Azure, an open cloud

José Ángel Fernández
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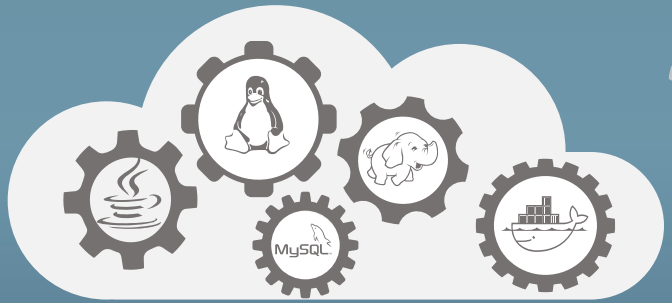
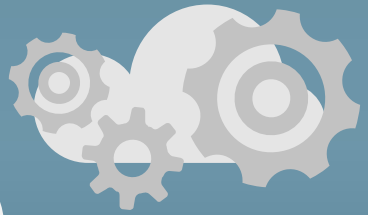
Cloud Solutions Architect





OPEN 24/7 ¿Quieres entrar?

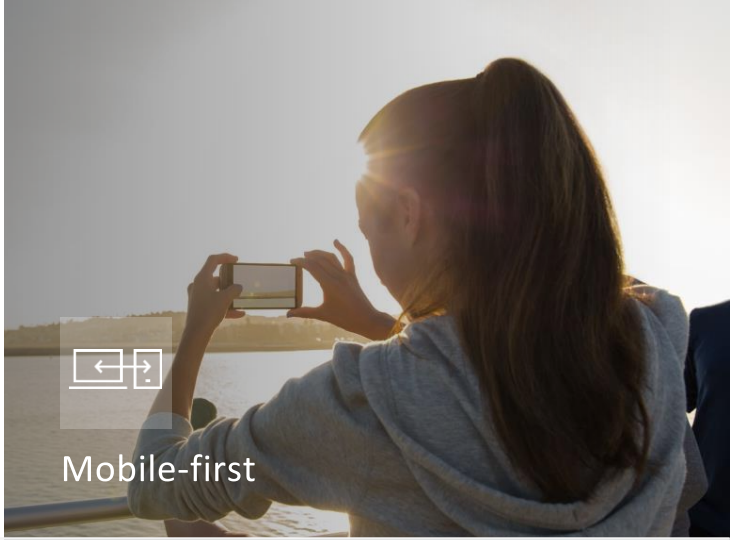
Microsoft

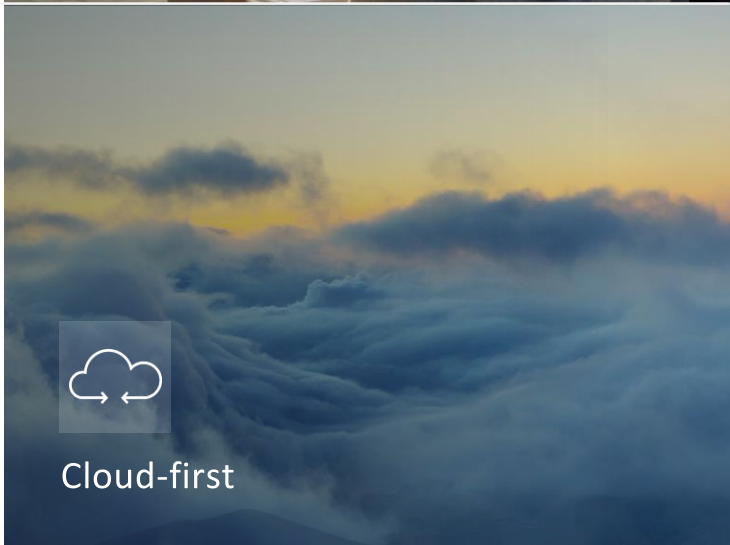
A change in Microsoft

Our Mission

"Empower every person and every organization on the planet to achieve more"

Our Vision



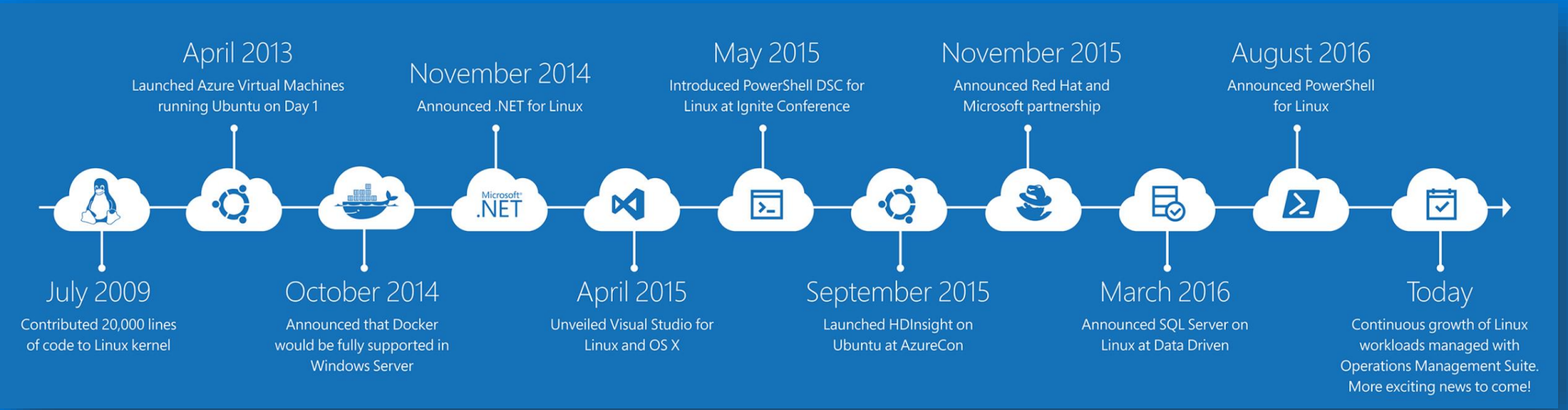


Microsoft

Microsoft journey to Open Source

EOSC

It's been a journey…



The Market is Embracing Our Transformation

"I know way too many Linux users who think of Microsoft as 'The Evil Empire.' People, that was yesterday. Get over it...Look at Microsoft in 2016 and you'll see a company which offers the open-source Hadoop big data software on Ubuntu and whose CEO proclaims that Microsoft loves Linux."

Steven J. Vaughan-Nichols ZDNet

"Seeing the words 'Microsoft' and 'Linux' together in a single sentence may still come as a shock to a few people, but Microsoft says more than 60 percent of images in the Azure Marketplace are now Linux-based."

Frederic Lardinois TechCrunch

"The new Microsoft has taken bold new steps and has been on a path to partner with its fiercest rivals of past years. Strategically, this is what is required to be a player at scale in the cloud platform wars."

Al Hilwa, IDC NETWORKWORLD

"[The Red Hat partnership is] a testament to Microsoft's ability to rise above product competitiveness and be open, especially when it comes to Azure."

Eli Khnaser, Gartner COMPUTERWORLD

"The new Microsoft Certified Solutions Associate Linux on Azure certification <...> It's something of a surprising move, considering that Azure didn't even support Linux virtual machines four years ago, but meshes with Microsoft's current strategy of embracing open source technologies."

Blair Hanley Frank IDG

"Even Microsoft, long viewed as the enemy of open-source development, has focused on making its Azure cloud computing platform a hospitable place for open-source software, including different flavors of the Linux operating system."

Barb Darrow FORTUNE

Microsoft

Investments are Fueling the Momentum

Our Products

SQL Server on Linux

Acquisition

HD Insight managed service on Linux

Windows Subsystem for Linux

```
C:\Users\markhill> bash
root@localhost: #
```

Run Linux on Windows natively

Our Offerings

Azure Marketplace

1 out of 3

60% of all images in Azure Marketplace are based on Linux/OSS

1 out of 3 VMs on Azure run Linux, and more than half of all new VMs run Linux

Our Partnerships

Partnership

Jenkins project on Azure

Microsoft joins Eclipse Foundation

Partnership with the Linux Foundation for Linux on Azure certification

Our Employees

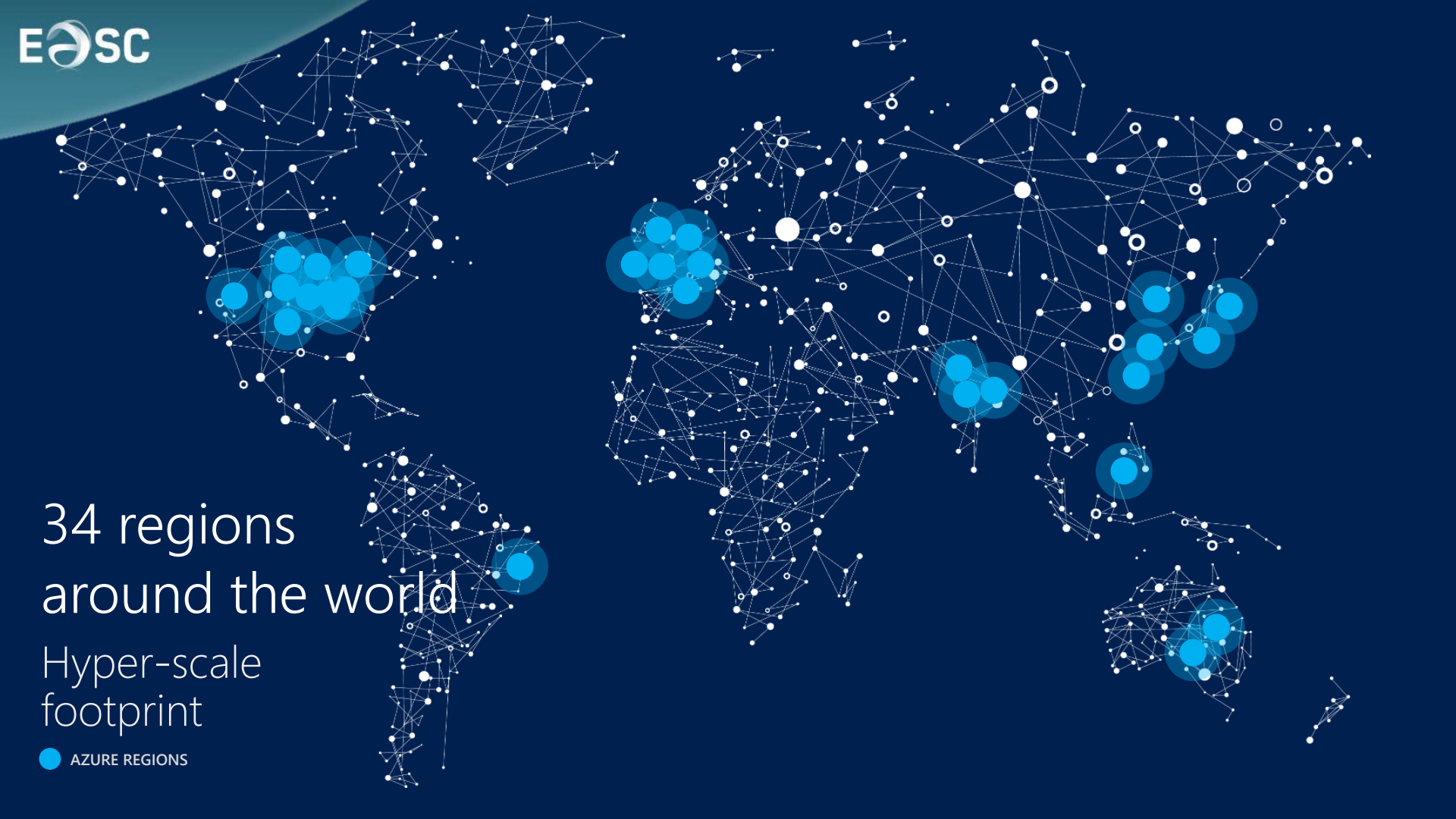
Ross Gardler
President Apache SW Foundation

600 Million+
Microsoft Open Source Hub

Lines of open source code submitted to GitHub by Microsoft engineers

Microsoft, org with the most OS contributors

What is Azure?


EOSC
34 regions
around the world
Hyper-scale
footprint
AZURE REGIONS

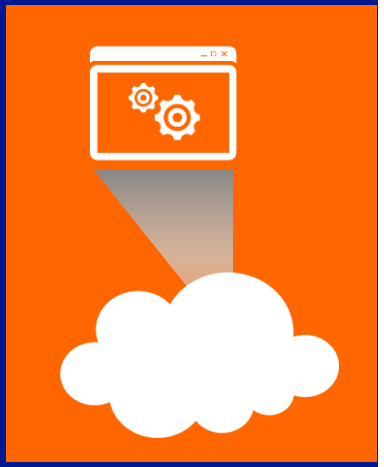
EOSC

Microsoft Azure

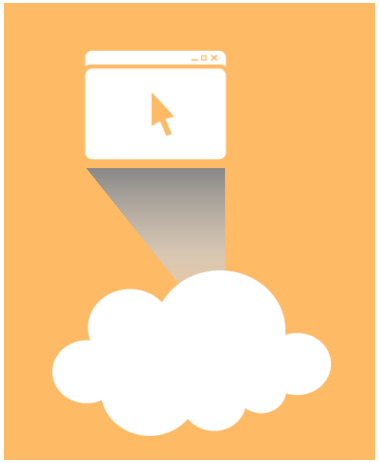
Físico

Virtual

IaaS



PaaS



SaaS

Platform Services

Security & Management

- Service Creation & Configuration
- User/Group Directory Store
- Identity Sign-Up and sign-in
- Multi-Factor Authentication
- Scheduled Service Management
- Task Scheduler
- Encryption Key Store
- Software/Solution Marketplace
- Pre-Build VM Images

Services Compute

- Stateless Compute
- Distributed Compute
- Scheduled Compute Jobs
- Virtual App Streaming

Integration

- Simple Queuing
- B2B Integration
- Hybrid Connections
- Pub/Sub Queuing

Media & CDN

- Live & OD Media Streaming
- Content Delivery Network (CDN)

Web and Mobile

- Web Apps Infrastructure
- API App Infrastructure
- Mobile Backends
- Business Process Automation
- API Management
- Push Notifications

Developer Services

- Development Tools
- Software Development Kits
- Software Lifecycle Management
- Application Instrumentation

Data

- Relational SQL Database
- Data Warehouse
- Document Database Service
- Distributed In-Memory Cache
- Search
- Simple Key/Value Store

Analytics & IoT

- Big Data Analytics
- Predictive Analytics
- Data Stream Analytics
- Big Data Storage
- Data Pipelines
- Device Data Collection
- Data Source Management
- IoT Device Management
- Mobile Analytics

Hybrid Operations

- Directory Health Monitoring
- Privileged Identity Management
- Domain Join & Policy Management
- Server Data Backup
- Operational Analytics
- Bulk Data Import And Export
- Disaster Recovery
- Hybrid/Intelligent Data Backup

Infrastructure Services

OS/Server Compute

- Virtual Servers
- Containers

Storage

- Disk based Object/File Storage
- Shared Storage
- SSD based Object/File Storage

Networking

- Virtual Network
- VM Load Balancer
- DNS
- Direct Network Connections
- Traffic Distribution
- VPN Gateway
- HTTP Load Balancer

Datacenter Infrastructure (34 Regions, more than any other cloud provider)

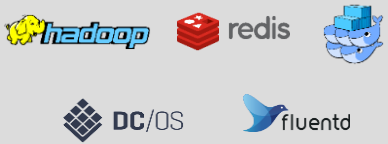
Our approach to open source in the cloud

Enable

An open and flexible platform that meets you where you are and adds value to your existing investments

Integrate

Embracing leading ecosystems, increase agility and offer consistent open source offerings



Release

Support a strong ecosystem to achieve more through Microsoft's own portfolio investments

R Server
.NET Core
Roslyn
TypeScript
F#

PowerShell
autorest
PowerBI Visuals
Office UI Fabric
MSR projects

Contribute

Extend the community and reach to more people, and partner for first-class experiences

Open Source Partners & Ecosystem

Azure is an open cloud

Azure Open Source App Platform

Stakeholders

Developers | Operations | DBAs and data scientists | Business

Office PowerBI

Build on the infrastructure

Virtual Machines
Stateful and stateless one-off solutions

VM Scale Sets
Scalable solutions

Container Service
Scalable, orchestrated Docker images deployed into containers

Lift-and-shift + net new on Linux | Docker

Build on the platform

Batch
Custom High Performance Computing solutions

Open Source PaaS
Cloud Foundry, OpenShift

Service Fabric
Custom Microservice-based stateless and stateful solutions

App Service

- **Environments** — All the goodness of App Service in a dedicated environment
- **Web, Mobile & API** — Template based rapid development web, mobile and API solutions
- **Logic** — Orchestrated workflow based integration solutions
- **Functions** — Serverless event driven experience

Cloud-born | LOB

Microsoft Azure

Azure Open Source Data Platform

Stakeholders

DBAs and data scientists | Operations | Developers | Business

Relational

Collective set of multiple data sets organized by tables, records and columns

NoSQL & Cache

Non-relational DBs where data is modelled in means other than the tabular relations used in relational databases

Big Data

Accept data at a very high velocity, and store structured and unstructured data in an efficient and scalable way across nodes

Leverage cloud infrastructure

Dev/Test, Production and Lift & Shift | Docker, incl. via DC/OS

Relational

Azure SQL Database including revamped client driver support for PHP, Node.js, Java, Linux ODBC and more

NoSQL & Cache

Azure DocumentDB, including native MongoDB wire protocol support, and Redis Cache

Big Data

Azure HDInsight – full Hadoop solution available as a service on Windows and Linux

Build rapidly and connect to the platform

Cloud-born | LOB

Microsoft Azure

Azure Open Source Container Portfolio

Developer & Data Agility with Containers in the Cloud

Developers

Operations

Data scientists

Docker VM Extension for Azure

Easy and programmatic way to add Docker capabilities to your VMs

Open source container-based PaaS platforms in Azure

Container-ready application platforms that benefit from Azure's native partitioning, capacity management and high availability

CLOUD FOUNDRY · OPENSHIFT ENTERPRISE · DEIS

Azure Container Service

Optimized container hosting in the cloud with familiar tooling and your choice of orchestrator

DC/OS

Azure Marketplace container partners

Partner solutions that address management challenges of containers

CoreOS · DC/OS · RANCHER

Microsoft Azure

CLOUD FOUNDRY

Workload portability

DC/OS

Cross-cloud orchestration

CHEF

Tools integration

Windows Server (preview) | Azure Stack (roadmap) | DC/OS | Your own platform

THREE REASONS INVESTORS LIKE MICROSOFT RIGHT NOW

1. IT'S AN OPEN COMPANY.

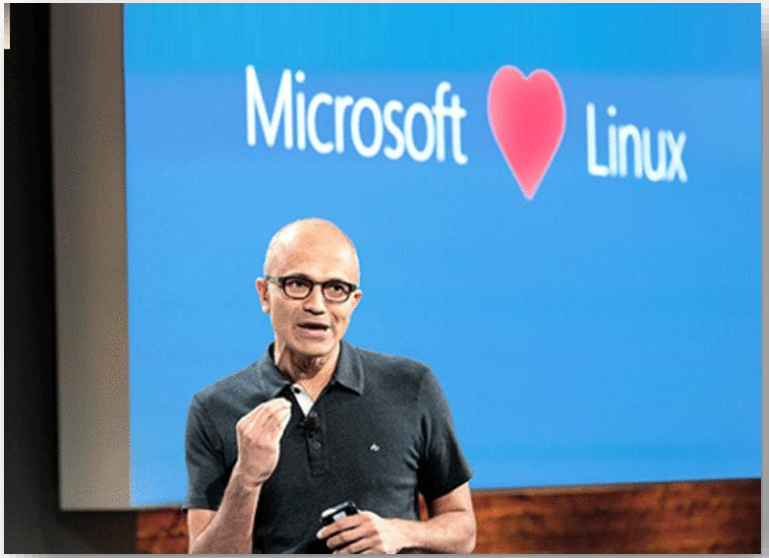
With Nadella at the helm, Microsoft is more willing to work with the rest of the technology industry than in years past. That keeps it from being an old-guard "stack" vendor and makes it a major player in the broader tech ecosystem.

2. IT'S ALL IN ON THE CLOUD.

Cloud computing is considered a massive growth opportunity for the entire tech industry. Thanks to savvy prior investments in infrastructure and services, Microsoft has the global scale and know-how to win big.

3. IT'S GOT A HYBRID STRATEGY.

"Hybrid cloud," that is. Most companies won't want to put all of their data in the public cloud. Most won't want to store it all privately, either. Microsoft is well-positioned with assets that serve clients in both places.



- Andrew Nusca,

Thank You!