

Platform-as-a-Service és Telekom felhő

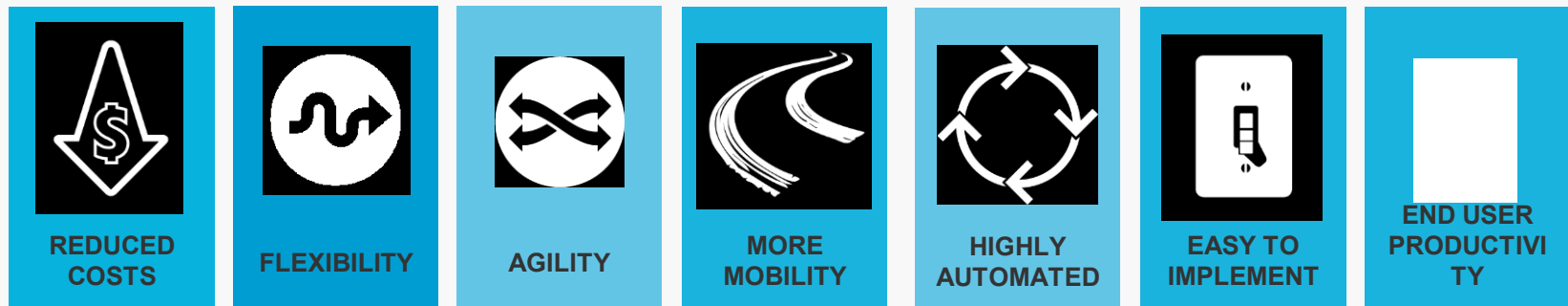
Simon Csaba

INTRO – CLOUDS REVISITED

A felhő alapú rendszerek értelme és szerepe az IT világban

Felhő szerepe – üzleti oldalról

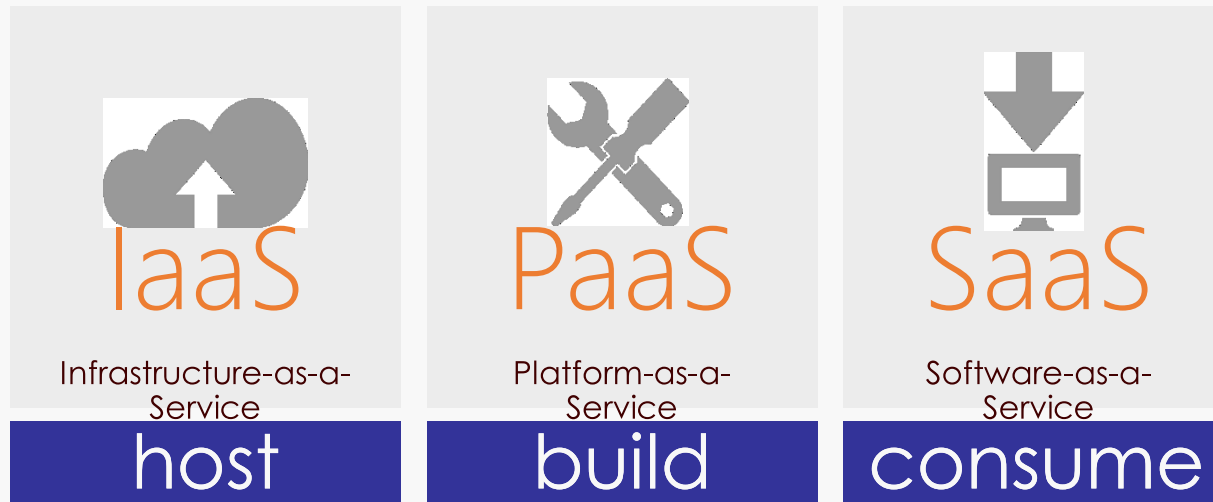
ELVÁRT ELŐNY/HASZON:



Ehhez az infrastruktúra oldaláról szükséges:



Felhő terminológia felhasználási mód szerint



A felhő típusok meghatározása

Telepítés/üzemeltetés módja

Private Cloud

Public Cloud

Hybrid Cloud

Szolgáltatás módja

Infrastructure
as a Service
(IaaS)

Platform as a
Service
PaaS

Software as a
Service
SaaS

MI A PAAS?

Platform as a Service – the **services**

Szolgáltatás: mit ad nekünk a PaaS?

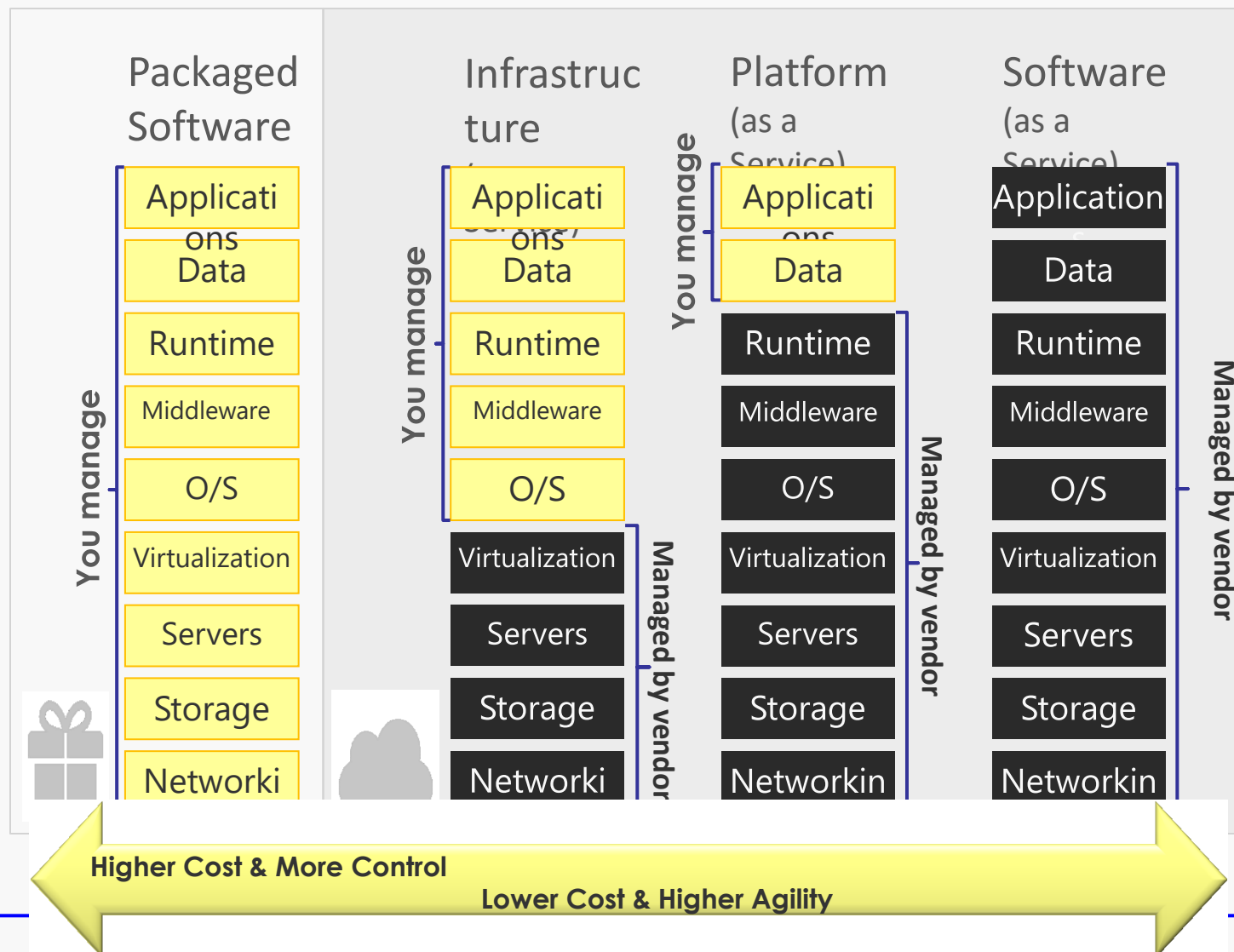
- Telepítés - app **deployment**
- Skálázhatóság - **scaling** (horizontal, vertical, auto)
- Terhelésmegosztás - load **balancing**
- Felügyelet - health **monitoring**, auto recovery
- Naplózás - **logging** service
- Eszköztár - external/internal services, **marketplace**

Advantages of PaaS – the **Platform** assures

- deployment
- load balancing
- high availability
- log aggregation
- scaling
- Image mgmt –
 - » Libraries, kernel versions
 - » Security updates

(Tenant's problem: just develop your **own app**)
- **Előny**: A felhasználó a saját alkalmazásának kidolgozására koncentrálhat

Compare the *aaS-es



Az *aaS modellek összehasonlítása

- » IaaS: The end user maintains control of the operating system and applications on the hardware.
- » PaaS: end user has to development, testing, deployment, and ongoing maintenance of applications
- » SaaS: end users pay on a per-use basis

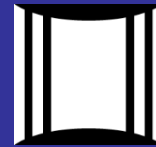
A PaaS dióhéjban

Teljes körű és komplex szolgáltatás halmaz

Gyors alkalmazás kezelés

- build
- telepítés
- menedzsment

Globális (több-helyszínen működő) hálózaton



Flexible



Open



Solid

PaaS rendszerek nagyon változatosak

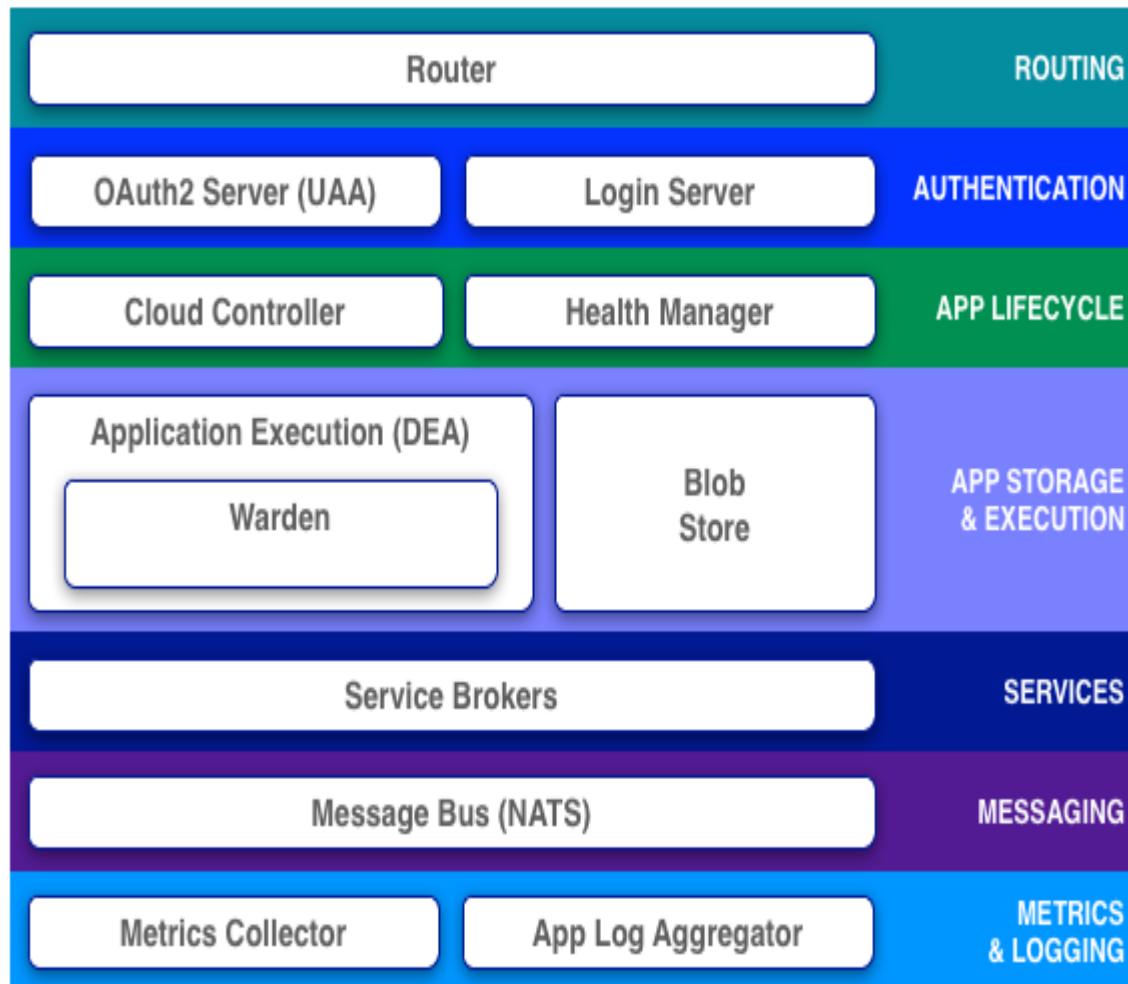
- Services that help develop and test apps
 - infrastructure is maintained by the provider
- Reduced infrastructure complexity
 - more effective overall application development
- Runtime environments are usually lock-in free
 - but might create lock-ins to provider specific infrastructure
- Usually simple network topology and access control
 - build your services as they would be open to the Internet
- The features and services provided vary a lot
 - from simple customizable runtime (CloudFoundry) to full marketplace of services (Heroku)

PaaS, mint egy eszköztár (Toolchain as a Service)

- Manage your project
 - Trello, Jira OnDemand, Sprint.ly, PivotalTracker, ...
- Create your code
 - Cloud9, Koding, Nitrous, ...
- Host your code
 - GitHub, Bitbucket, ...
- Build your code
 - Codeship, Travis CI, CloudBees, Drone, ...
- Test your code
 - BrowserStack, Sauce Labs, Xamarin Test Cloud, Blitz, ...
- Distribute your code
 - npm, Bintray, Maven Central, PyPI, Docker Hub, ...

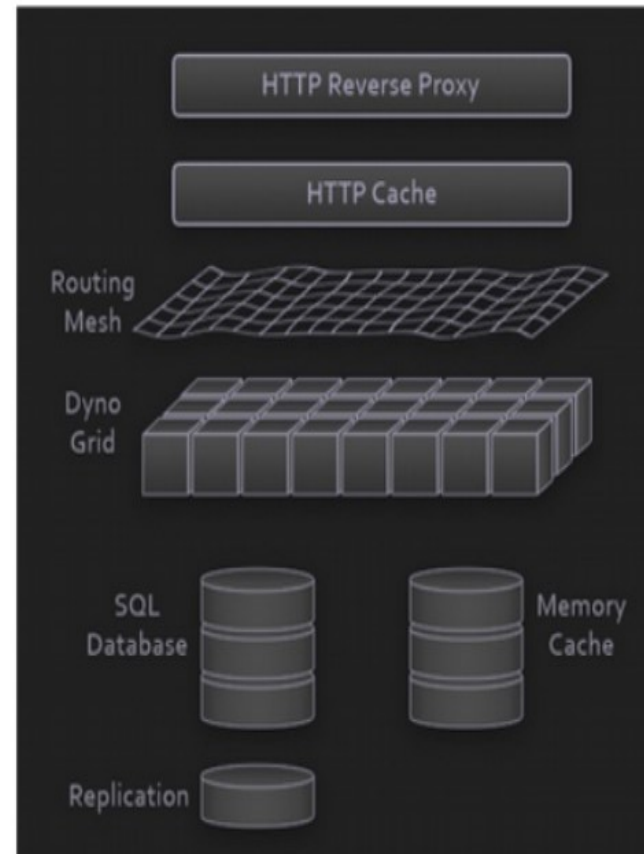
PAAS ARCHITEKTÚRA

Cloud Foundry - Architecture



Heroku architecture

- Reverse Proxy by nginx
 - terminates SSL
 - forwards to cache layer
- HTTP Cache by Varnish
 - returns cached pages immediately
 - forwards to routing mesh
- Routing Mesh written in Erlang
 - routes to an existing dyno
 - spawns a dyno if none available
- Dyno Grid ('railgun' servers)
 - AWS hosted EC2 instances
 - multiple dynos per server

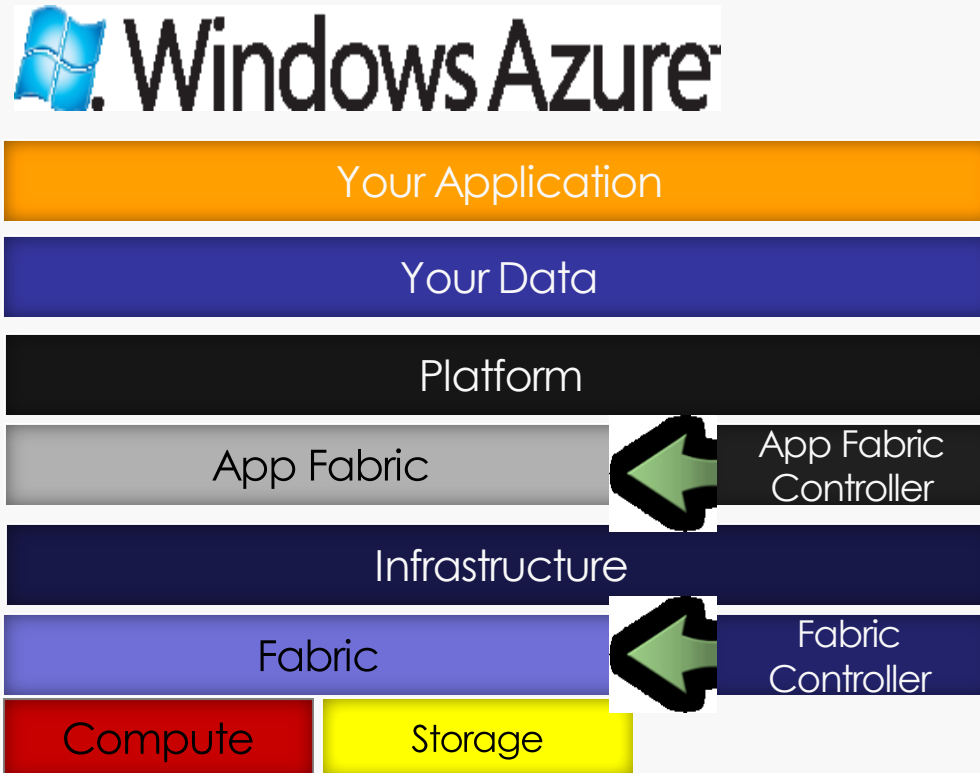


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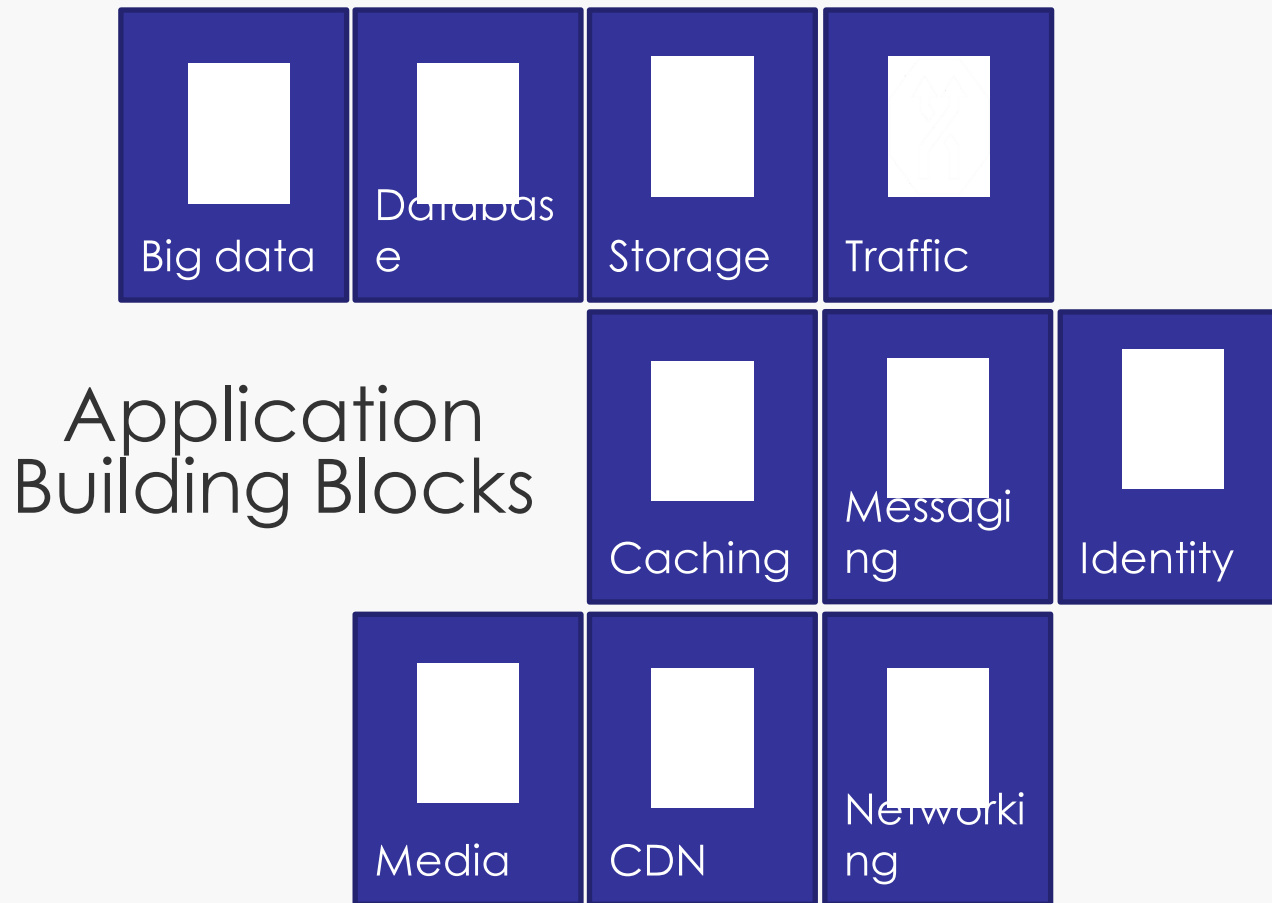
Heroku terminology

- **Application** source code and description of any dependencies
- **Procfile** list of process types – named commands to be executed
- **Deployment** sending application to Heroku using git or dropbox
- **Buildpack** compilation process that creates a slug from application
- **Slug** bundle of application, language runtime and compilation output
- **Dyno** isolated, virtualized Linux container for application runtime
- **Release** append-only ledger of slugs, config vars and add-ons
- **Config var** configuration data hosted independently of source code
- **Add-on** easily attachable third party cloud services
- **Logplex** collates logs from all running dynos and other components

Winazure



Azure Building Block Services



Éles versenyben „elkel” a segítség

- » Kiszervezni a felhasználókat egy PaaS-ból
 - » Migrálni egy másik (IaaS) szolgáltató hálózatába
 - » „Véletlenül” az ajánlattevő biztosítja a PaaS-t ebben az új felállásban
- » <https://www.skyliner.io/offer/heroku>

Skyliner



We'll port your Heroku app to AWS for free

Skyliner is a Heroku-like launch platform that you can use on AWS. Switching to Skyliner will save you a bundle on your infrastructure.

Virtualizáció úttörője



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See Success Stories
Virtualization

REALIZE WHAT'S POSSIBLE?
Virtualization Management

Virtualizing Business Critical Applications

Virtualizing Big Data

Business Continuity & Disaster Recovery

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Pivotal Cloud Foundry – VMware Photon Platform Deliver



Best-in-Class Cloud-Native Stack

VMware is paired with Pivotal Cloud Foundry to deliver startup speed with enterprise reliability.



Simple to Purchase, Install and Maintain



Faster Innovation for Developers and Operations

The joint solution is built for speed, scale and programmability, making it usable by developers, operations, and everyone in-between. It is accessible and controllable via APIs, CLI for developers, and a GUI for operations teams.