Functions	• Functions
Batch Processing - Batch computing and large scale processing that can be done off peak hours		
• AWS Batch		• Batch

Storage

AMAZON	GOOGLE	MICROSOFT
Object Storage - storage of object based data		
• Amazon S3	• Cloud Storage	• Storage
Block Storage - storage of data in blocks and tracks. Ideal for virtual machine disk drives		
• Amazon EBS	• Persistent Storage	• Storage
File Storage - file system like storage		
• Amazon Elastic File System		• Storage
Archives - Services to store large amounts of data that don't require immediate and regular access		
• Amazon Glacier		

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Databases

AMAZON	GOOGLE	MICROSOFT
Relational Databases - includes relational database environments that support several database applications to fully managed, high availability, enterprise grade systems		
• Amazon Aurora • Amazon RDS	• Cloud SQL • Cloud Spanner	• SQL Database • SQL Server Stretch Database (Combination of on premise and cloud SQL server)
NoSQL Databases - offerings range from simple NoSQL databases to fully managed, enterprise grade NoSQL instances		
• Amazon EBS	• Persistent Storage	• Storage
Caching Services - Redis-based or proprietary cache servers		
• Amazon Elasticache		• Redis Cache

Networking

AMAZON	GOOGLE	MICROSOFT
Virtual Networking - all three providers offer a wide range of network configuration options. Networks can be singular or multiple, can connect to each other, or be isolated		
• Amazon VPC	• Cloud Virtual Network	• Virtual Network • VPN Gateway
Interconnected Services - Provides a direct connection from an on-premises site directly to the provider's cloud, usually through a third-party provider or dedicated hardware.		
• AWS Direct Connect	• Interconnect	• Express Gateway

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And also...

AMAZON	GOOGLE	MICROSOFT
Other Services - There are a wealth of offerings that are designed to complement the above services, are very niche in nature, or are implemented too uniquely to each service for generalization here.		
• Developer Tools • Management Tools • Security, Identity, and Compliance • Artificial Intelligence • Mobile Services • Application Services • Messaging • Business Productivity • Desktop & App Streaming • Internet of Things • Game Development	• BigQuery Machine Learning • Identity & Security • Management Tools • Developer Tools • Genomics	• Web + Mobile • Internet of Things • Enterprise Integration • Security + Identity • Developer Tools • Monitoring + Management

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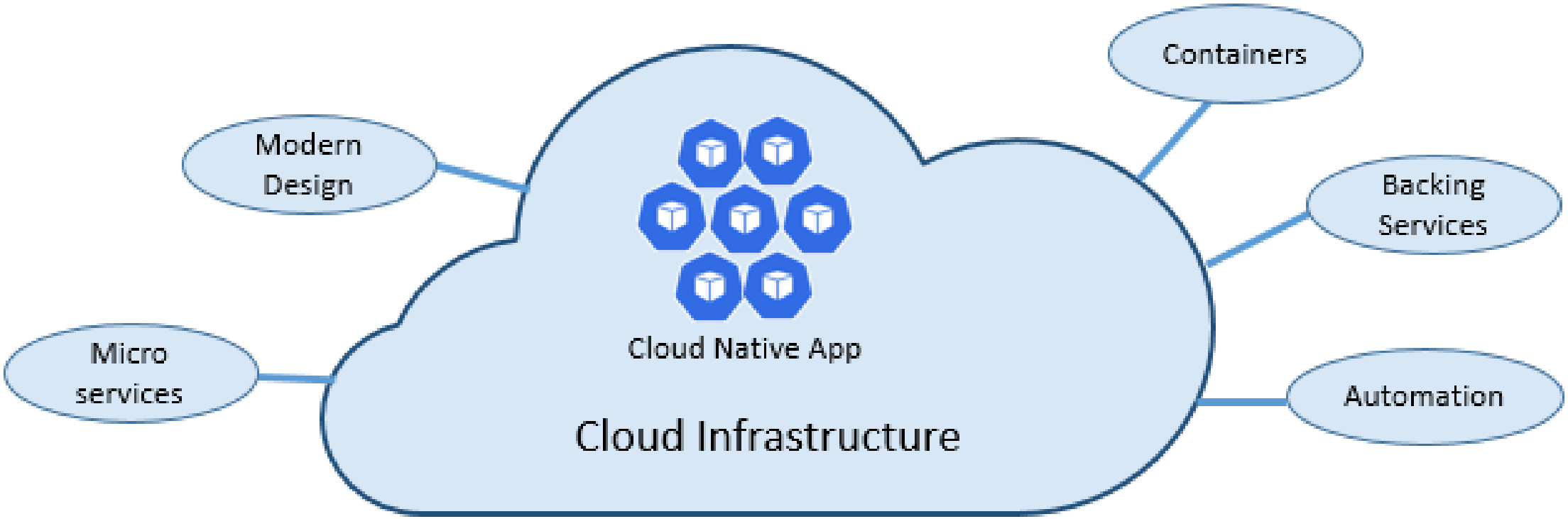
Cloud native



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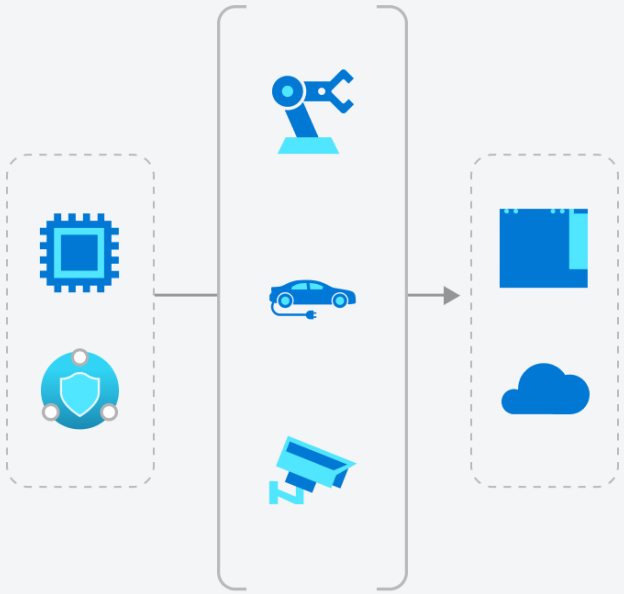
IoT

THINGS



INSIGHTS

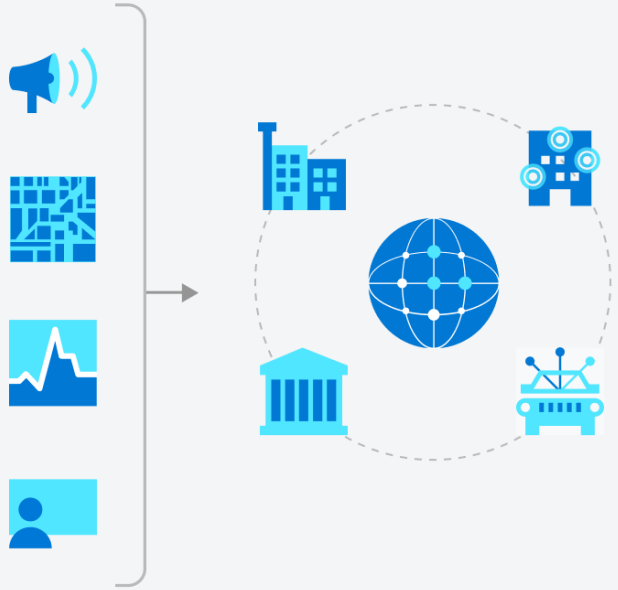
FULLY MANAGED

APP SERVICE

OR

BUILD CUSTOM WITH
PLATFORM SERVICES

ACTIONS



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Why to learn cloud technologies?

- Future-Proof Your Career
- Raise Your Value as an IT Professional
- Personal Growth and Interest

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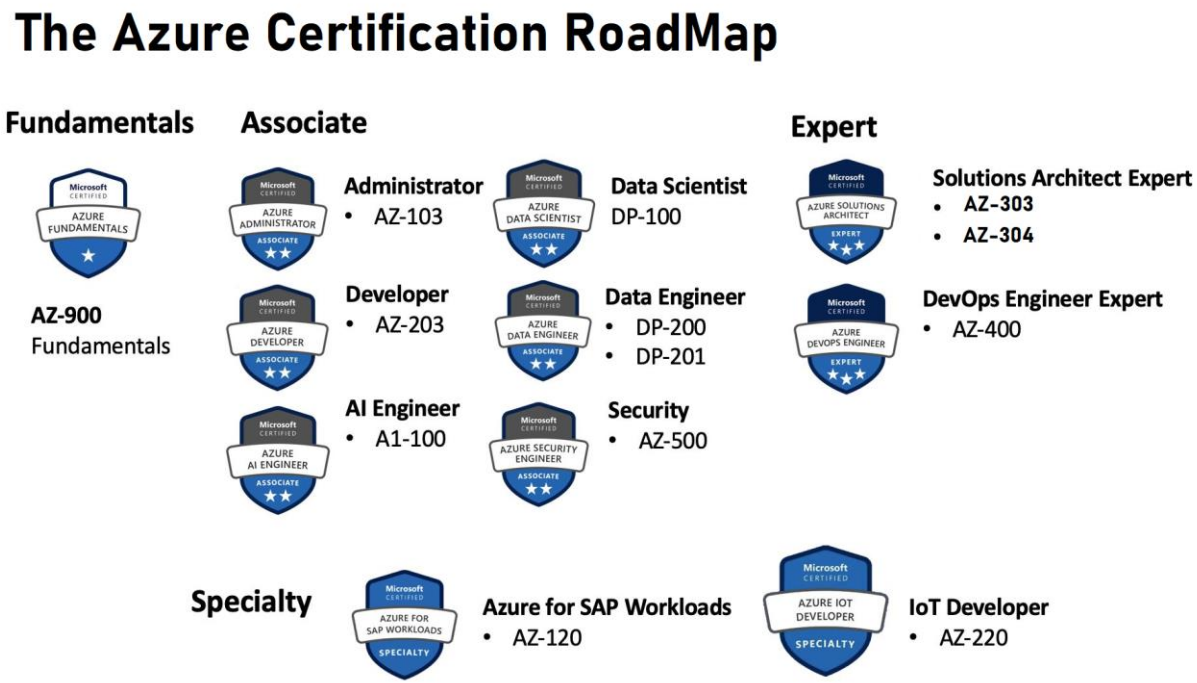
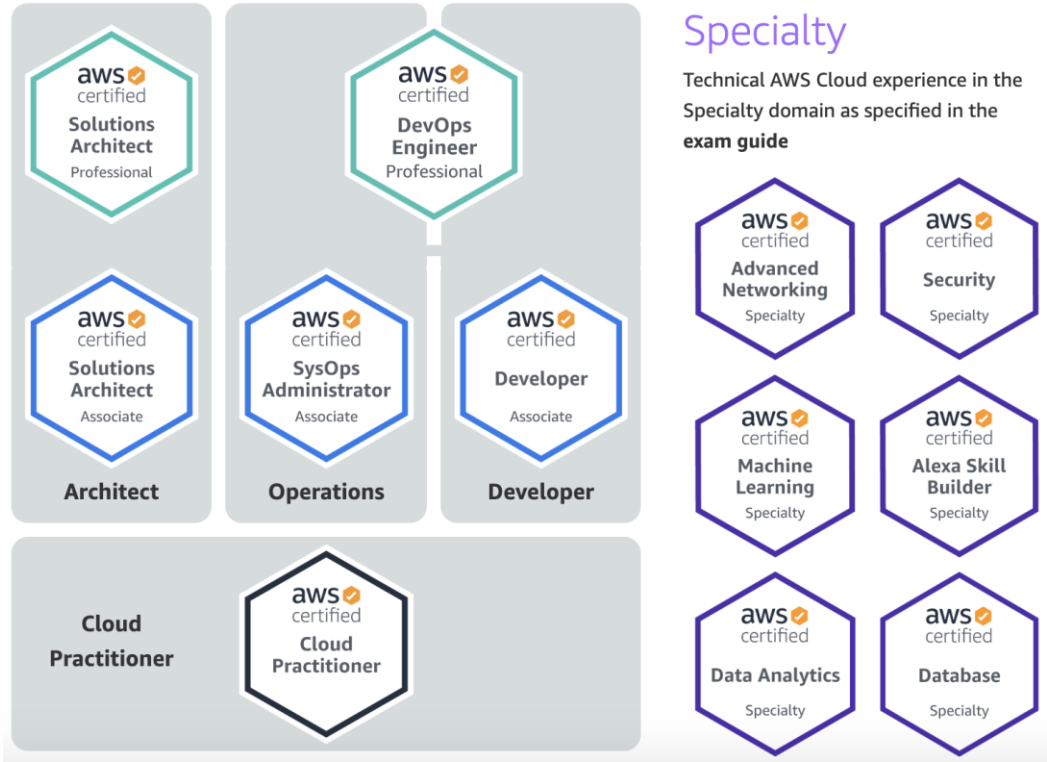
Cloud certifications





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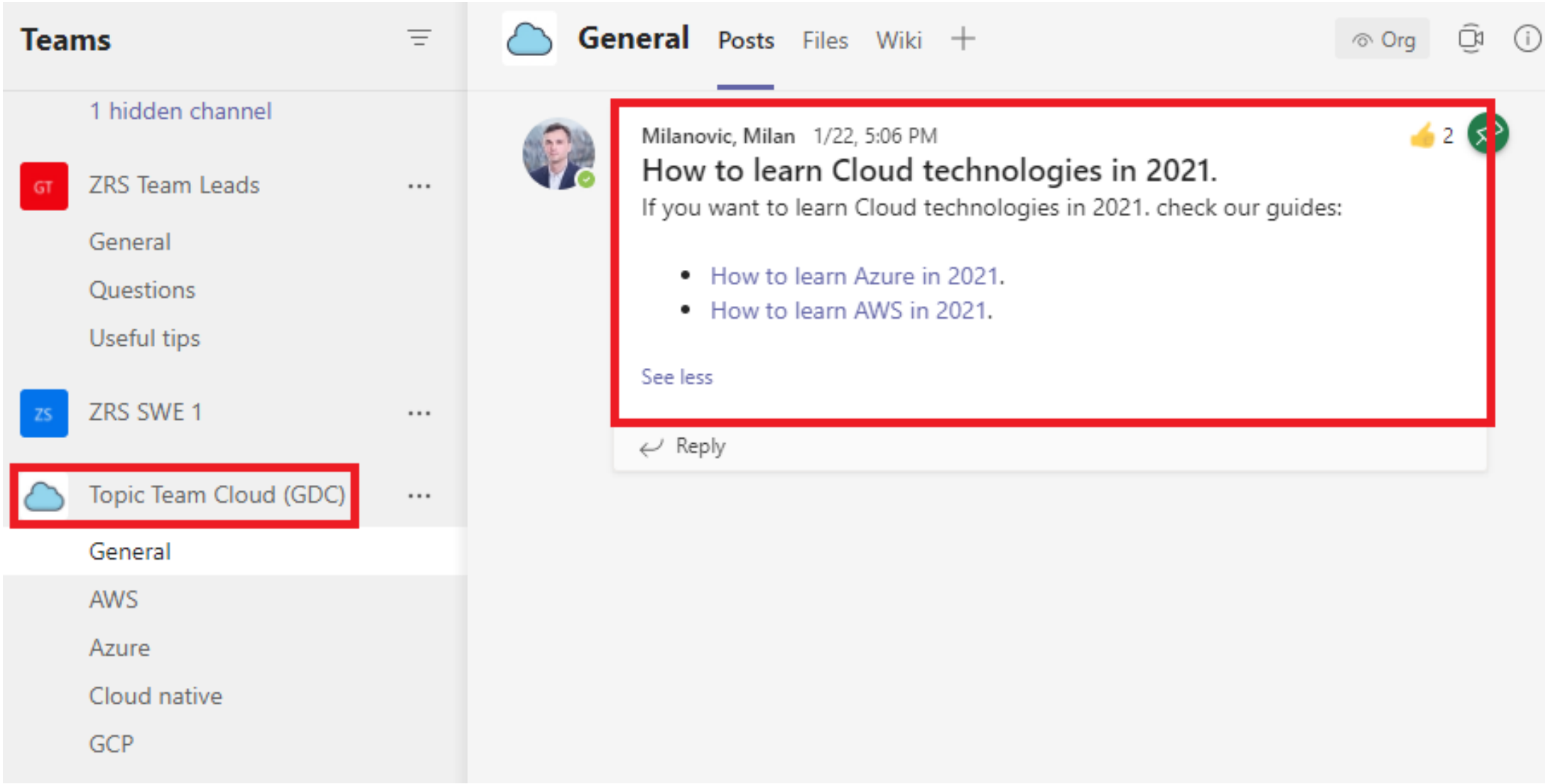
How can I get started?



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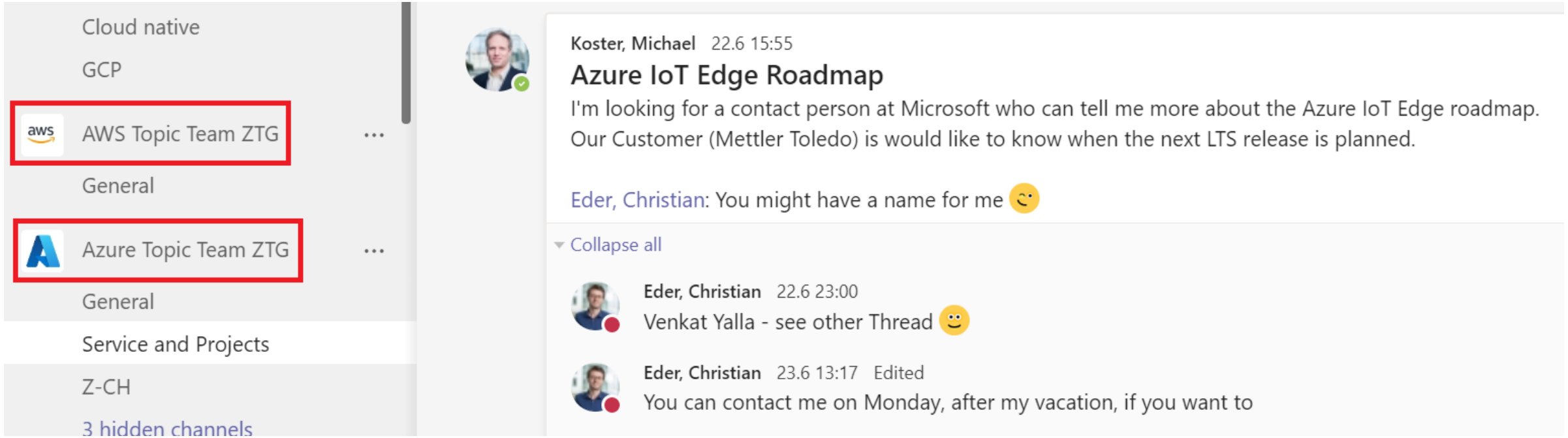
Cloud Topic groups – Group level



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Thanks! Questions ?

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