

Microsoft Azure Stack

Markus Klein
Hybrid Cloud Lead, MVP
Orange Networks GmbH
Blog: <http://www.mscommunity.cloud>





Microsoft Azure Stack

Power of Azure in your datacenter

Microsoft Azure Stack is a new hybrid cloud platform product that enables organizations to deliver **Azure services** from their own datacenter.

Business and technical considerations

Regulations



Data
sovereignty



Customization



Latency



Hybrid solution

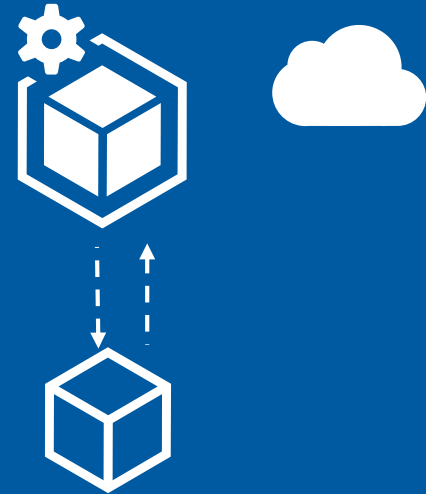
App flexibility



Hybrid
application patterns



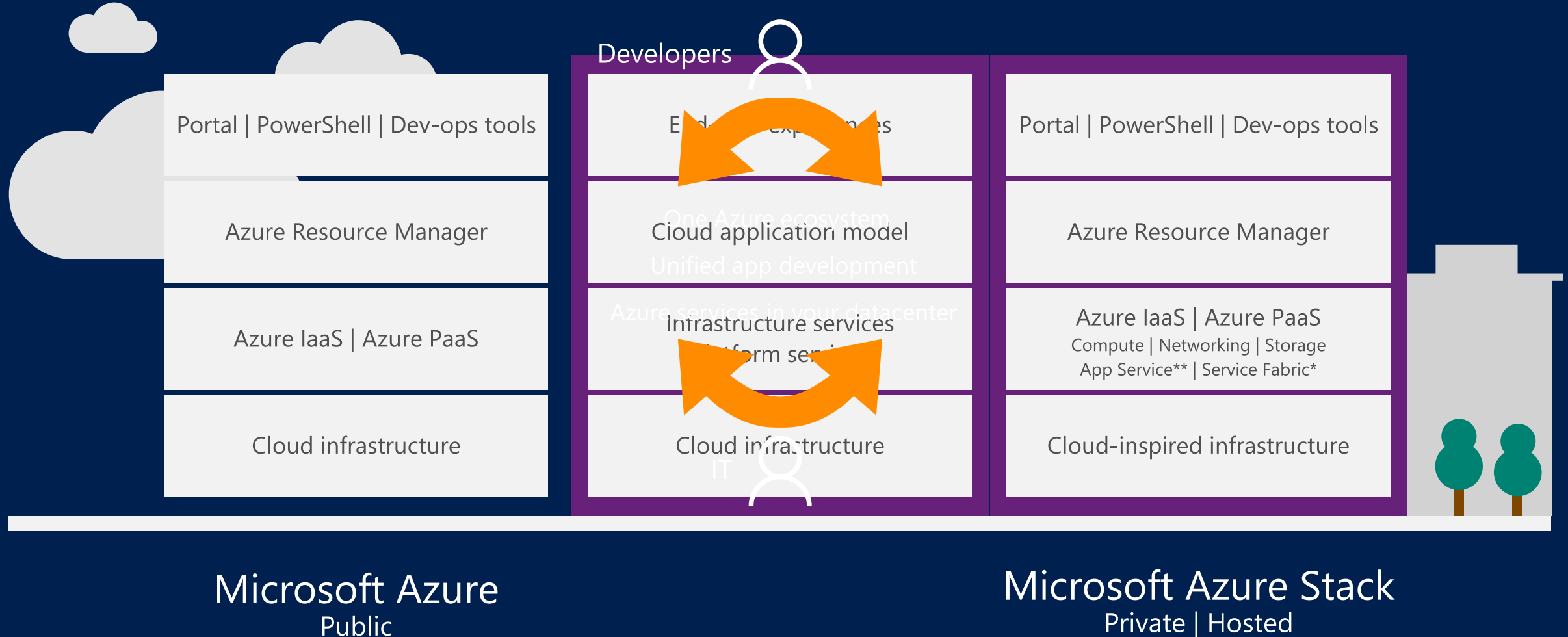
Seamless
application mobility



Continuous
DevOps releases

Microsoft's hybrid cloud platform

Power of Azure in your datacenter



* - some components will be in Preview at Azure Stack GA

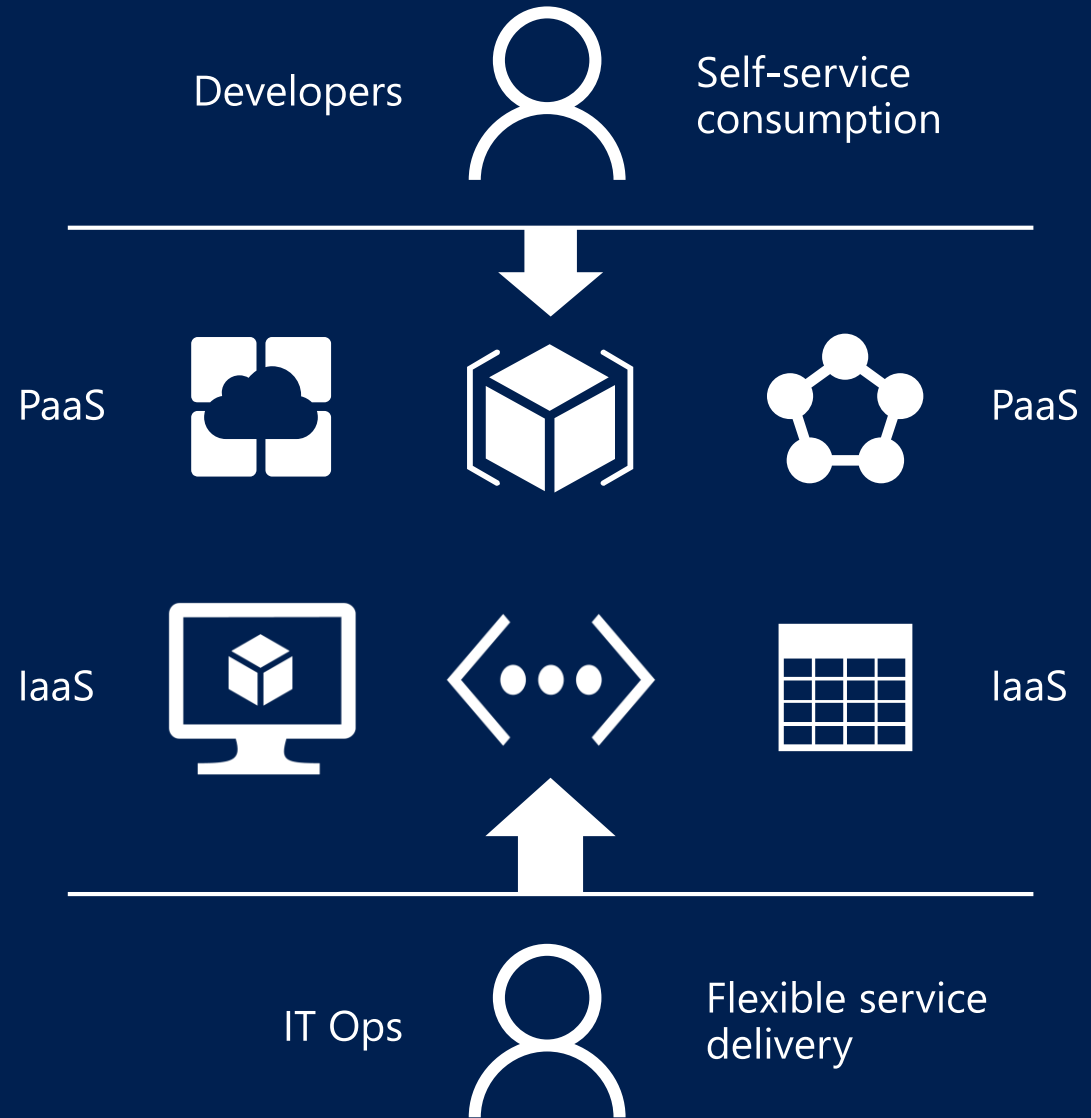
Azure services in your datacenter

Transform datacenter resources into cloud services

Self-service IaaS—Virtual Machines, Virtual Network, Storage, Docker-enabled containers

Self-service PaaS— App Service, Service Fabric*

Flexible service delivery with Azure-based management and automation tools



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Unified app development

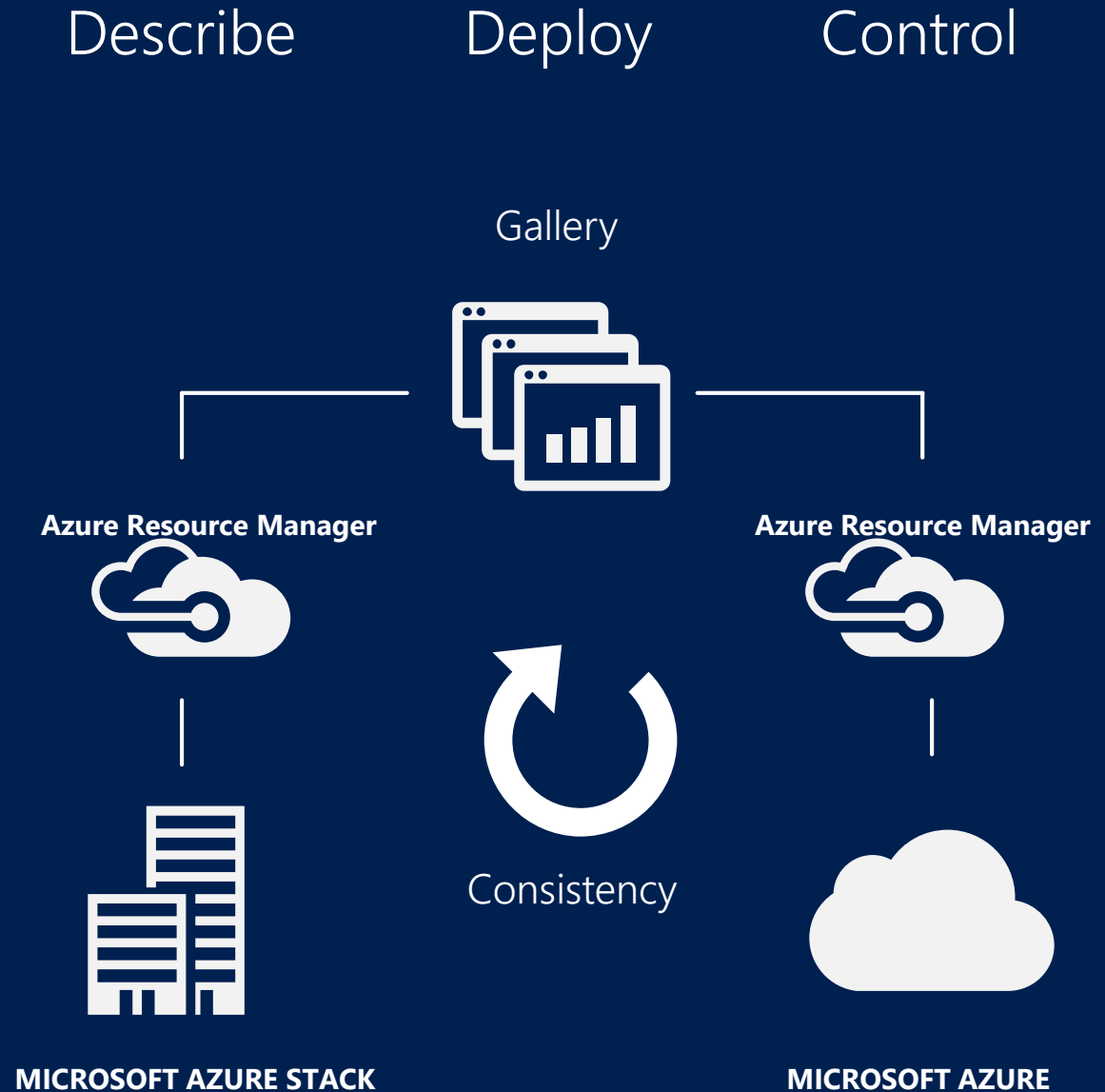
Write once, deploy to Azure or Azure Stack

Identical application model with same APIs

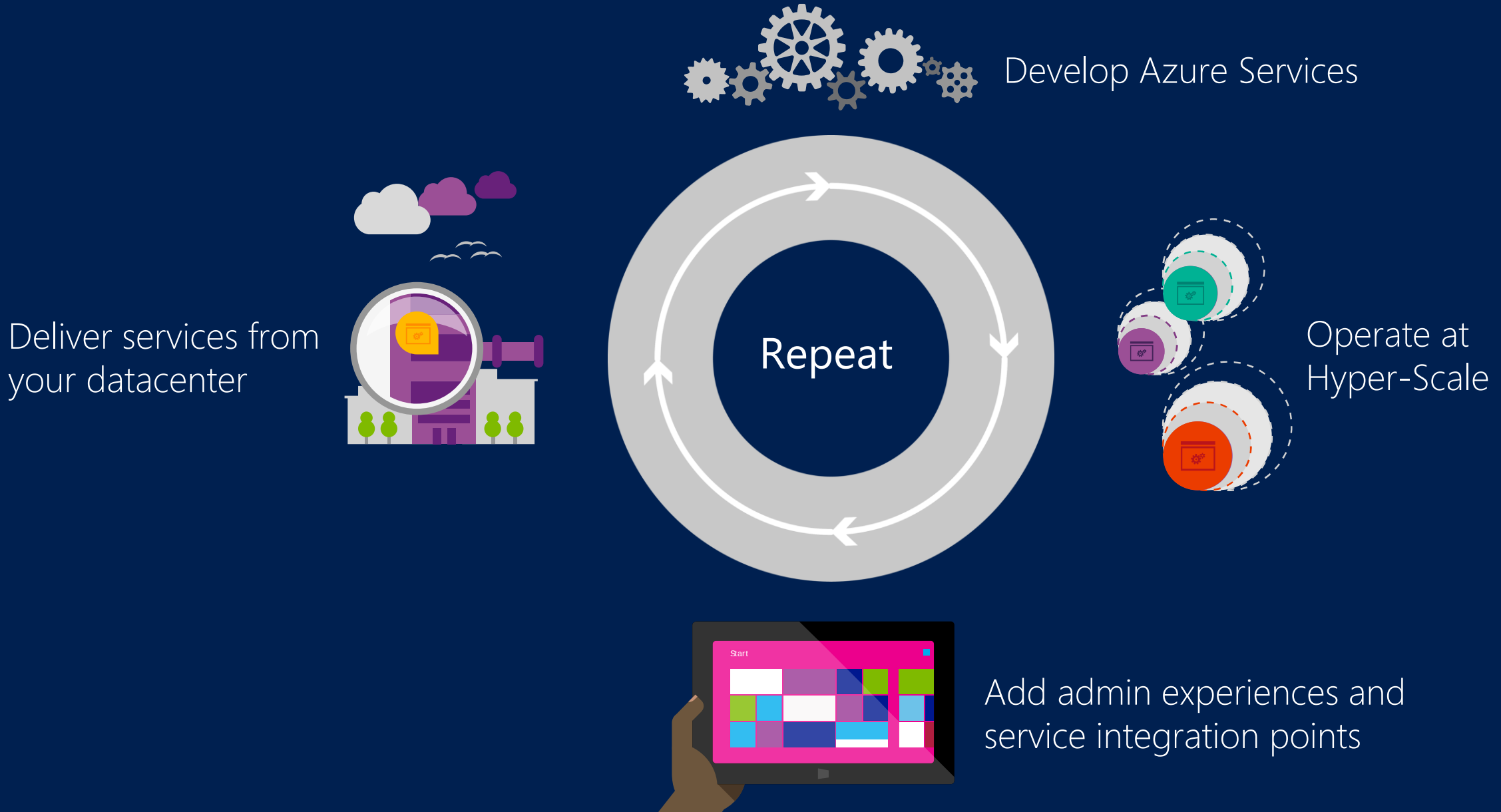
Role-based Access Control (RBAC)

Same deployment experience—PowerShell, Azure portal, or Visual Studio

Choice of open source application platforms, languages, and frameworks



Delivering continuous innovation from Azure



Envisioning hybrid solutions with Azure and Azure Stack



Digital
marketing



Mobile



E-commerce



Micro-service
applications



Development
and test



SharePoint on
Azure Stack



Business
intelligence



Disaster
recovery



Backup
and archive



Predictive
maintenance
with IoT



Remote
monitoring
with IoT



Big data
and analytics

Envisioning hybrid solutions: Azure Stack services @GA



Digital
marketing



Mobile



E-commerce



Micro-service
applications



Development
and test



SharePoint on
Azure Stack

Management, Security and Identity/Access: Azure Portal | Key Vault | Azure AD & ADFS integration

Azure PaaS: Web Apps | Mobile Apps | API Apps | Service Fabric*

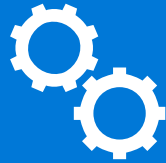
Azure IaaS: Virtual Machines (incl. container extensions) | Storage (Blobs, Tables, Queues) |
Networking (Virtual Network, Load Balancer, VPN Gateway)

Cloud consumer scenarios (app developer)



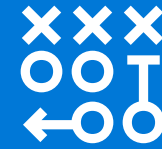
Accelerate your DevOps initiatives

- Deploy Windows and Linux workloads from open source repository and/or Visual Studio
- Manage configuration drift with VM extensions (example: DSC/PowerShell)
- Manage application secrets with Key Vault



Run cloud-native workloads

- Deploy LAMP stack from GitHub
- Deploy 3-tier app using Azure Resource Manager template
- Deploy container-based app on Linux or Windows Server



Work flexibly

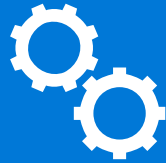
- VPN into POC environment, connect to Azure Stack from different devices (incl. MAC)
- Use cross platform development tools, incl. Azure CLI, PowerShell, Visual Studio

Cloud provider scenarios (service ops)



Cultivate a cloud services portfolio

- Offer custom marketplace items
- Develop custom cloud services
- Automate creation and updates of offers/ plans



Run traditional workloads

- Deploy Active Directory domain in IaaS
- Deploy SQL Server in IaaS
- Deploy SharePoint farm
- Deploy load-balanced Linux web servers



Organize, control, and manage cloud resources

- Apply granular role-based access control (RBAC)
- Allow delegated providers to manage services for their customers
- Configure storage recovery

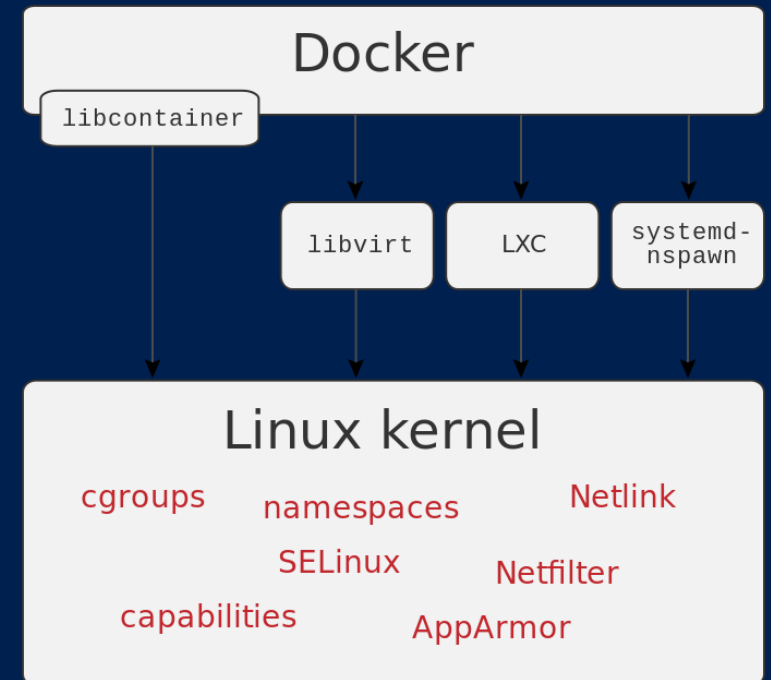
PaaS Solutions on Azure Stack

- Docker / Container
- Cloud Foundry
- MESOS
- Service Fabric



Linux Docker

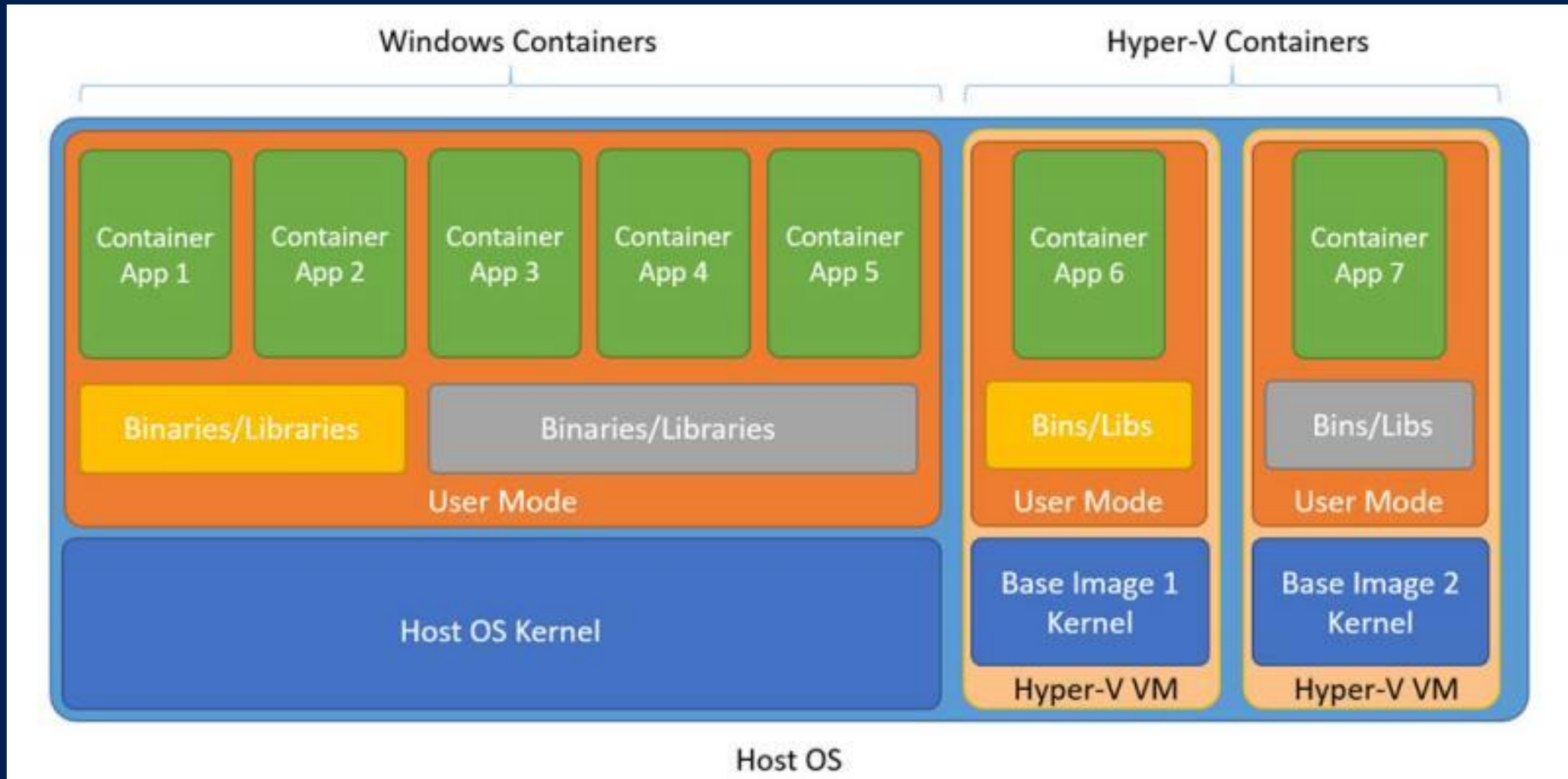
- Vereinfachte Bereitstellung von Anwendungen
- enthalten alle nötigen Pakete
- Lassen sich einfach transportieren u. installieren
- gewährleisten Ressourcen-Trennung:
 - Code,
 - Laufzeitmodul
 - System-Tools,
 - Systembibliotheken



Windows Container

- Windows Server-Container
 - Bieten Anwendungsisolation (Prozessen und Namespaces)
 - Teilt sich einen Kernel mit dem Containerhost und allen Container, die auf dem Host ausgeführt werden.
- Hyper-V-Container:
 - Erweitern die bereitgestellte Isolation, indem jeder Container auf einem hochgradig optimierten virtuellen Computer ausgeführt wird.

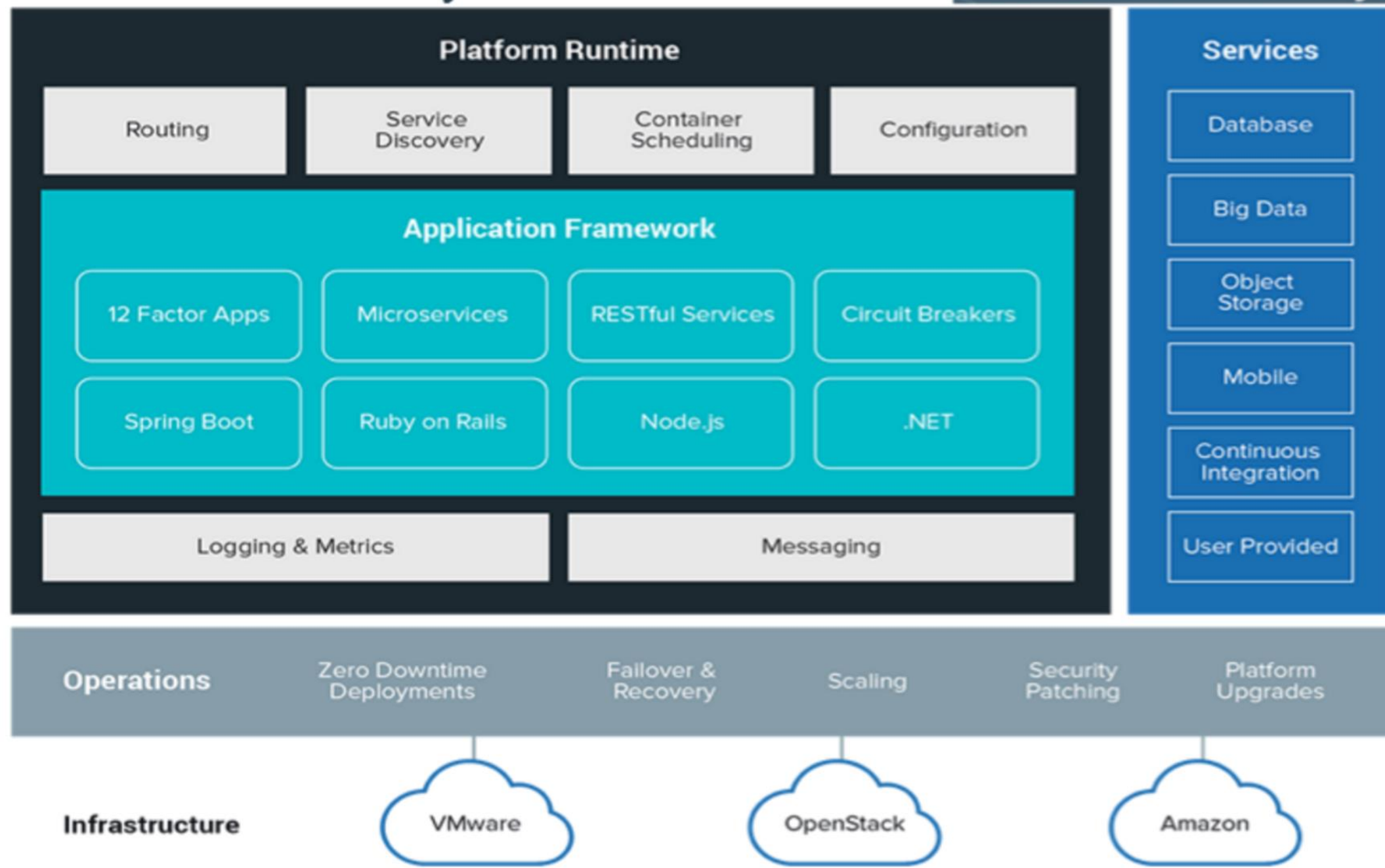
Unterschied von Containern



Cloud Foundry

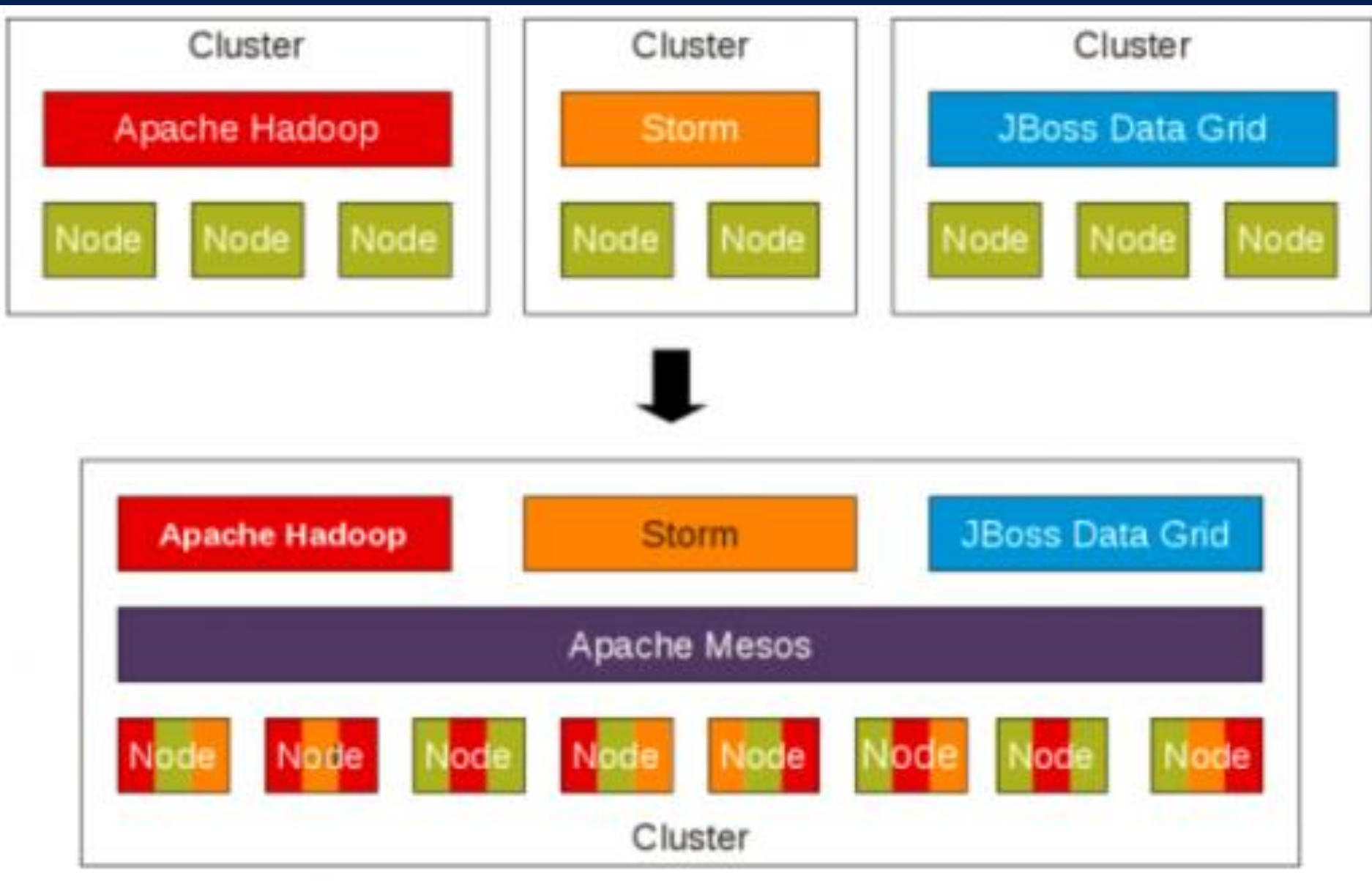
- The software was originally developed by [VMware](#) and then transferred to [Pivotal Software](#), a joint venture by [EMC](#), [VMware](#) and [General Electric](#). In January 2015, the Cloud Foundry Foundation was created as an independent not-for-profit 501 [Linux Foundation](#) Collaborative Project.

Pivotal Cloud Foundry - Architecture



MESOS

- Mesos began as a research project in the UC Berkeley RAD Lab by then PhD students Benjamin Hindman, Andy Konwinski, and [Matei Zaharia](#), as well as professor [Ion Stoica](#). The students started working on the project as part of a course taught by [David Culler](#). It was originally named *Nexus* but due to a conflict with another university's project, was renamed to Mesos.¹
- Mesos uses Linux [Cgroups](#) to provide isolation for [CPU](#), [memory](#), [I/O](#) and [file system](#). Mesos is compared to the [Google Omega scheduler](#), a highly secretive platform used internally to manage and distribute Google's services.



Service Fabric

- Stets verfügbare, skalierbare, verteilte Anwendungen erstellen und ausführen
- Vereinfachen Sie die Entwicklung microservicebasierter Anwendungen sowie die Lebenszyklusverwaltung
- Sorgen Sie auch bei äußerst großen Bereitstellungen für geringe Latenzen und hohe Effizienz
- Bewährte Plattform, die von Azure und anderen Microsoft-Diensten genutzt wird
- Führen Sie Ihre Lösungen in Azure, lokal oder in anderen Clouds aus
- <http://aka.ms/servicefabricvideo>

Azure Stack TP3 Delivers Hybrid Application Innovation and Introduces Pay-as-you-Use Pricing Model

Veröffentlicht am 1 März, 2017

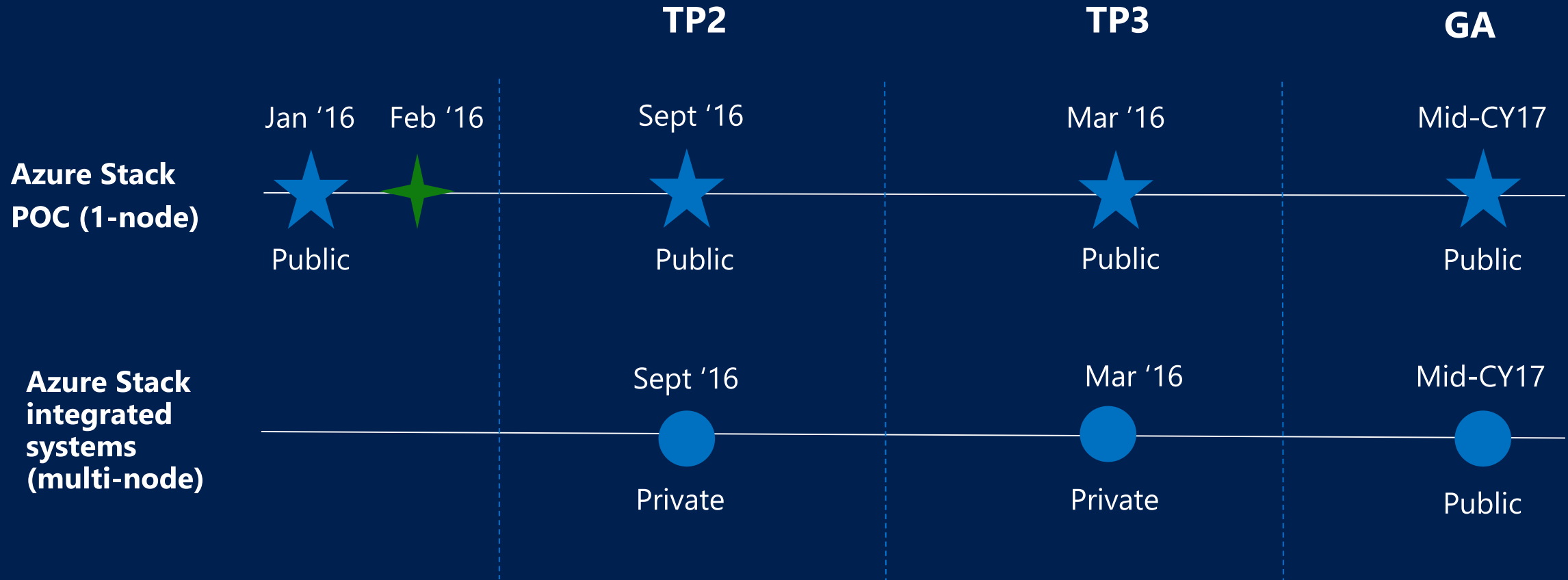


[Jeffrey Snover](#), Technical Fellow, Microsoft Enterprise Cloud Group

Building innovative applications on cloud technologies is critical for organizations to accelerate growth and create differentiated customer experiences. Applications leveraging cloud technologies with pay-as-you-use pricing are now standard. Our goal is to ensure that organizations choosing hybrid cloud environments have this same flexibility and innovation capability to match their business objectives and application designs. This is why we are extending Azure technologies on-premises with Azure Stack and today, are announcing several updates for Azure Stack:

- **TP3 available for download:** [Technical Preview 3 \(TP3\) is available for download](#) today and has new features that enable: more modern application capabilities; running in locations without connections to Azure; along with infrastructure and security enhancements.
- **Packaging and pricing model:** Azure Stack brings the cloud economic model on-premises with pay-as-you-use pricing.
- **Roadmap Update:** Shortly after TP3, [Azure Functions](#) will be available to run on TP3, followed by [Blockchain](#), [Cloud Foundry](#), and [Mesos](#) templates. Continuous innovation will be delivered to Azure Stack up to general availability and beyond. TP3 is the final planned major Technical Preview before Azure Stack integrated systems will be available for order in mid-CY17.

Timelines



Legend



Each Technical Preview (TP) will include "foundational" Azure services such as Compute, Networking, Storage. In between TPs, we will release incremental updates with new customer scenarios.



Following each TP, we will release updates for "additional" Azure services, such as Web Apps.

This is
my
thank you
dance!

