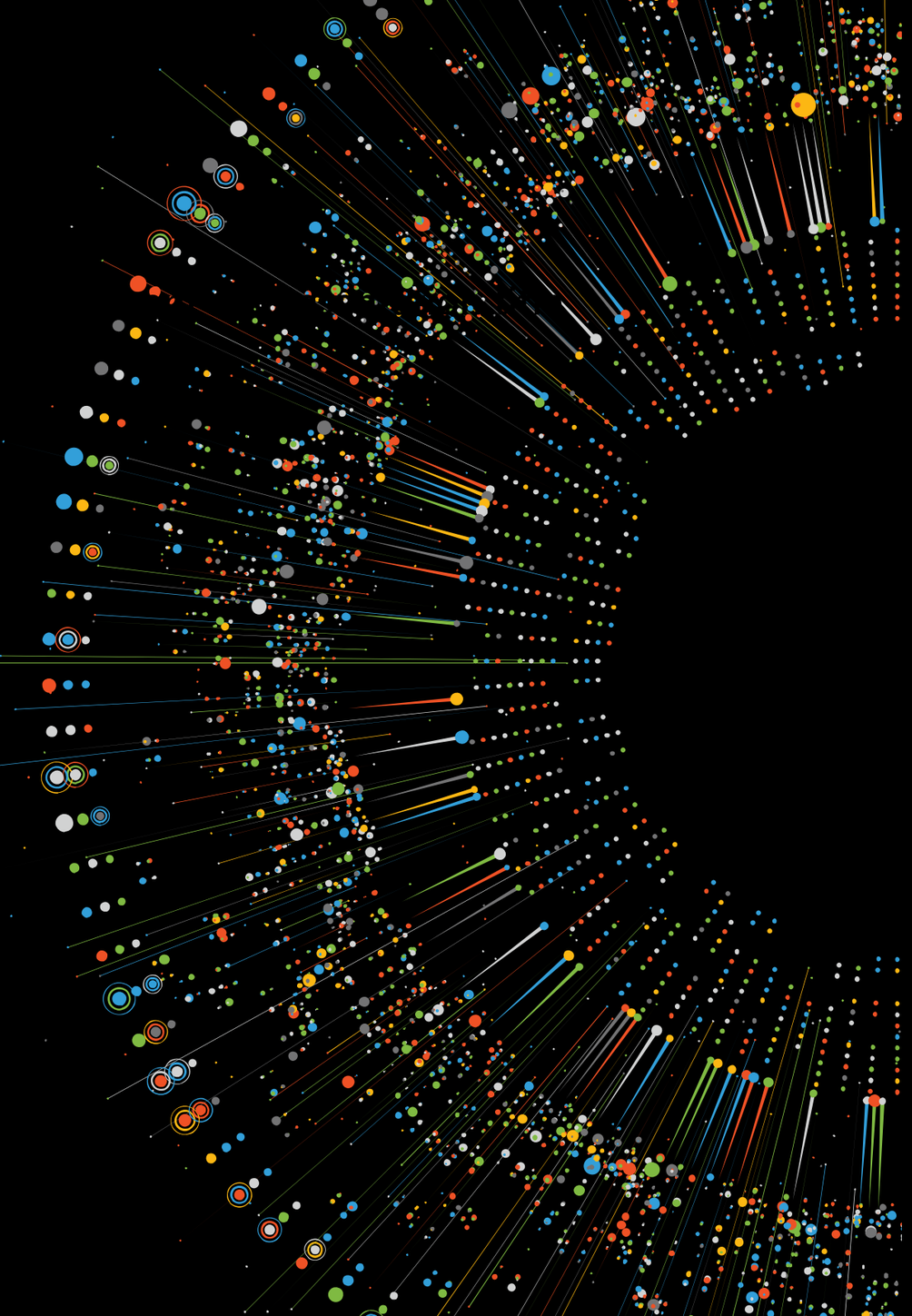

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TIAGO COSTA

Cloud Architect and Advisor, Trainer, Author

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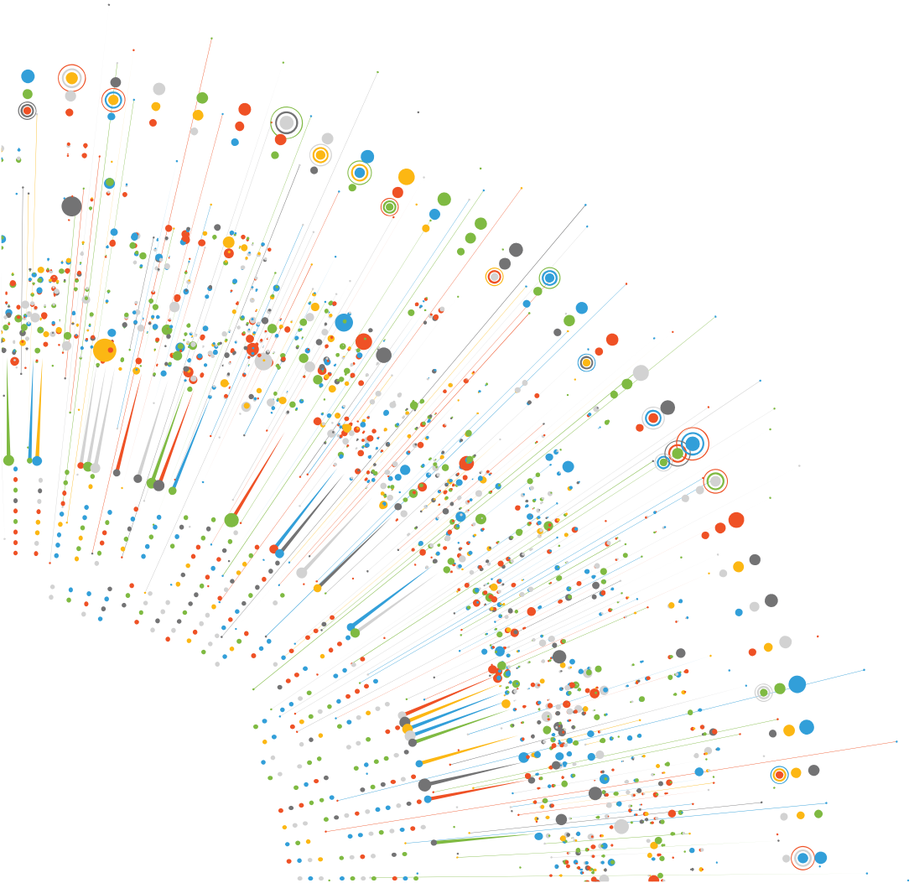

Supercharge your App Service to a Global scale

Azure COMMUNITY CONFERENCE

#AzConfDev

Tiago Costa

Azure COMMUNITY CONFERENCE

Cloud Architect and Advisor

Trainer | Author | Speaker

Independent Contractor

MVP – Microsoft Azure

MCT – Microsoft Certified Trainer

MCT Regional Lead

Microsoft CERTIFIED Trainer

MVP Microsoft® Most Valuable Professional

tiago.costa@tiagocosta.com | www.tiagocosta.com | @tiagocostapt

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Agenda

Azure COMMUNITY CONFERENCE

Microsoft Azure Overview

Business request

Azure App Service

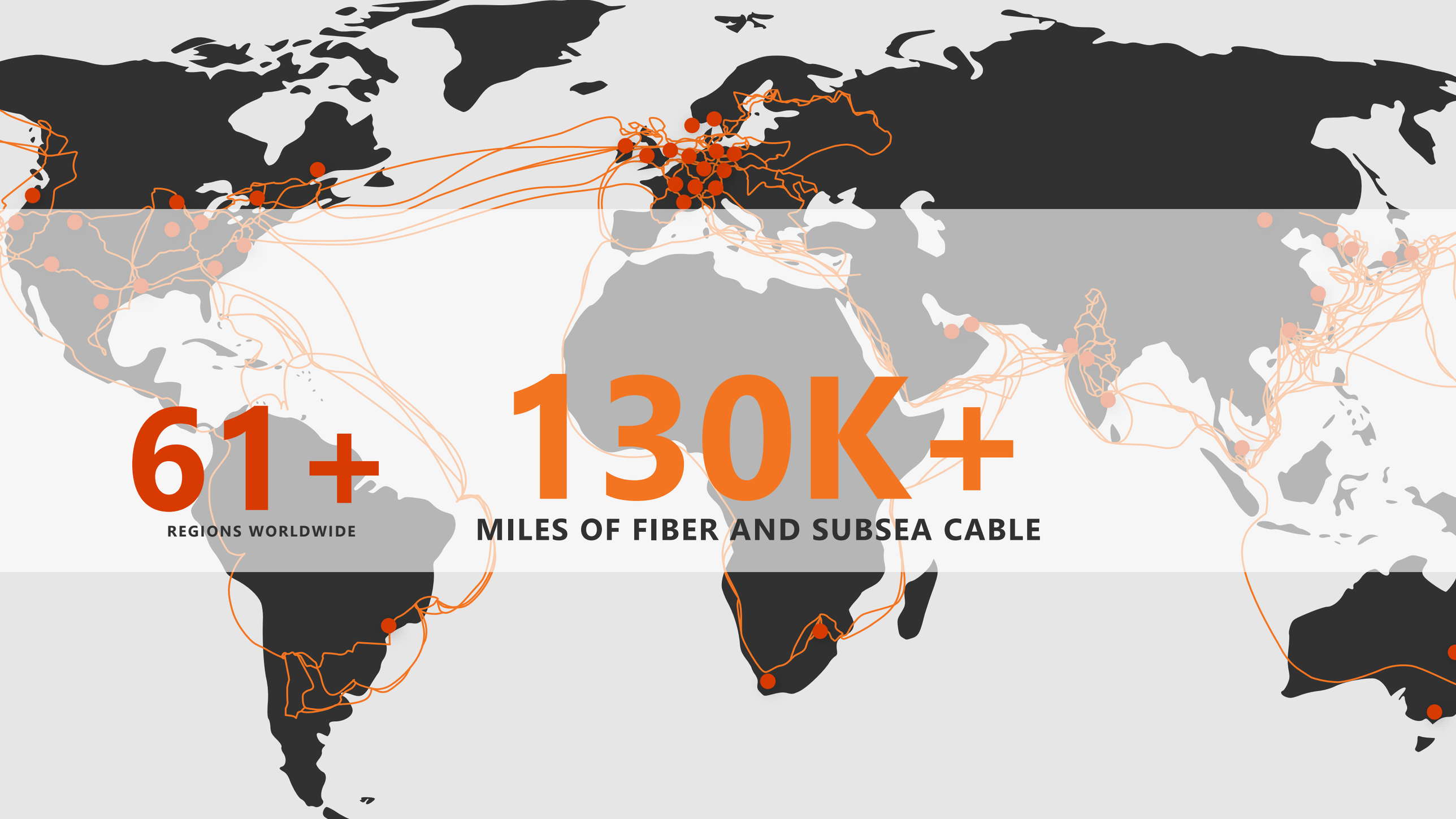
Azure Traffic Manager

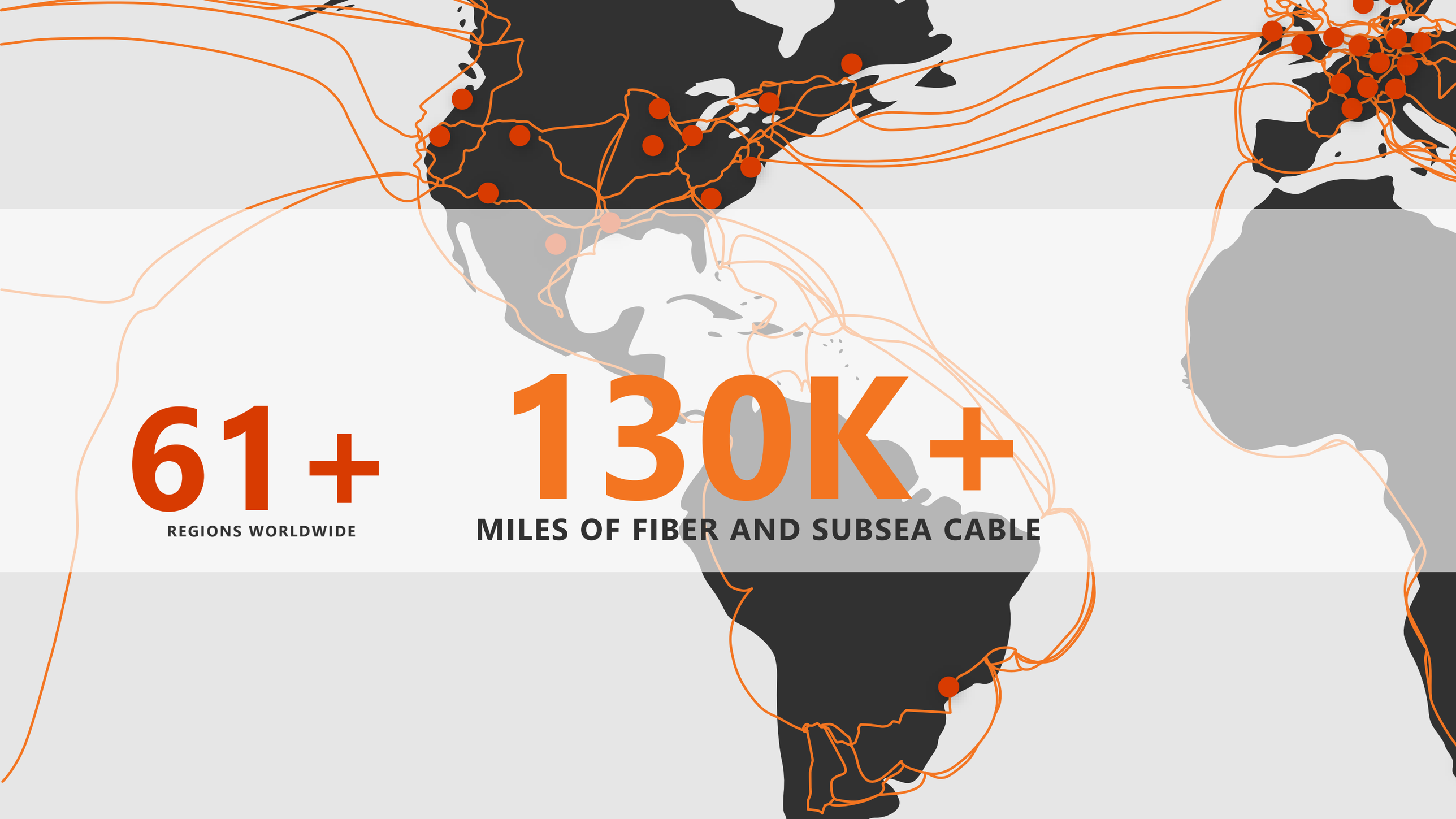
Azure CDN

Other useful Azure services

2nd
LARGEST PUBLIC CLOUD PROVIDER

61+
REGIONS WORLDWIDE


61+
REGIONS WORLDWIDE
130K+
MILES OF FIBER AND SUBSEA CABLE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REGIONS WORLDWIDE
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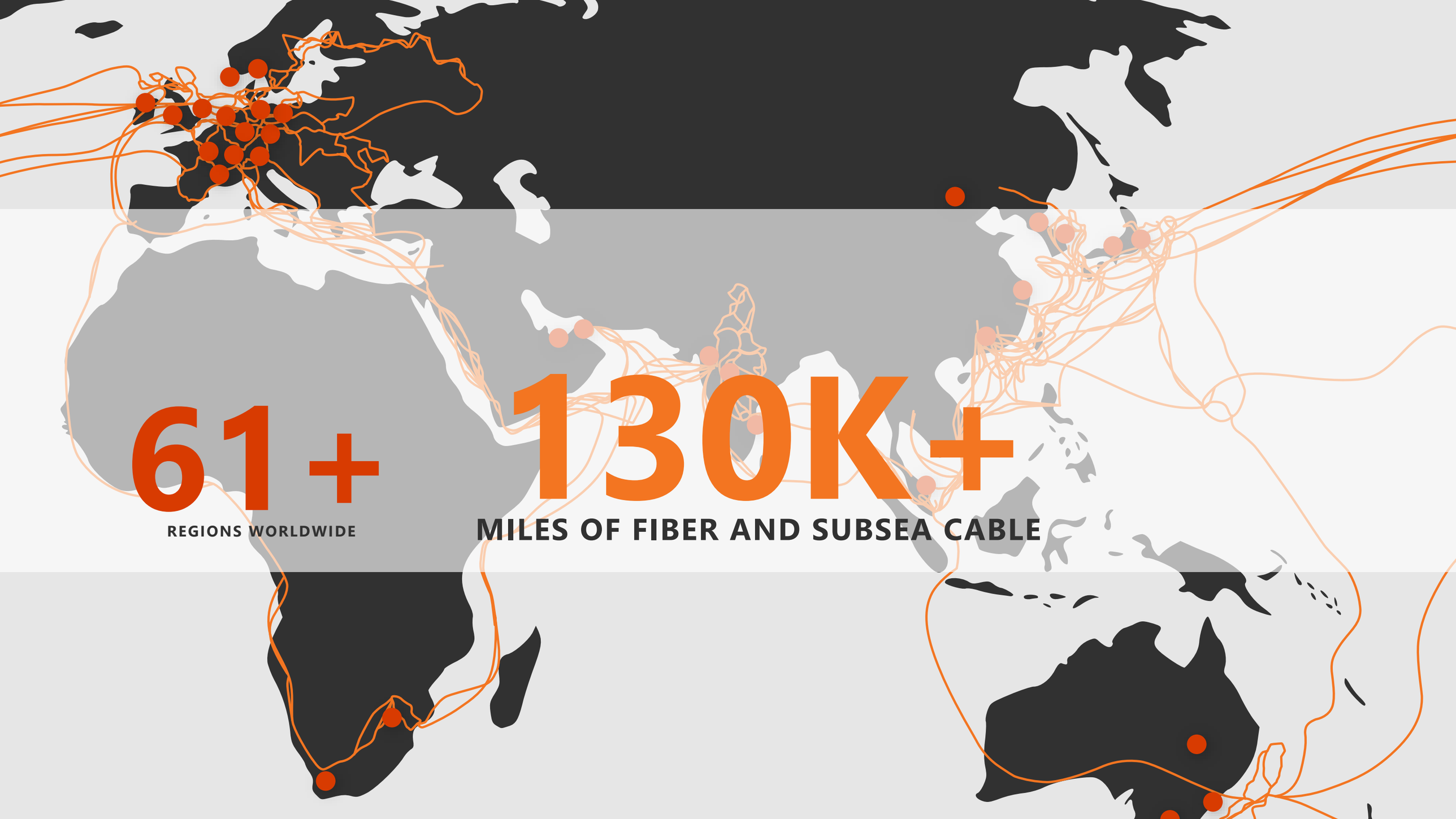
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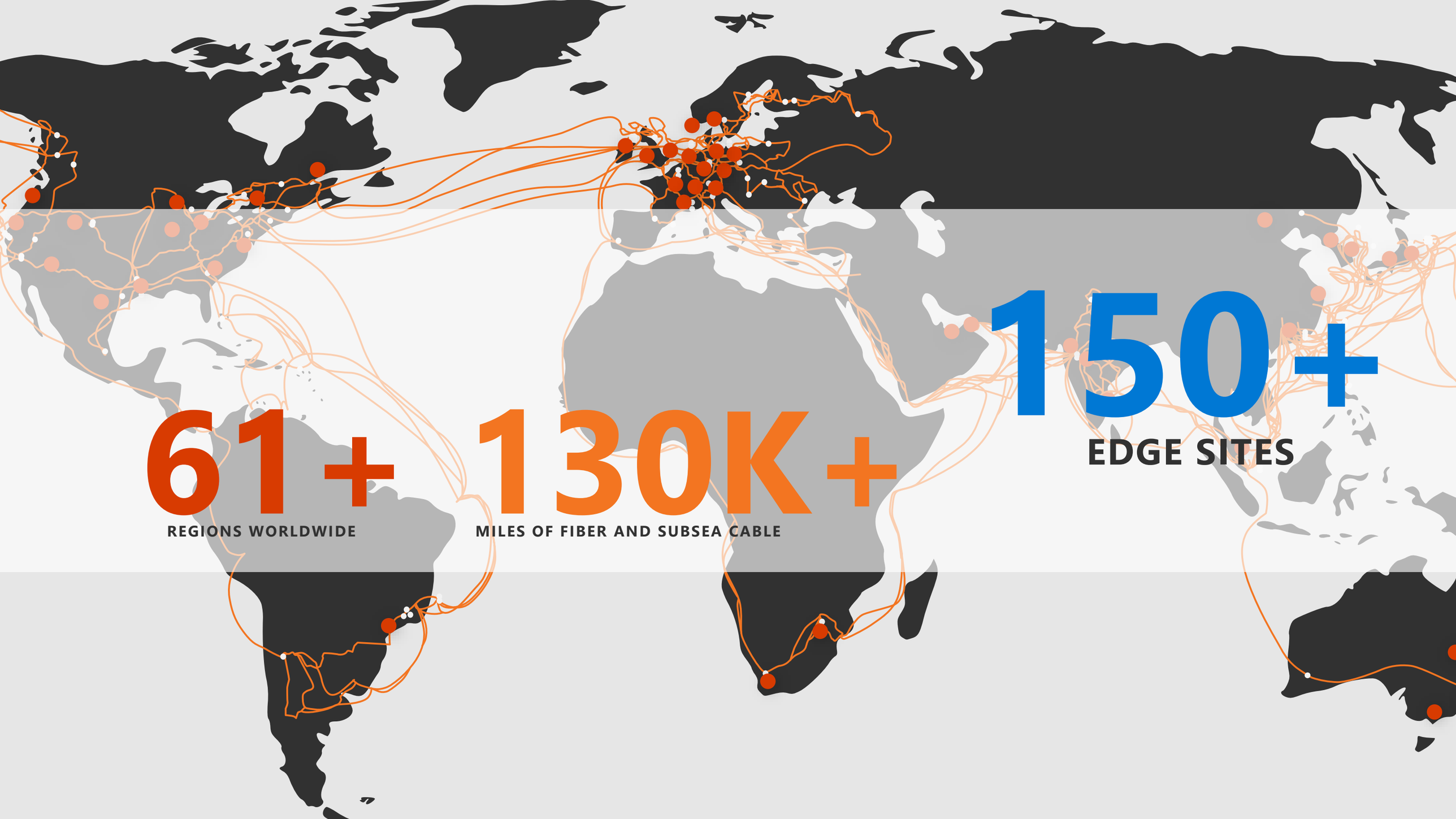
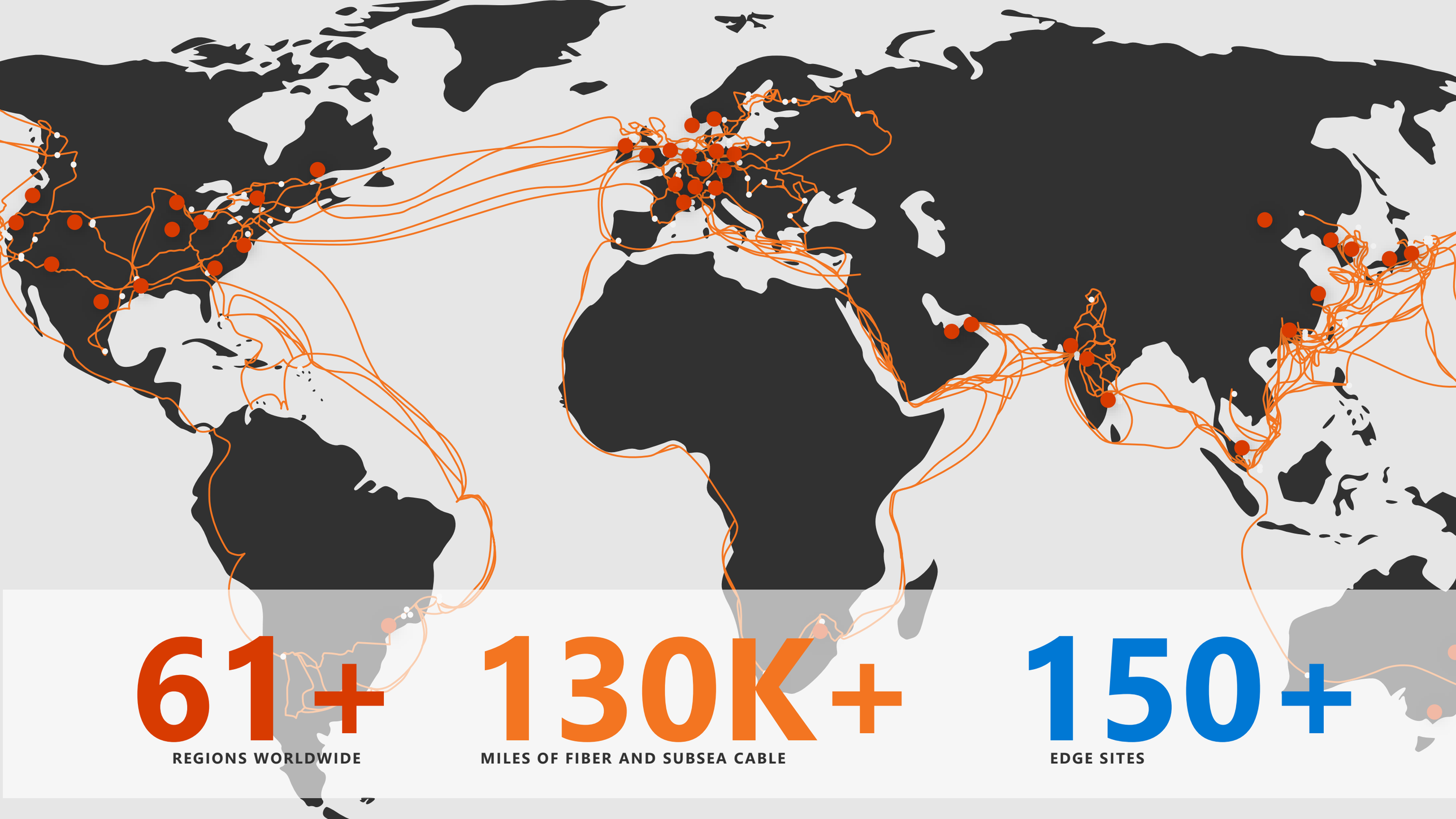
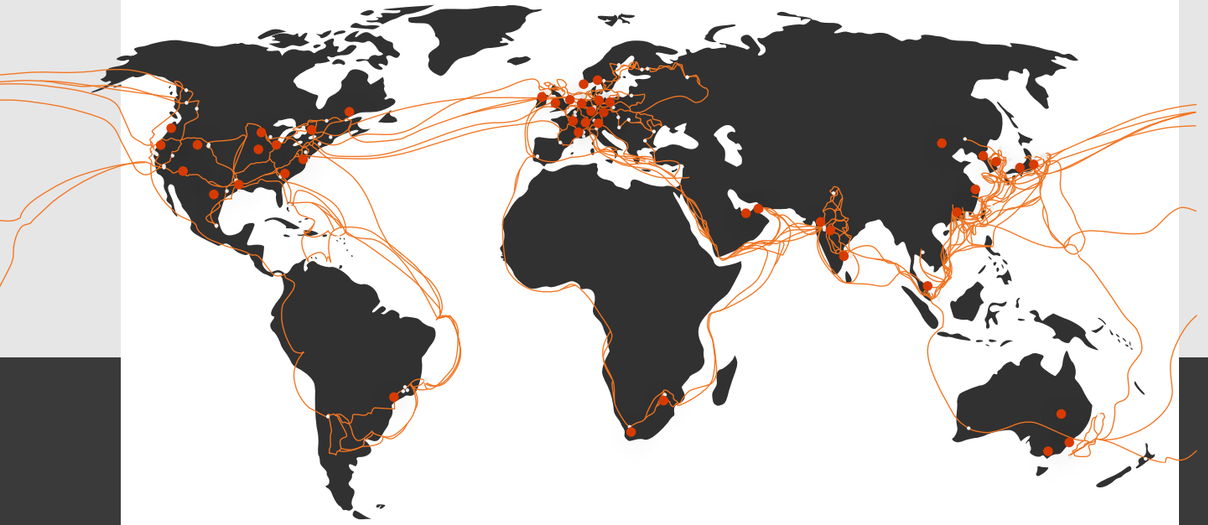

61+
REGIONS WORLDWIDE
130K+
MILES OF FIBER AND SUBSEA CABLE
150+
EDGE SITES



61+
REGIONS WORLDWIDE

130K+
MILES OF FIBER AND SUBSEA CABLE

150+
EDGE SITES



100 Gbps - fastest private connection

1.6

million miles of fiber

- Datacenter
- CDN Locations
- Edge Node
- Internet Exchange
- Terrestrial Network
- Subsea Network

Azure

Virginia (2014)

Virginia (2017)

Why Azure

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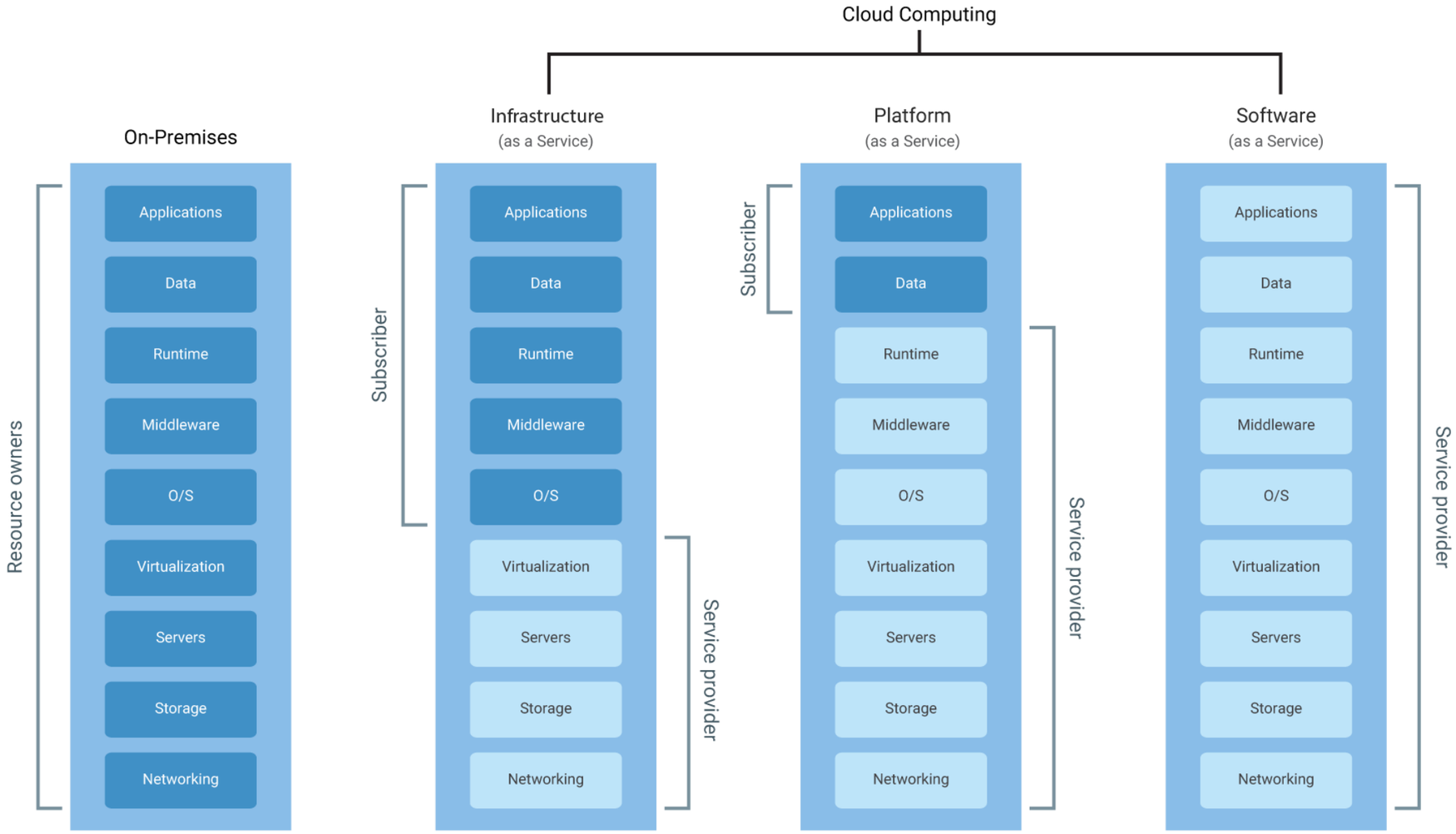
Huge demand from customers. Starting now in some geography's but huge across the US and Europe.

Fun to work with! Every project is a different project and we can use new services and/or new feature of already exiting services

Pay for what you use

Cloud Models



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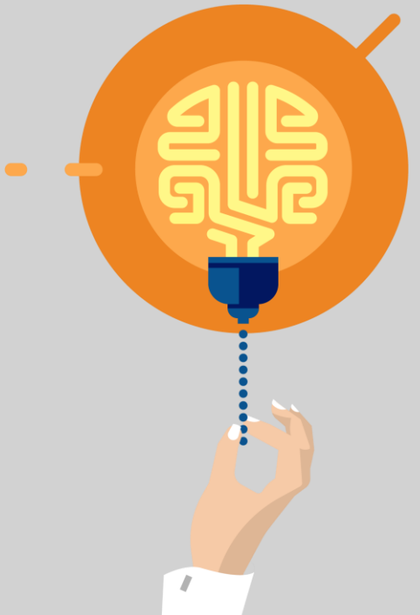
The Challenge?



Customer Business request

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Host our global customer experience Web Application and services layer for mobile apps

Customers in Europe, USA and Asia

Fast response times across all regions on the globe – Currently app is suffering from timeouts…

Scalable solution when needed

Low maintenance

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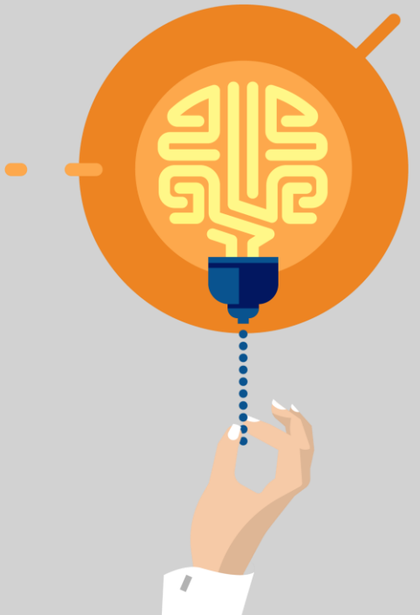
Azure App Service



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Azure App Service

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Scalable platform to host Web Application and REST services

Open platform for many different development languages: .Net, .Net Core, Java, PHP, …

Windows or Linux support

Integration with Development tools like VS Code, Visual Studio, Eclipse, Azure DevOps, GitHub, …

Support for custom domains – mycompany.com

App Service USP

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Enterprise-grade apps

Global data center footprint

Hybrid support

AAD integrated

Secure + compliant

Fully managed platform

Built-in auto scale and load balancing

High availability with auto-patching

Reduced operations costs

Backup and recovery

High productivity development

.NET, Java, PHP, Node, Ruby, and Python

Staging and deployment

Testing in production

App gallery marketplace

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App Service features Highlight

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WW Datacenter Coverage

Azure Functions and WebJobs

Custom domain names / SSL

Autoscale

Deployment Slots

Easy setup for CI/CD with Azure DevOps and other tools

Integration with other Azure Services like: CDN, Traffic Manager and Front Door

App Service Plan Tiers

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Free/Shared

- 60-240 Compute Minutes / day
- Custom domains (Shared only)

Basic / Standard / Premium / PremiumV2 / PremiumV3

- 3-10-30 Instances
- Traffic Manager (Standard, Premium, PremiumV2 and PremiumV3)
- Deployment Slots (Standard, Premium, PremiumV2 and PremiumV3)
- Backups (Standard, Premium, PremiumV2 and PremiumV3)

Isolated – App Service Environment (ASE)

- Up to 100 Instances
- VNet Isolation

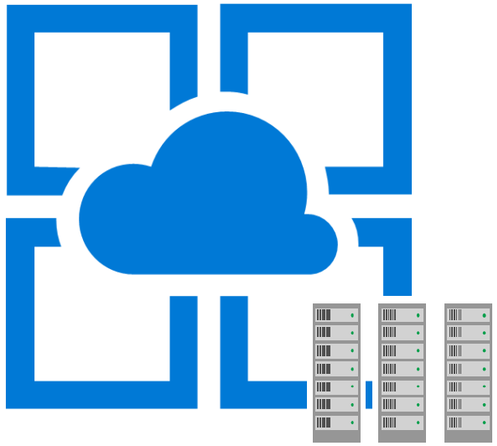
App Service Availability

AZURE APP SERVICE (MULTI-TENANT)

Get your Web, API, or Mobile App created in seconds in the cloud. We provide the infrastructure, you provide your application code.

APP SERVICE ENVIRONMENT

Run your apps in virtual network at high scale. Manage all of the resources behind your public endpoint creating an isolated environment specifically for your organization.



AZURE STACK*

Leverage cloud innovations in on-premises infrastructure. App Service on Azure Stack brings the power of Azure App Service to your own data centers.

App Settings

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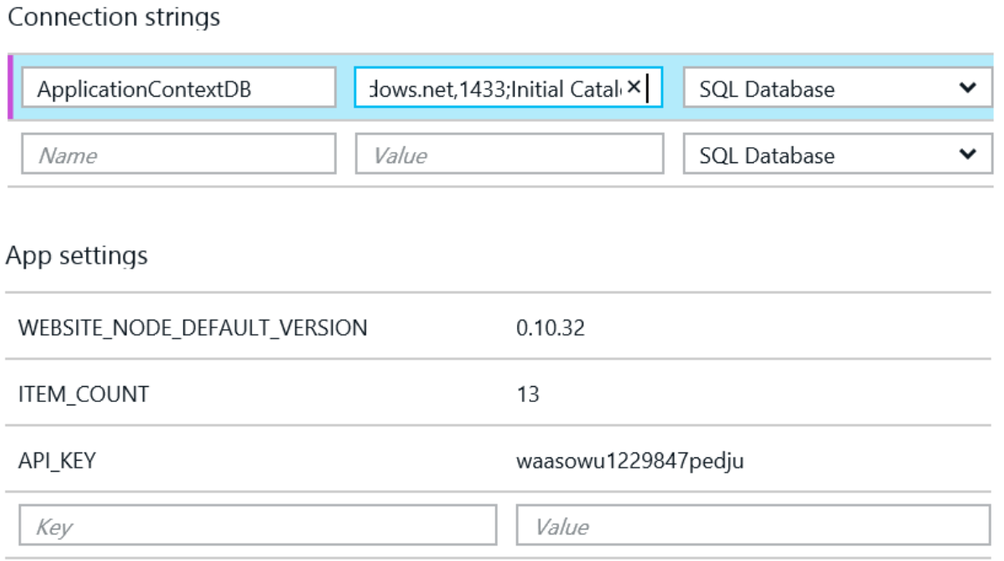
Applications settings and connections strings can be configured in the Azure Portal



Autoscale

Azure COMMUNITY CONFERENCE

Scaling rules: Schedule or Based on performance metrics

Performance Metrics

CPU

Memory

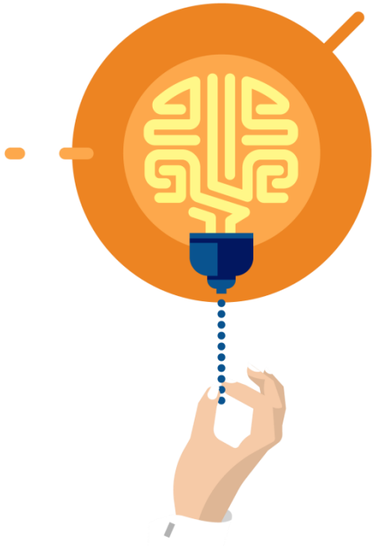
Queue

Can setup a Min and Max instance threshold

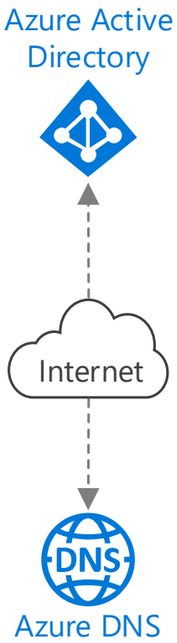
Azure COMMUNITY CONFERENCE

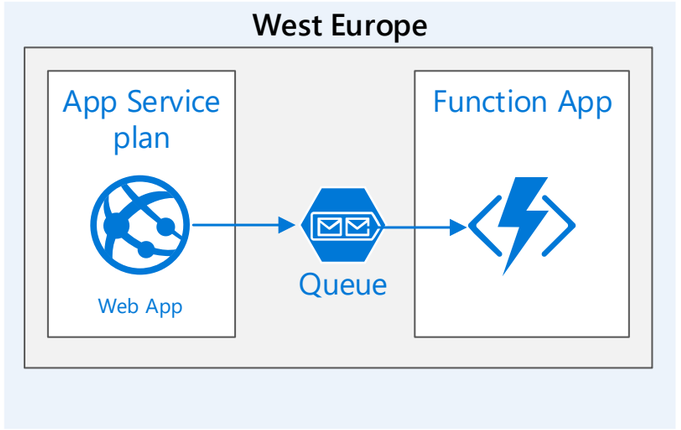
Demo

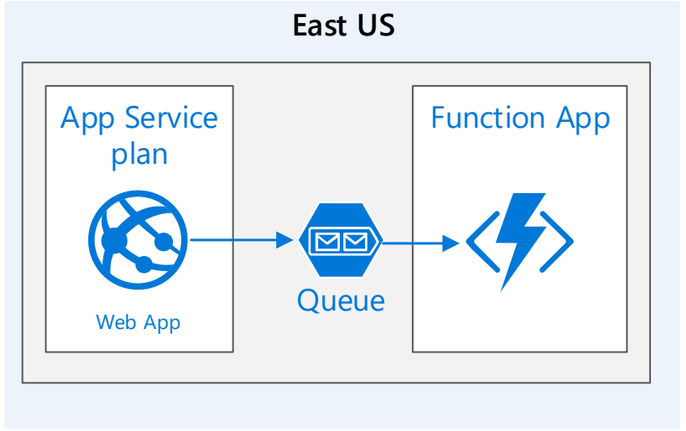
Creating and deploying a Web App

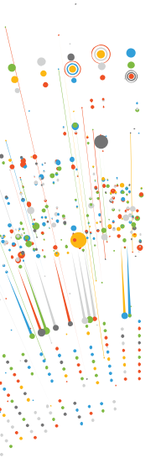


Current Status

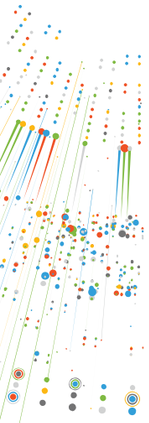








Azure Traffic Manager



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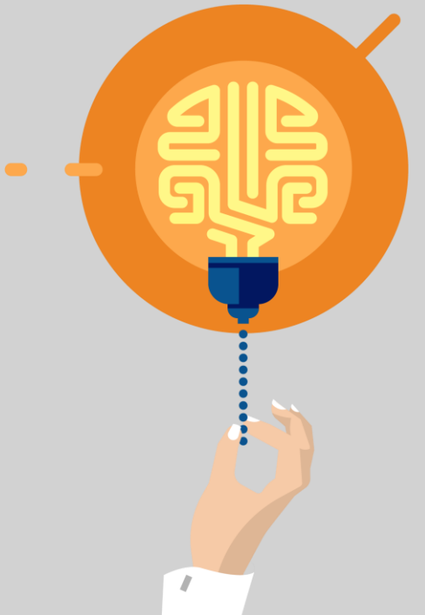

Azure Traffic Manager

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Allows you to control the distribution of user traffic

Service endpoints:

- Azure VMs
- App Service
- External endpoints

Azure Traffic Manager - Benefits

Improve availability of critical applications

Improve responsiveness for high-performance applications

Perform service maintenance without downtime

Combine on-premises and Cloud-based applications

Distribute traffic for large, complex deployments

Configure Azure Traffic Manager

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Create a Traffic Manager profile

Choose a load-balancing method:

Geography

Priority

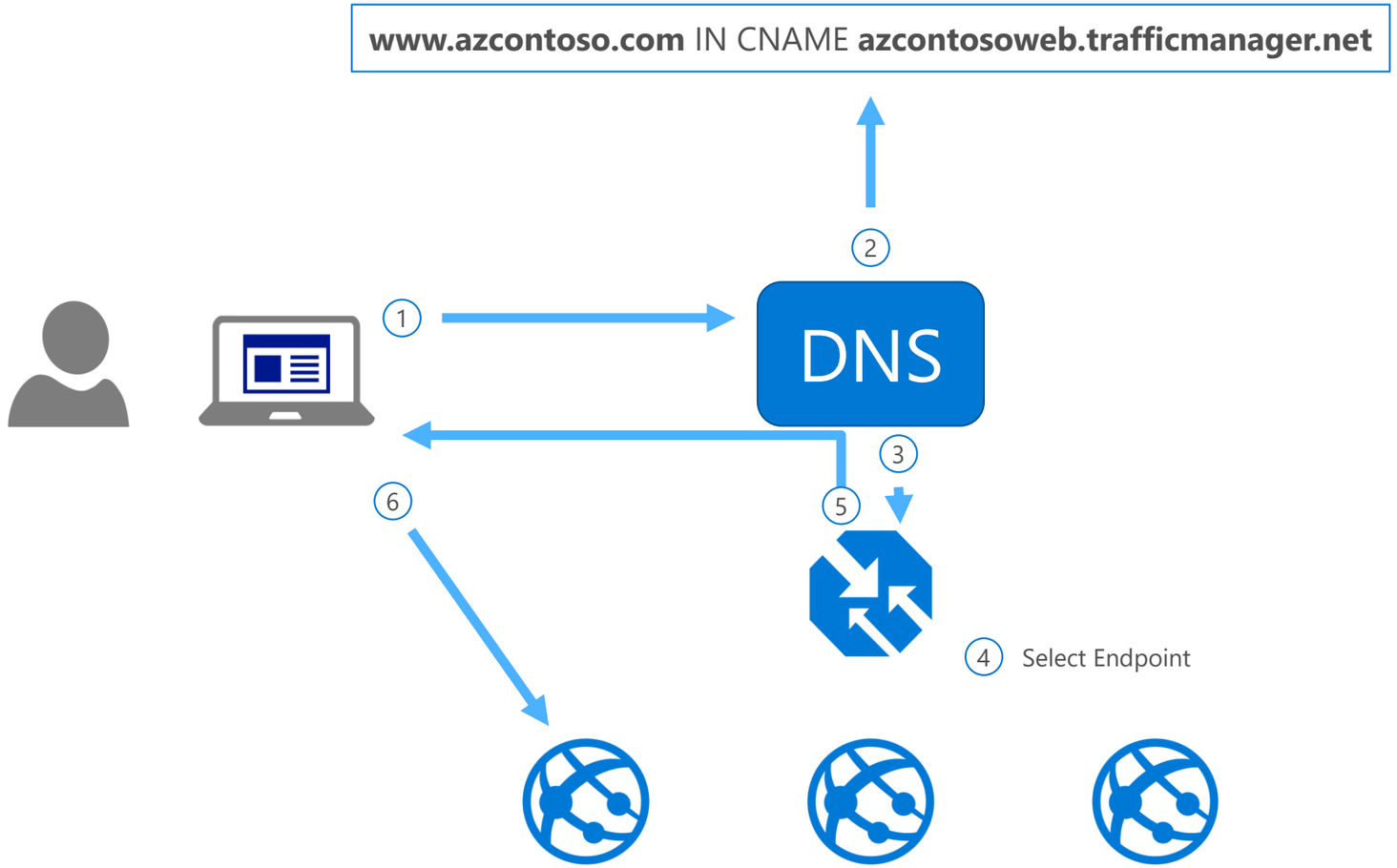
Performance

…

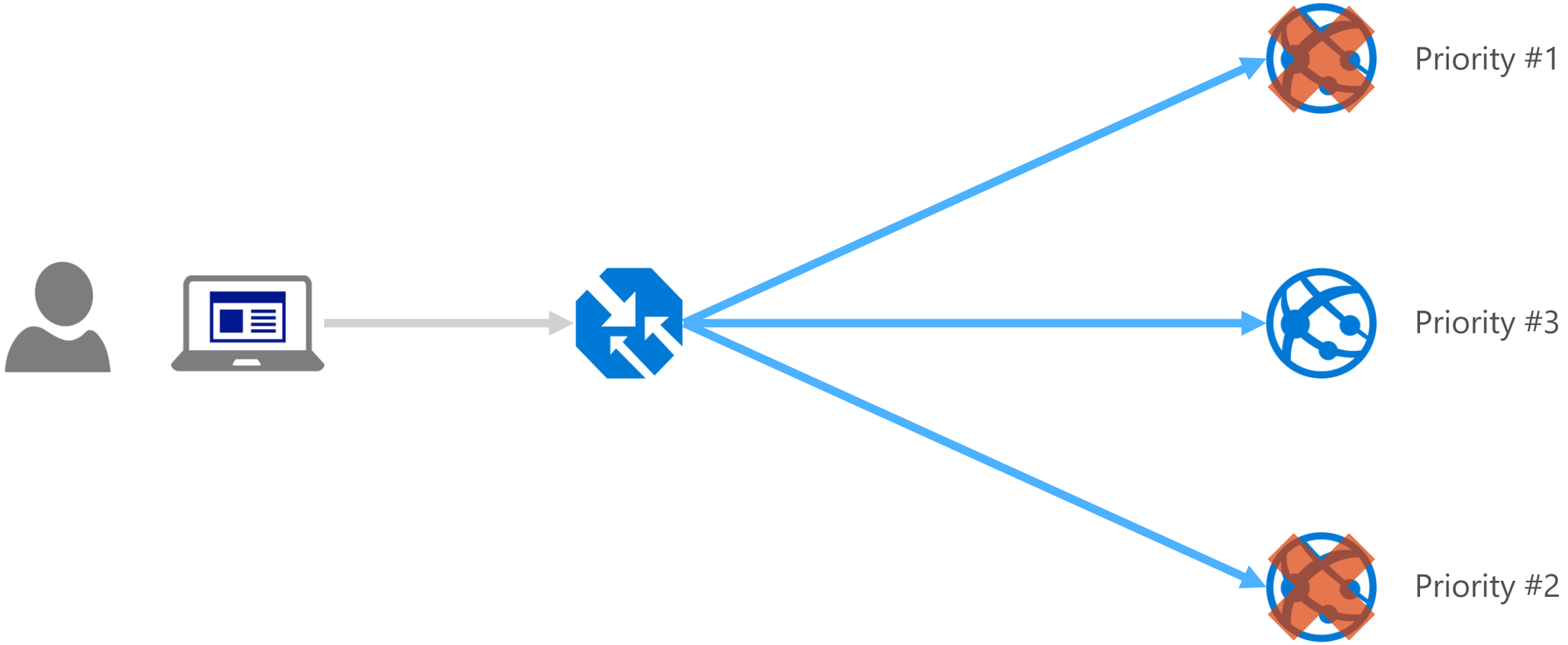
Add endpoints to the Traffic Manager profile

Add a DNS CNAME record point to Azure Traffic Manager endpoint

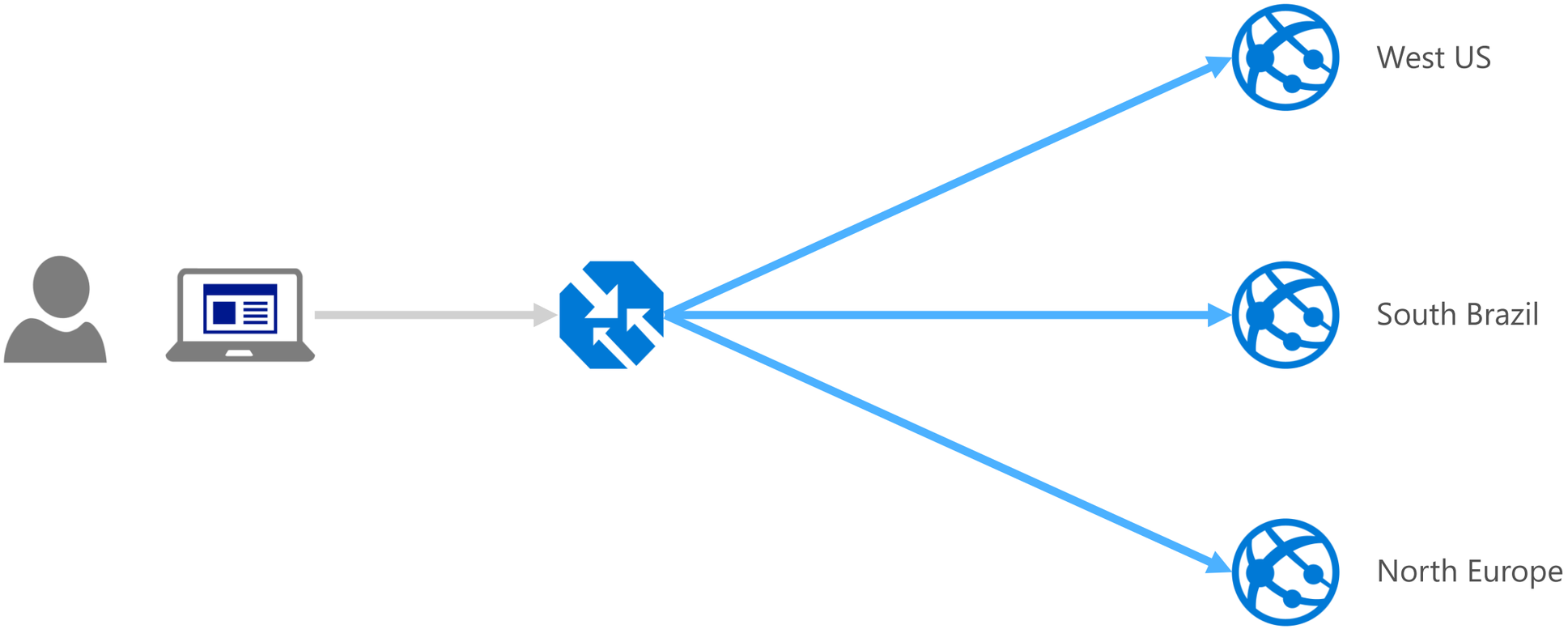
Azure Traffic Manager



Azure Traffic Manager - Failover



Traffic Manager – Geography / Performance



Azure
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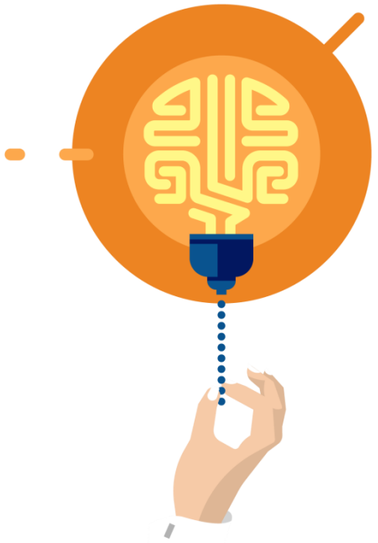
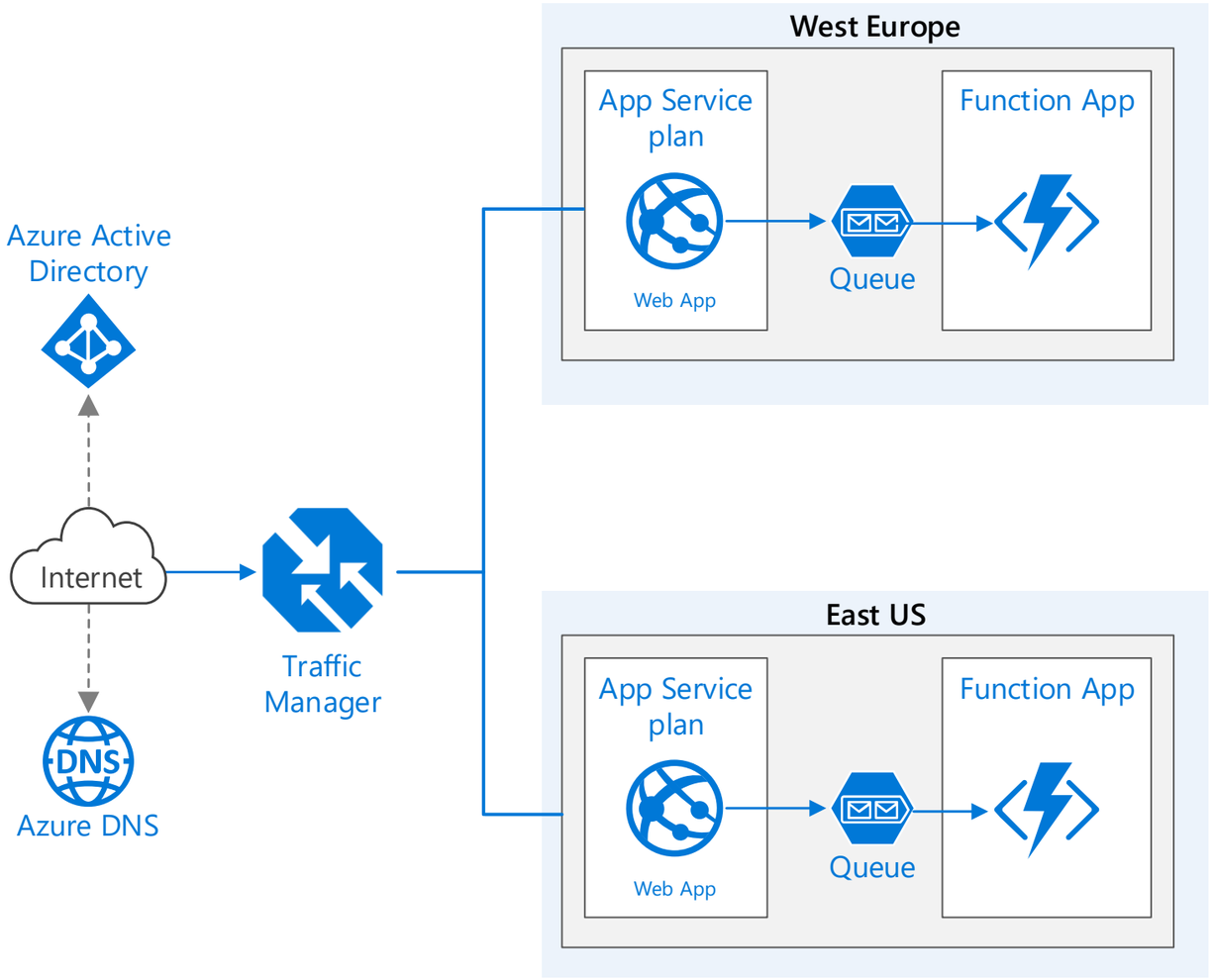
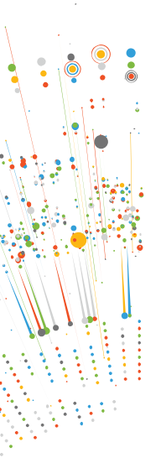
Demo

Azure Traffic Manager

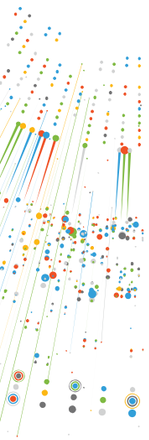


Current Status





Azure CDN



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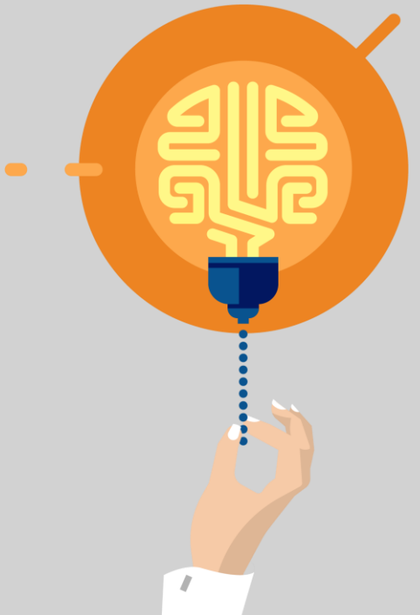

Azure CDN

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Serve content from Azure Storage / Cloud Services / App Services / …

Separate hostname

Several POP locations

DNS anycast to get content closer to users

Azure CDN - Overview

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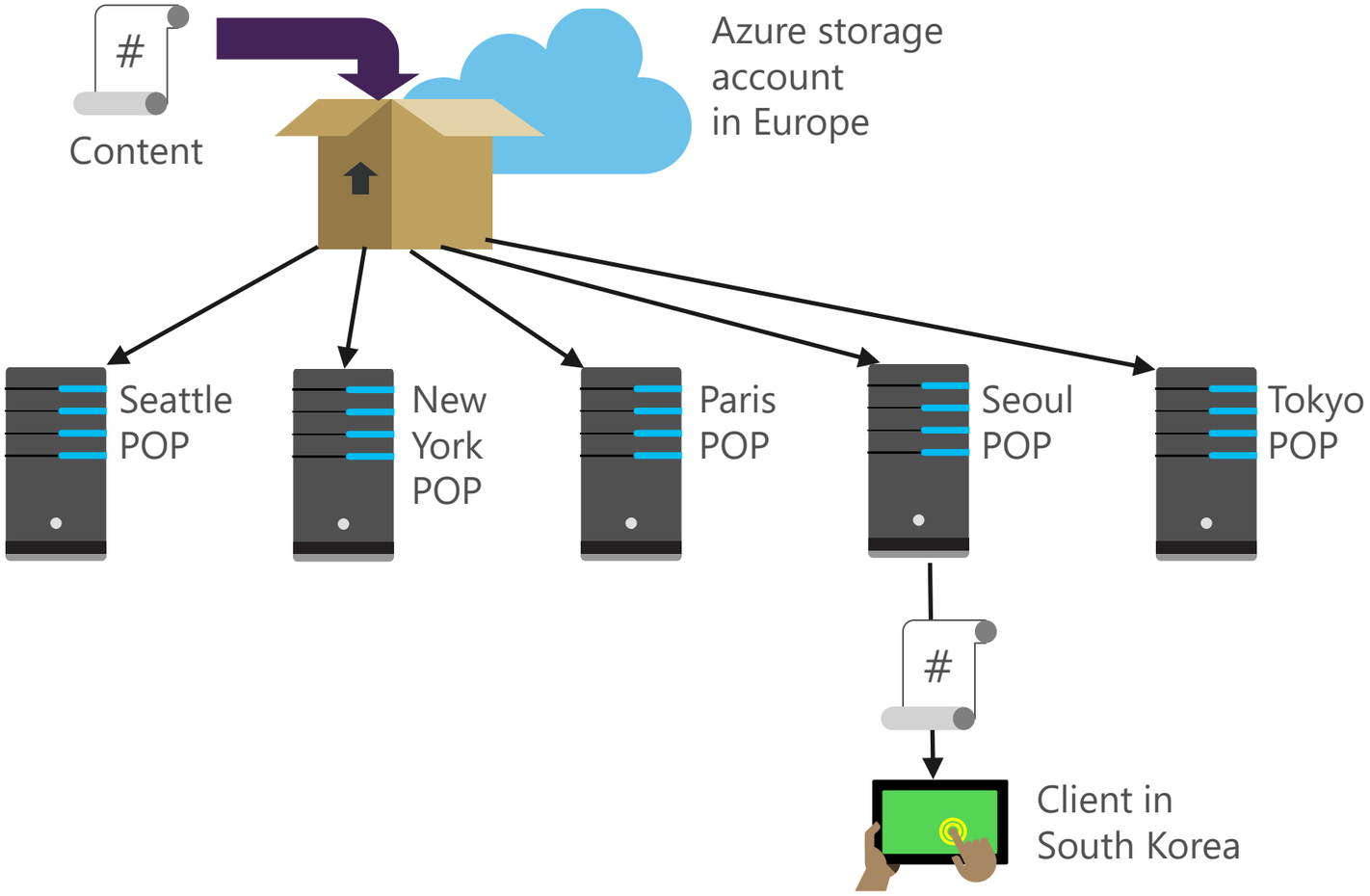
1. CDN endpoints are globally distributed:
    1. Microsoft
    2. Verizon
    3. Akamai Networks
2. Data from Azure Storage is cached at each CDN endpoint
3. Users access data from their closest CDN endpoint
4. If data is not available at a CDN endpoint, Azure retrieves it from the origin and caches it at the CDN endpoint

Azure CDN


#
Content
Azure storage account in Europe
Seattle POP
New York POP
Paris POP
Seoul POP
Tokyo POP
#
Client in South Korea

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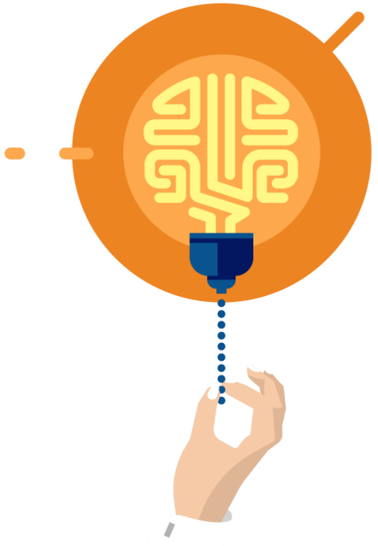
Demo

Azure CDN



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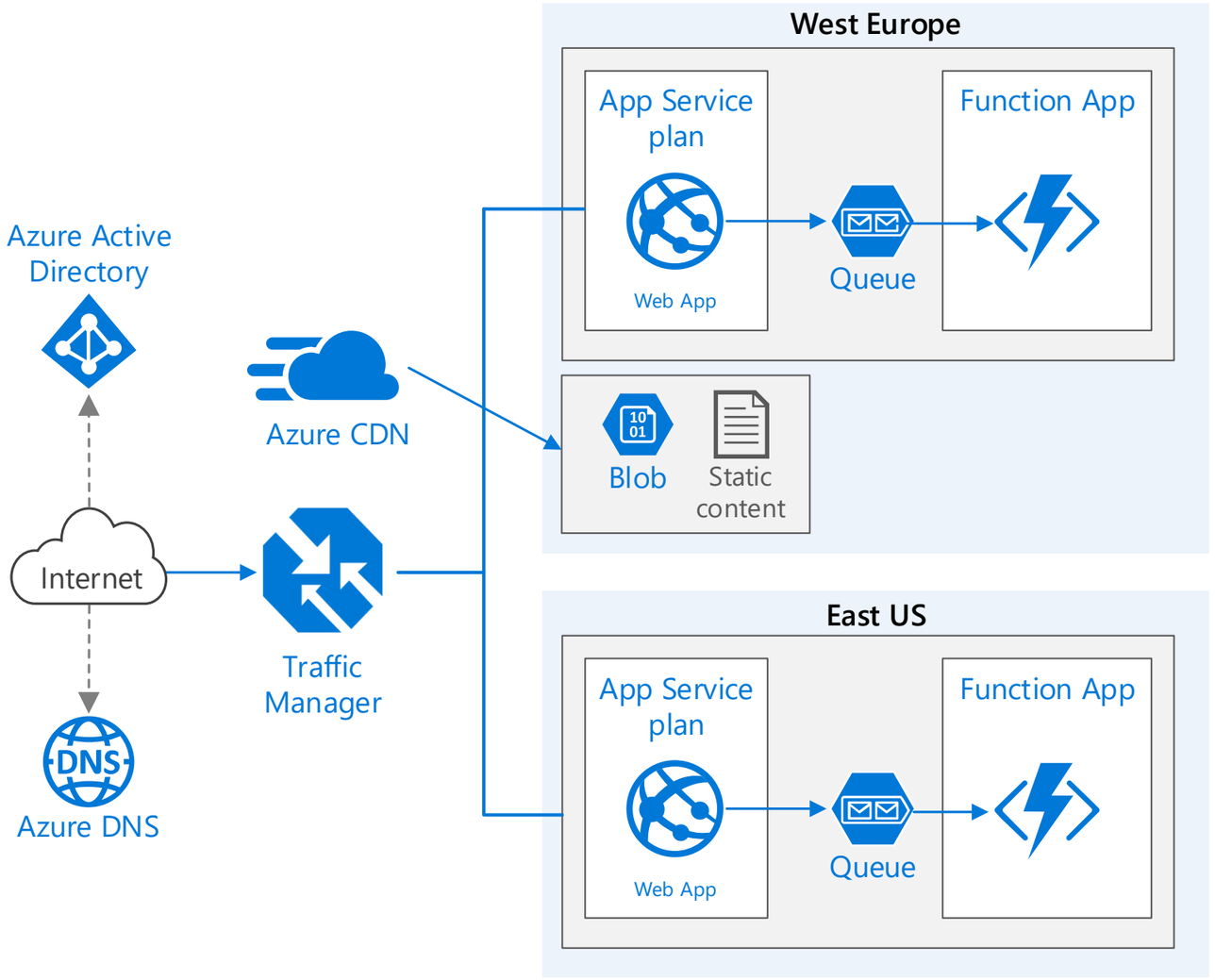


Other services

Azure Storage

Azure Functions

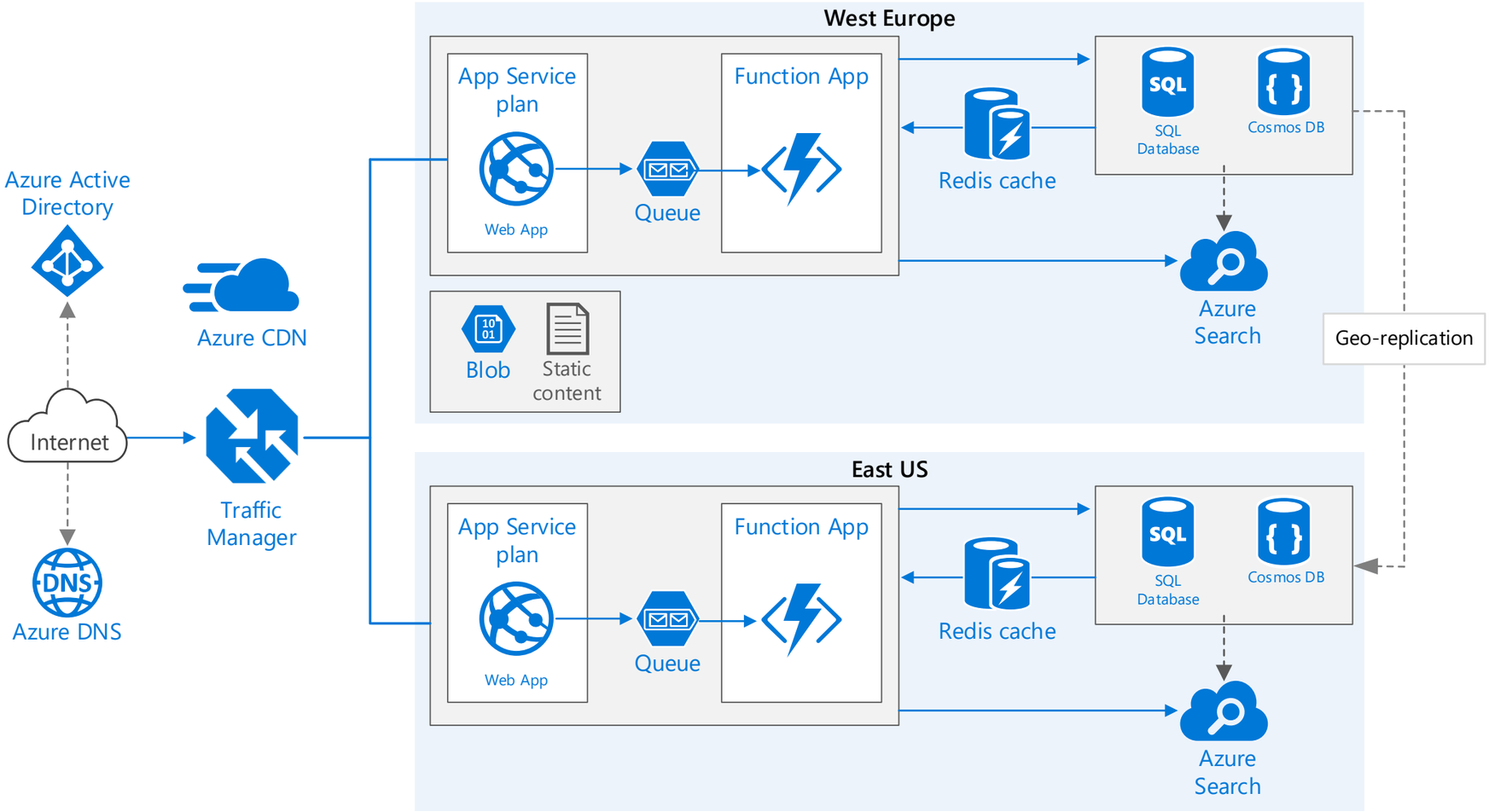
Azure Redis Cache

Cosmos DB / SQL Databases

Azure Search

Azure Front Door

Full diagram solution



Resources

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Tools & Resources

- Visual studio - https://visualstudio.microsoft.com/
- Visual Studio Code - https://code.visualstudio.com/
- Git - https://git-scm.com/
- Azure DevOps - https://azure.microsoft.com/en-us/services/devops/

Sponsors

Microsoft

DevOps Partner

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Communities

Communities

MUGH

soda foundation
The Open Source Collaboration for Data Autonomy

K-MUG

KUBERNETES PUNE

Open Source Bangalore

talklify

PUG
Pune User Group

R

Azure 6AZ
Easy to Learn - Learn Together

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Thank You!

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