Microsoft

App Innovation with DevOps

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Azure Technical Specialist

Agenda

09:00 Driving Digital Transformation with Apps (Nick Ward)

11:00 Morning Tea

11:15 Microsoft DevOps Vision (Simon Lamb)

12:15 Lunch.

13:00 Any Language, Any Platform (Simon Lamb)

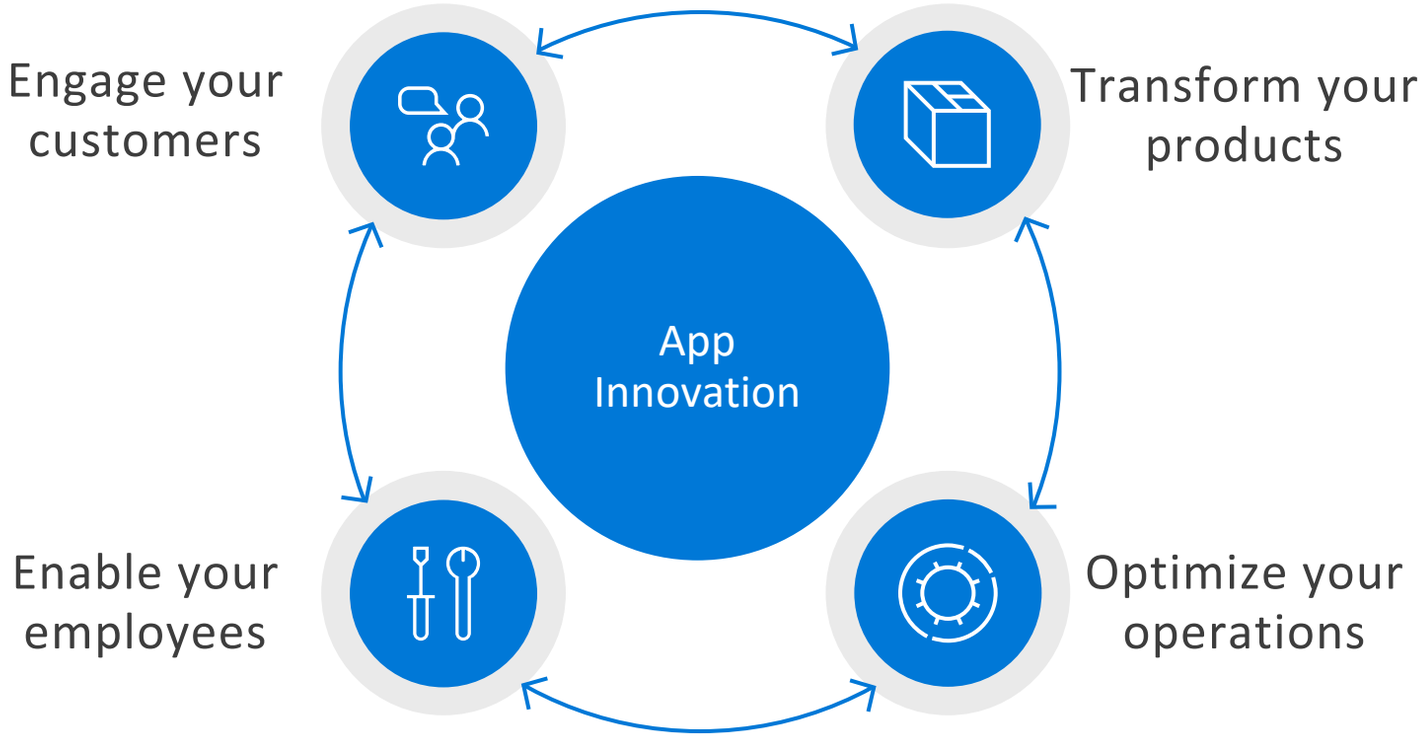
14:00 Cross-platform Mobile Applications (Michael Williams)

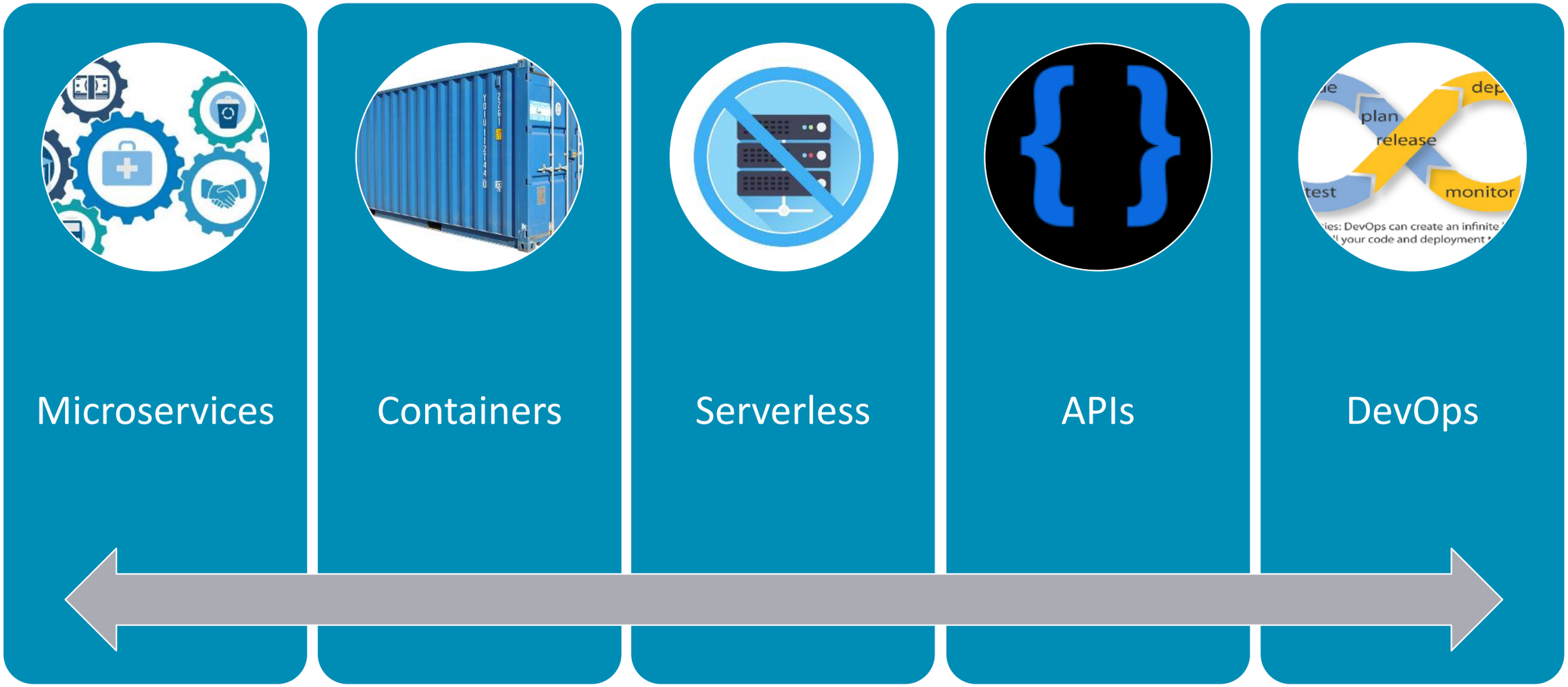
15:00 Mobile DevOps (Michael Williams)

16:00 Afternoon Tea

16:15 Build and Release (Simon Lamb)

App Innovation **is** Digital Transformation



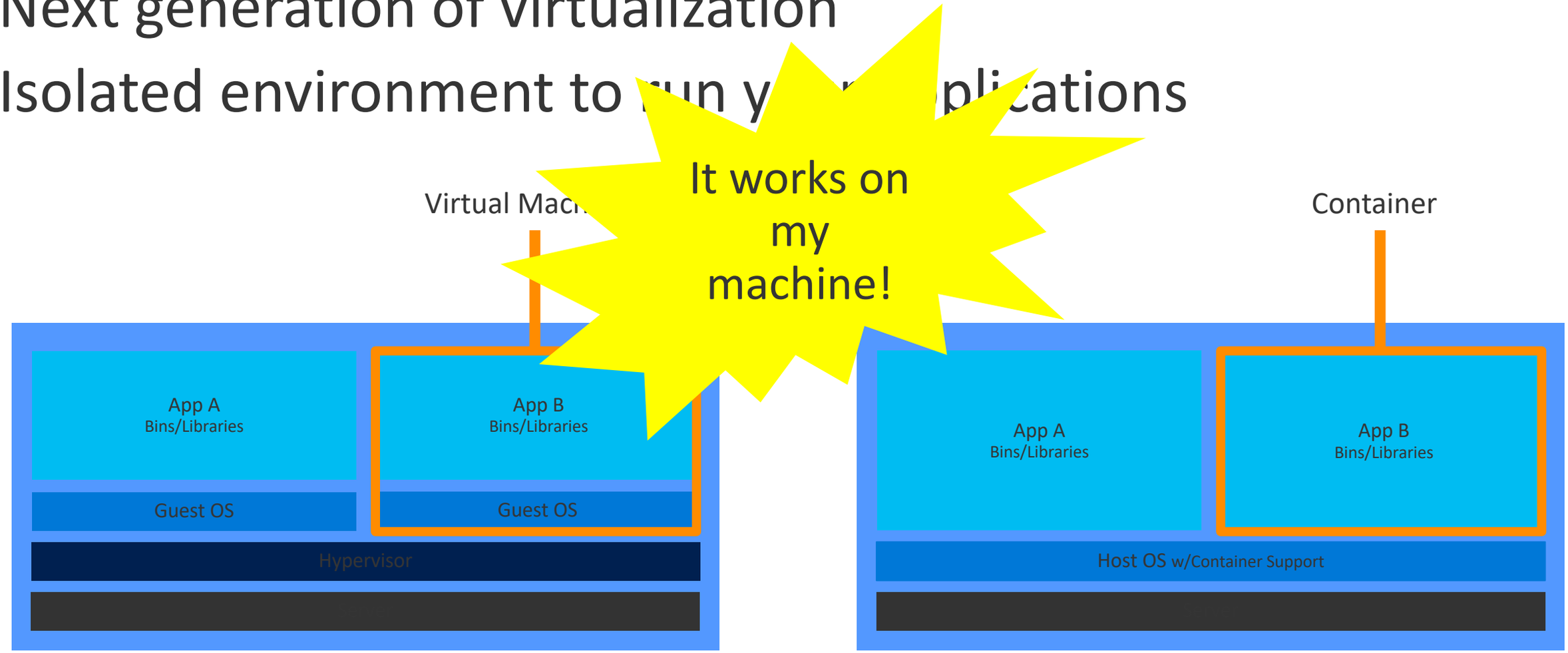

Microservices
Containers
Serverless
APIs
DevOps
plan
release
test
monitor

Microservices

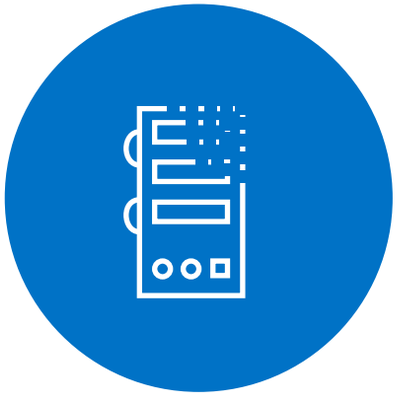
What is a container?

Next generation of virtualization

Isolated environment to run y plications



What is Serverless?



Manage Apps,
Not Servers

Instant, automatic
scale

Micro-billing

The rise of APIs

"In the age of the customer, every business is a digital business. This means software is central for today's enterprises, and **APIs are central for today's software**."

"... APIs play on the frontlines of business opportunity, creating new sources of revenue and market presence; they play behind the scenes, unlocking data and transactions buried in back-office systems; and they play anywhere in between."

"Sizing The Market For API Management Solutions"
Randy Heffner and Michael Yamnitsky
Forrester Research Inc.
April 2, 2015

Microservices

+

Containers

+

Serverless

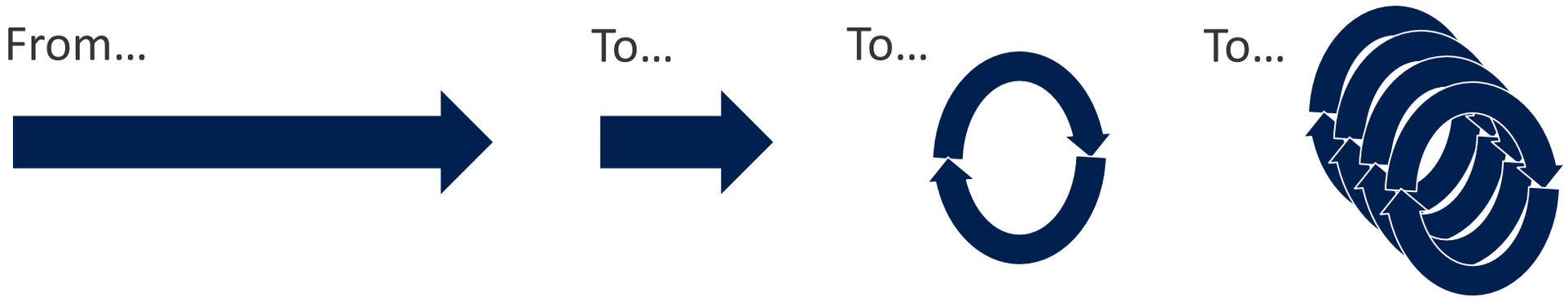
+

APIs

=

Faster Innovation

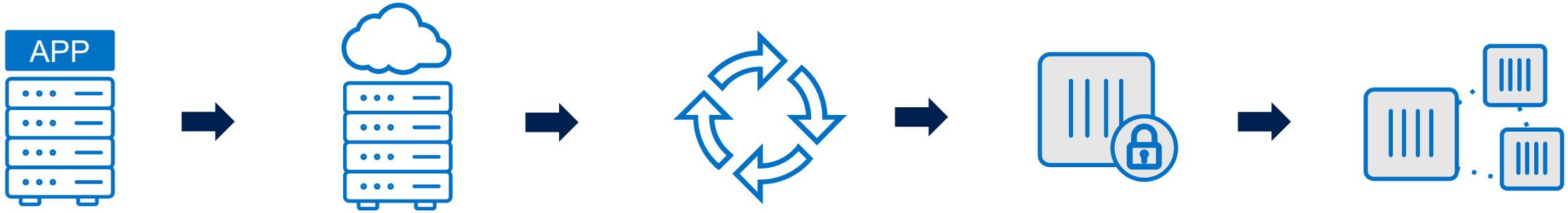
DevOps = How to manage the pace



Cultural change, organizational change

… and some tools

From traditional app to modern app



Existing Application

Modern Infrastructure

Move to the cloud as VMs or Containers or refresh HW.

Modern Methodologies

Implement CI/CD and automation.

Containerize Applications

Re-architect apps for scale with containers.

Modern Microservices

Add new services or start peeling off services from monolithic code.

Azure

THREE REASONS INVESTORS LIKE MICROSOFT RIGHT NOW

1. IT'S AN OPEN COMPANY.

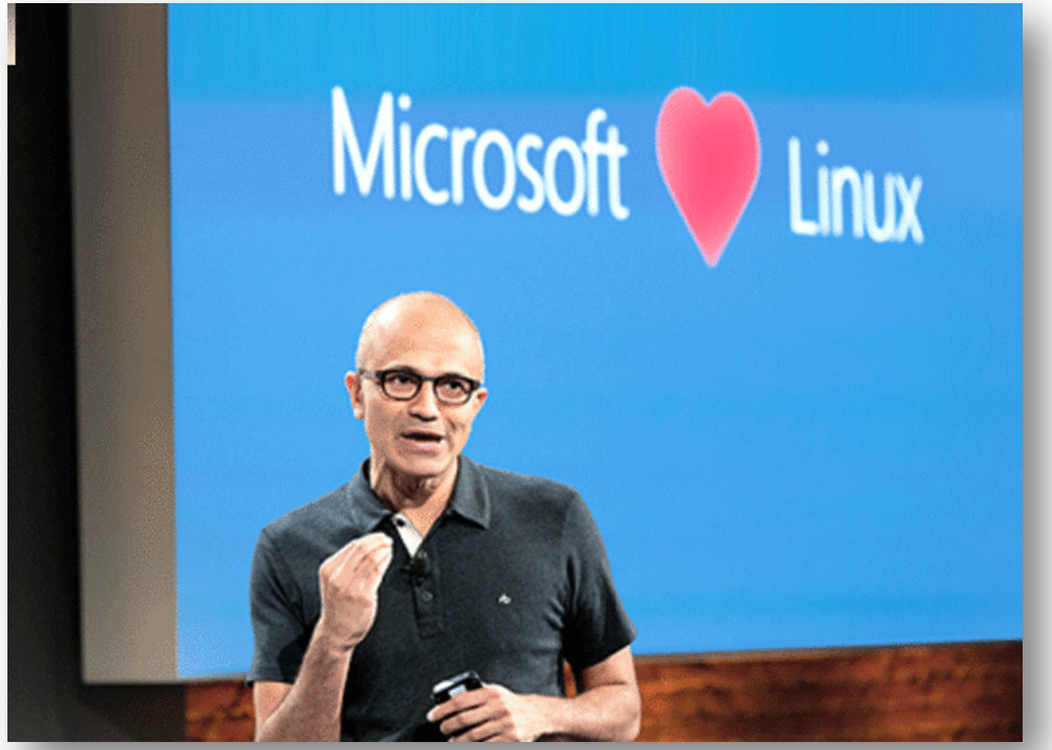
With Nadella at the helm, Microsoft is more willing to work with the rest of the technology industry than in years past. That keeps it from being an old-guard "stack" vendor and makes it a major player in the broader tech ecosystem.

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.

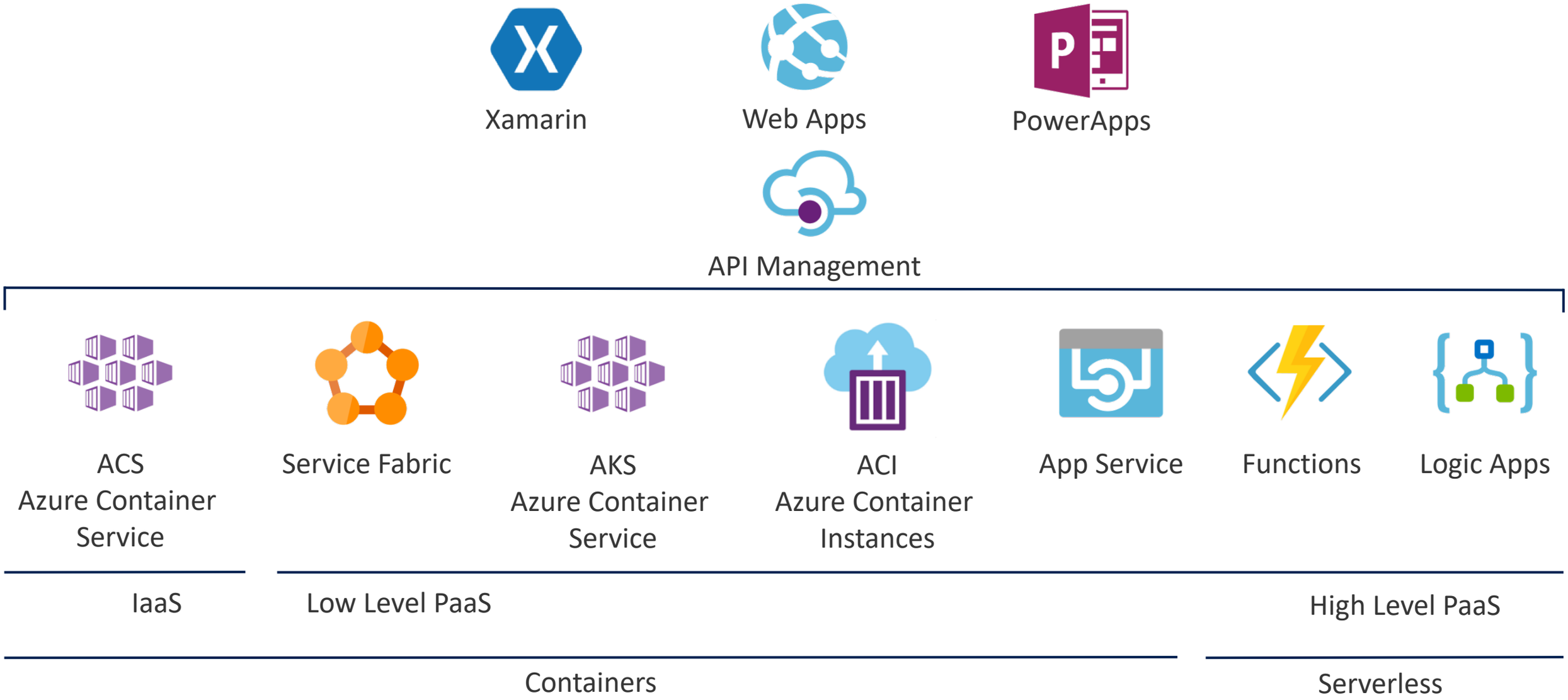
3. IT'S GOT A HYBRID STRATEGY.

"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, Fortune

App Options on Azure



Azure Microservices Options

Dev Ops

Continuous Integration
Continuous Deployment
Work Item Tracking
Source Code Control

Xamarin

Web Apps

PowerApps

API Management

Analytics

Data Lake
Machine Learning
Dashboards
Reports
Structured / Unstructured Analytics

ACS
Azure Container Service

Service Fabric

AKS
Azure Container Service

ACI
Azure Container Instances

App Service

Functions

Logic Apps

Operations – Reporting – Telemetry – Crash Analytics – Beta App Distribution – Identity

Serverless application platform components

SERVERLESS COMPUTE

Functions

Logic apps

Data/Storage	Messaging	Integration	Intelligence	Bots

DEVELOPMENT

IDE support	Local development	Visual debug history	Verbose debugging

- Real-time stream analytics
- SaaS event processing
- Web app architecture
- Real-time bot messaging

Azure Service Fabric

Integrated platform to help you build, deploy and operate applications, across OS, at any scale, on any cloud

Build

Build new or transform existing applications

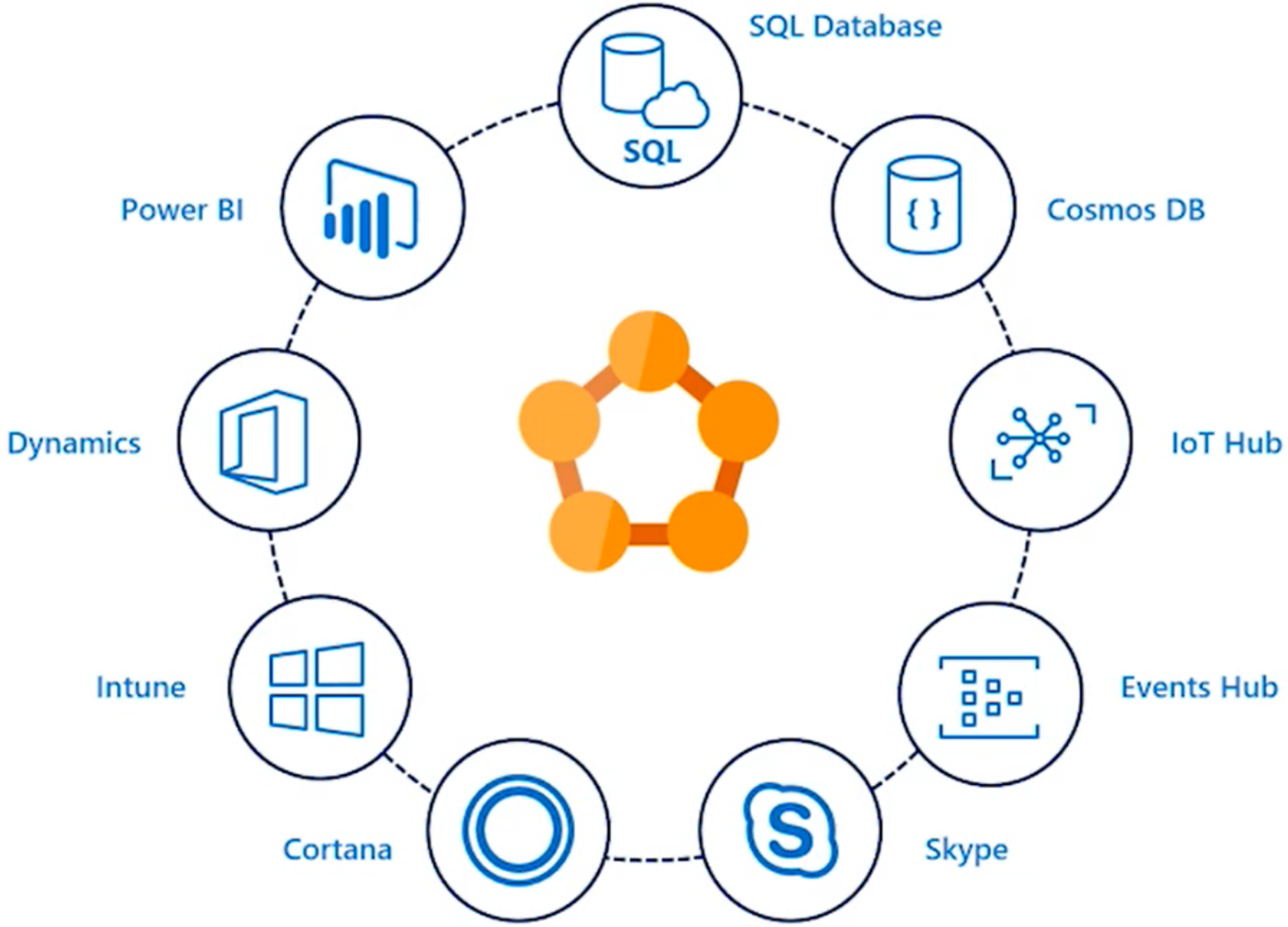
Deploy

Deploy any code at any scale using tools you know

Operate

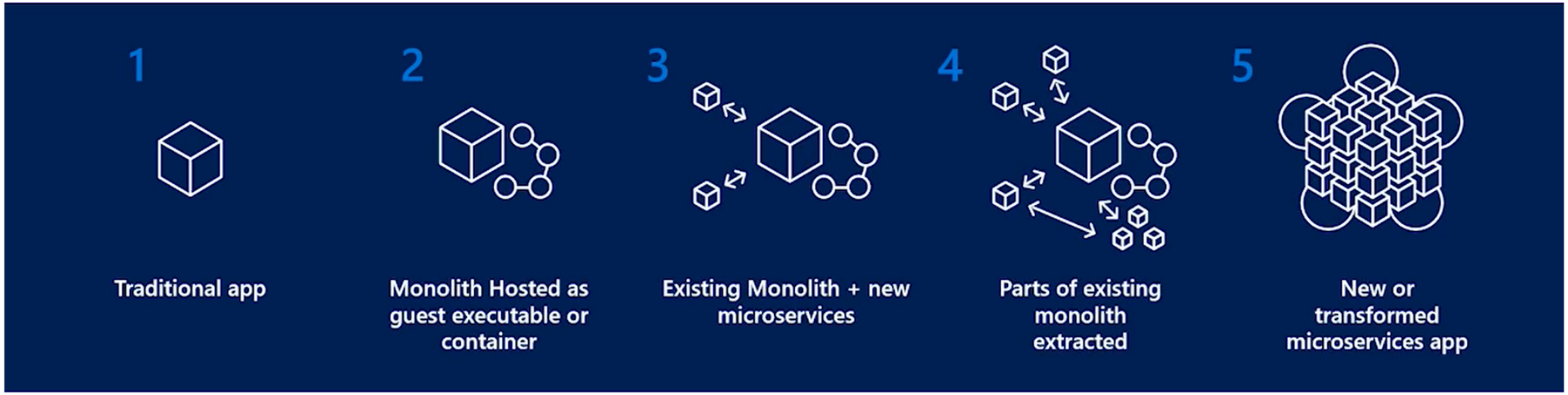
Run and secure services reliably at any scale

Powering Core Azure and Microsoft Services

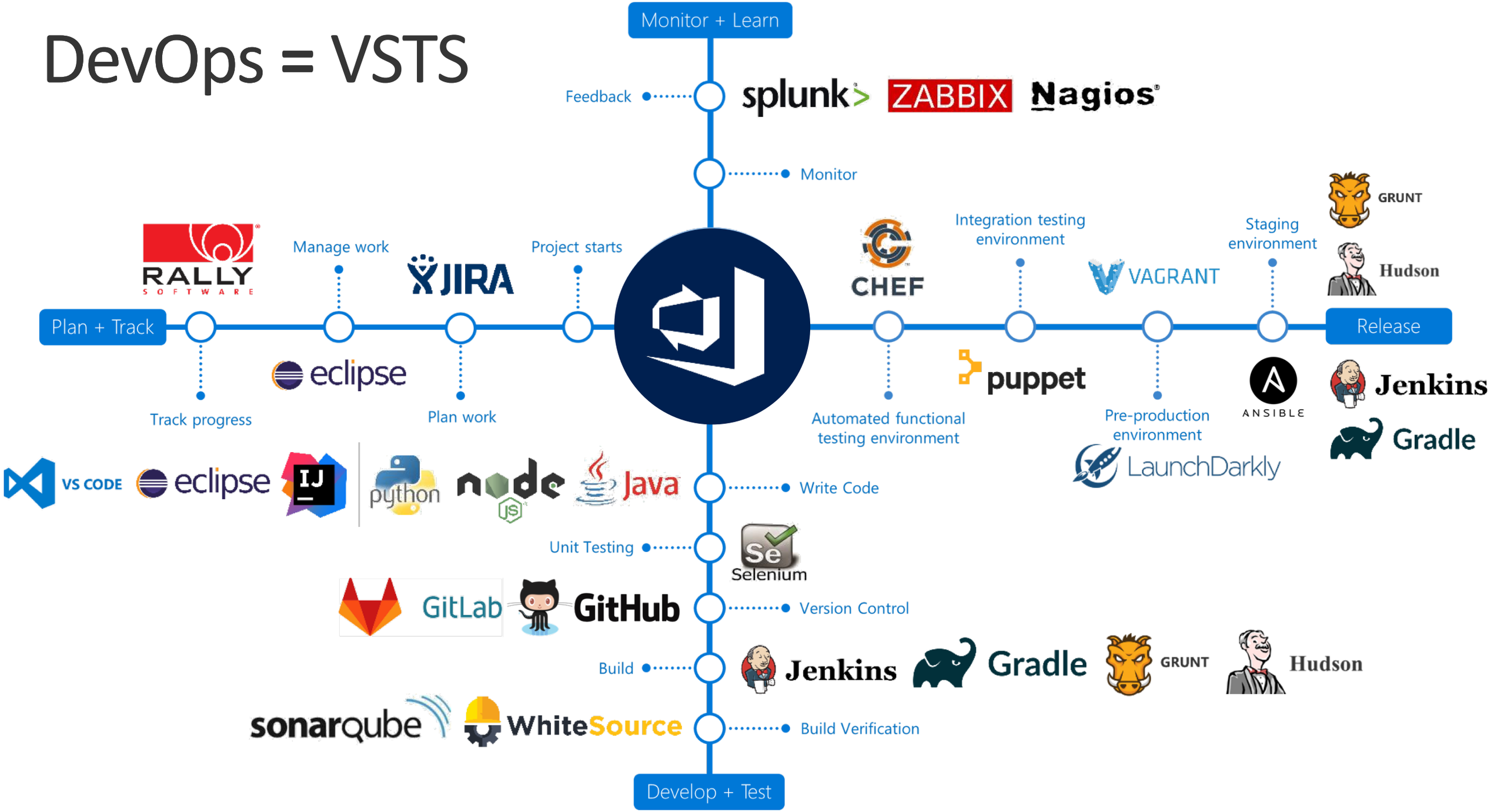


To Monolith or to Microservice?

We support any stage you choose



DevOps = VSTS


Monitor + Learn
Feedback
splunk>
ZABBIX
Nagios
Monitor
GRUNT
Integration testing environment
Staging environment
Hudson
RALLY SOFTWARE
Manage work
JIRA
Project starts
CHEF
VAGRANT
Plan + Track
Release
eclipse
puppet
Jenkins
Track progress
Plan work
Automated functional testing environment
Pre-production environment
ANSIBLE
Gradle
LaunchDarkly
VS CODE
eclipse
IJ
python
node
Java
Write Code
Unit Testing
Selenium
GitLab
GitHub
Version Control
Build
Jenkins
Gradle
GRUNT
Hudson
sonarqube
WhiteSource
Build Verification
Develop + Test

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 + OSS momentum

1.5X YoY

Growth of **Node.js** web apps deployed

15% MoM

Cloud Foundry driven consumption growth

#1

Kubernetes is the most used orchestrator in ACS

2.5X QoQ

Growth of **serverless Node.js** apps in Azure

8.7% MoM

Linux growth rate in Azure

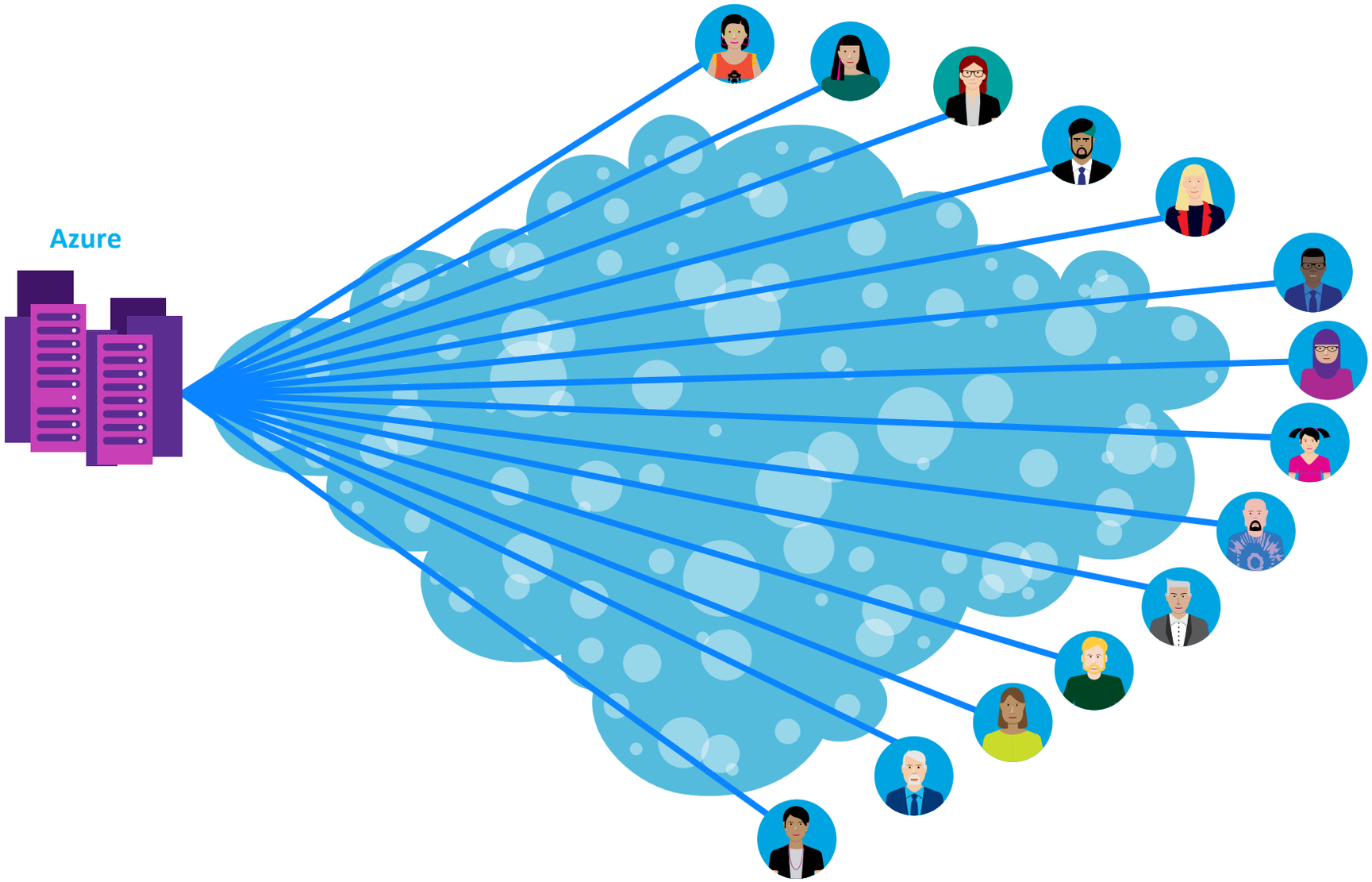
1.4X

Linux growth rate vs. Windows

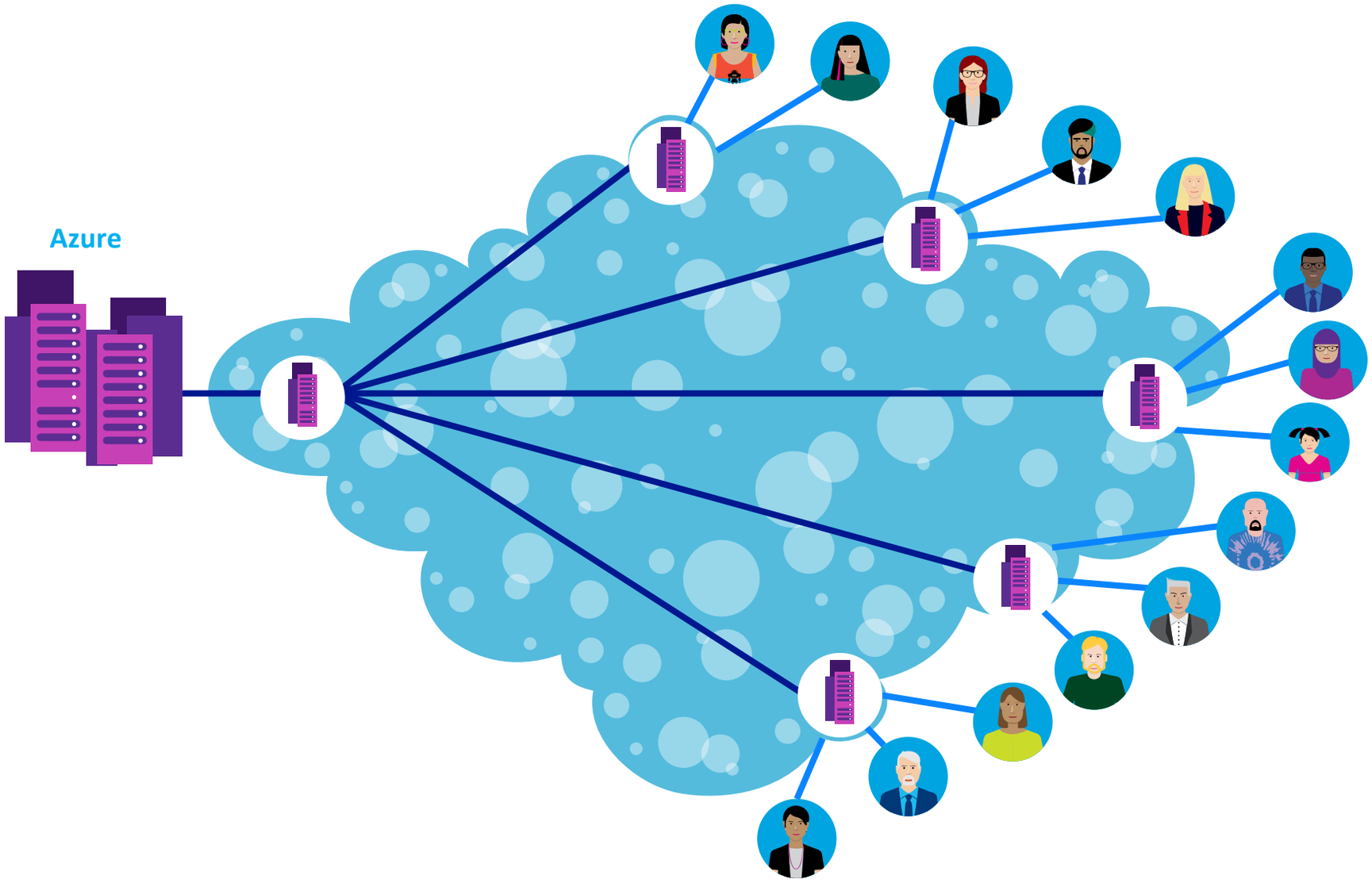
+7P

Increased monthly growth rate for **Red Hat PAYG** (@15% MoM)

Delivering content from the edge of the Internet



Delivering content from the edge of the Internet



Why is Azure CDN unique?

Multi-provider Offering

- Verizon (Standard, Premium)
- Akamai (Standard)
- Dynamic Acceleration from Verizon and Akamai

Ease of Use

- Simplified user experience to active CDN within minutes
- Unified APIs to be used to provision and administer all providers

Deep Integration

- Deep integration with Azure services (Media Services, web app, storage, etc.) to enable and manage CDN from these services
- Single click to deploy Azure services with CDN with templates

Simplicity & Consistency

- No commit, pay as you go with no specific contract
- Simplified pricing model with usage based charge only
- Single support interface from Microsoft support for all providers