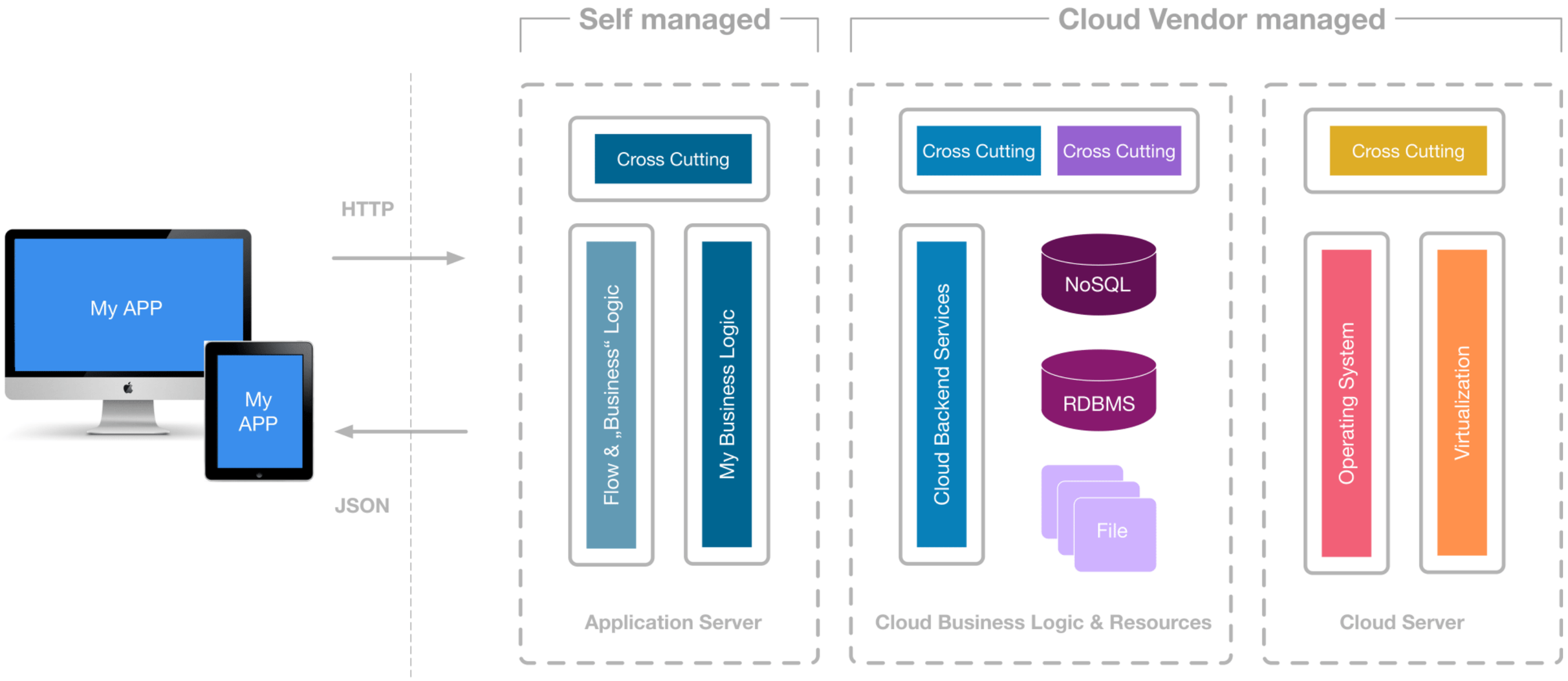
QAWARE
SOFTWARE ENGINEERING

Kapitel 10: Serverless

Kein Server ist einfacher zu verwalten, als kein Server!

(Werner Vogels, CTO, Amazon)

Traditionelle Cloud-basierte Anwendungsarchitektur



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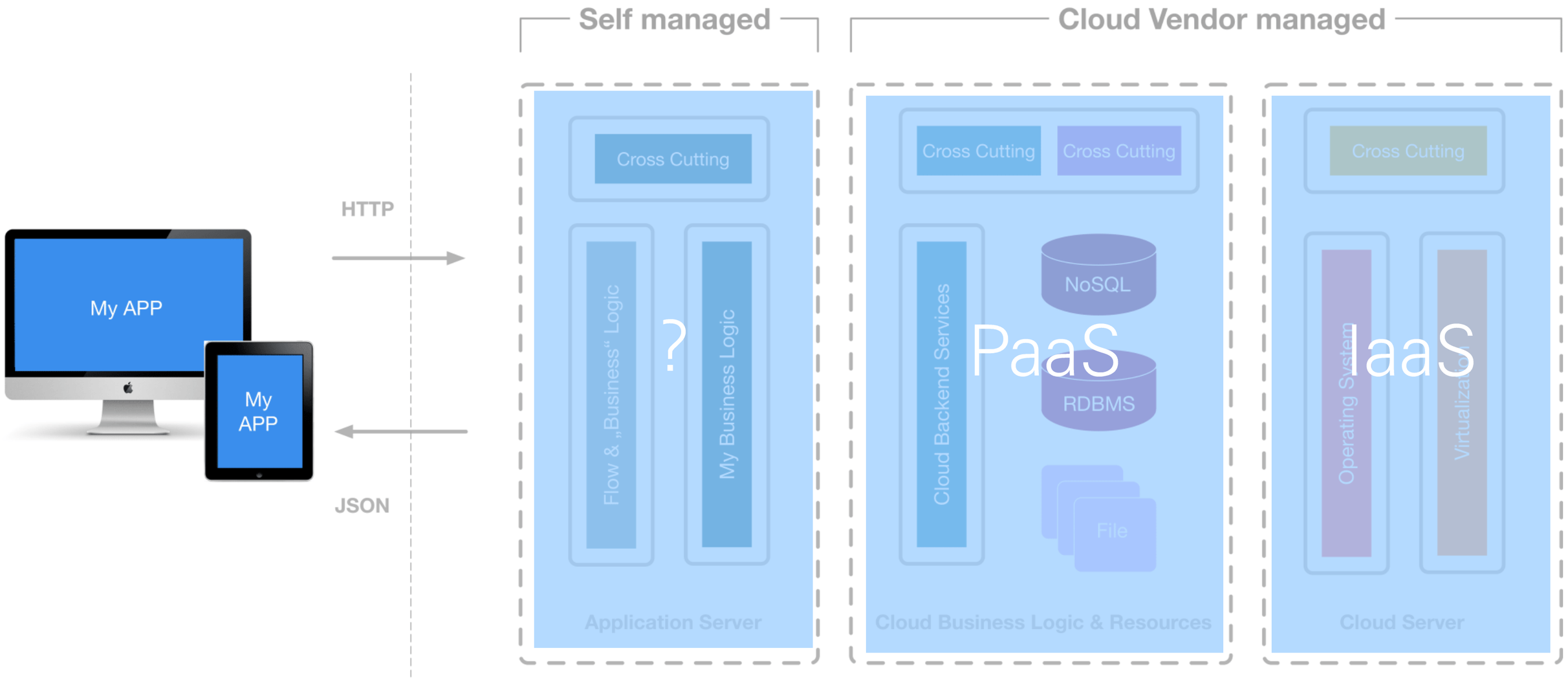
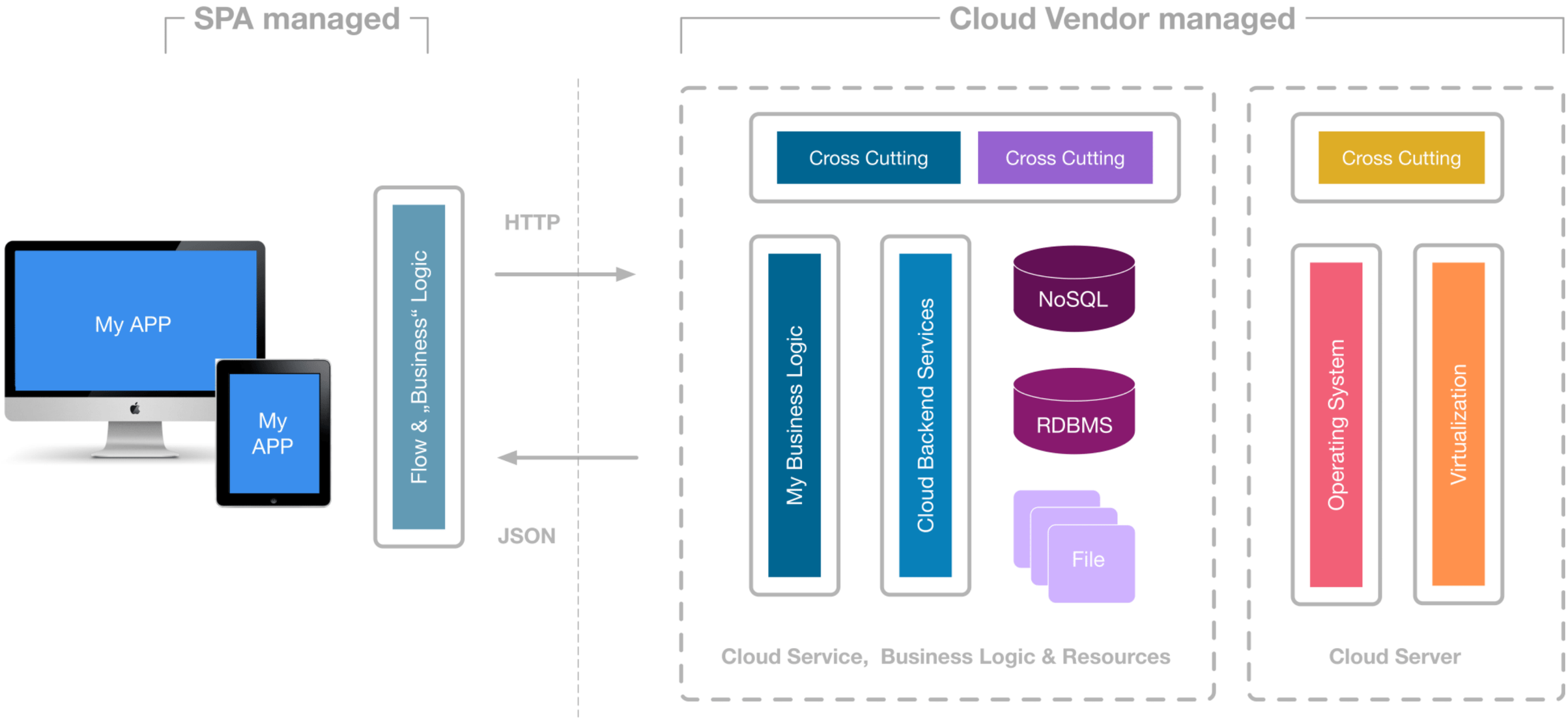


Serverless Anwendungsarchitektur



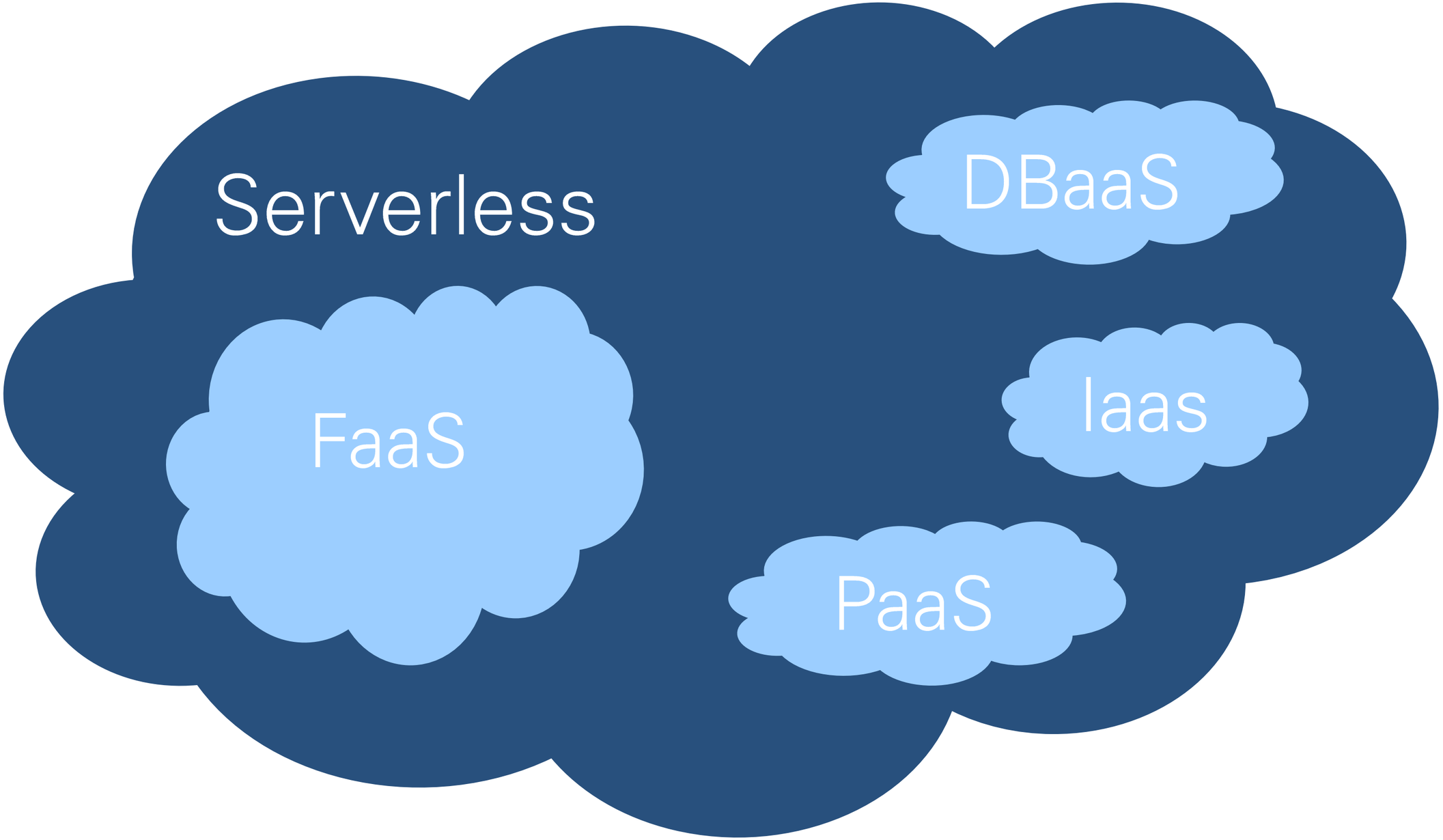
Die Idee.

Run Code, not Servers!

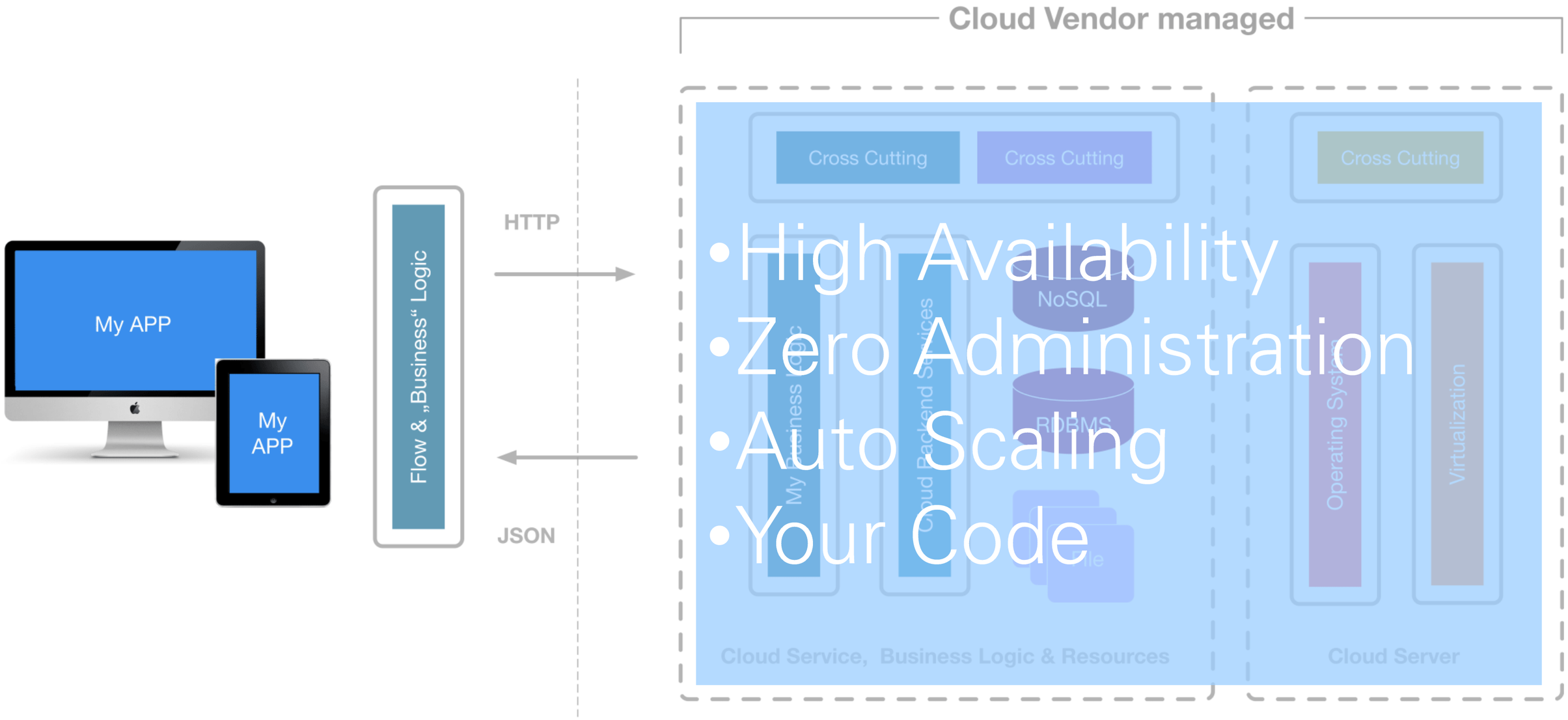
Serverless Definition

„Run your code **highly-available** in the cloud in **response to events** and scale **without any servers** to manage.“

Out-of the Box Self-scaling Fully Managed Backend



Serverless Anwendungsarchitektur



Serverless Cloud Native Landscape
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See the serverless interactive display at s.cncf.io

Greyed logos are not open source

Tools

CLOUDZERO, dashbird, Epsagon, event gateway, Gloo, IO pipe, Iron.io, Node Lambda, python-λ, SCAR, SIGMA, STACKERY, THUNDRA

Security

intrinsic, Protego, PURESEC, snyk, threat stack

Framework

APEX serverless architecture, .arc Architect, aws Chalice, AWS SAM, Claudia.js, FLOGO, gun.io, serverless, SPARTA, Spring Cloud Function

Platform

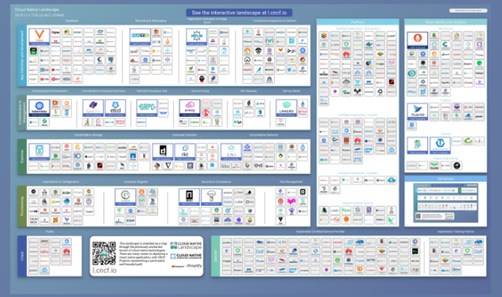
Hosted

ALGORITHMIA, Alibaba Cloud Function Compute, AWS Lambda, Azure Functions, BINARIS, cloudboost, CLOUDFLARE, Google Cloud Functions, HUAWEI, HYPER.SH, IBM Cloud, netlify, PubNub FUNCTIONS, spotinst, stdlib, Tencent Cloud Serverless Cloud Function, twilio, ZEIT

Installable

OpenWhisk, AppScale, DISPATCH, fission, fn, GALACTIC FOG, Knative, Kubeless, Kyma, LunchBadger, nuclio, OPENFAAS, PipelineAI, rff, Virtual Kubelet

Cloud Native Landscape



s.cncf.io

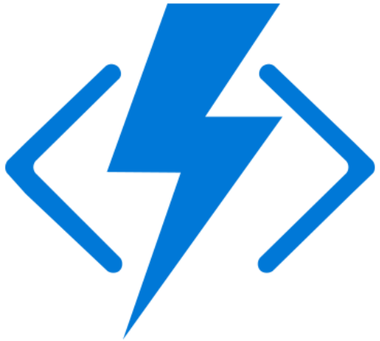
Serverless computing refers to a new model of cloud native computing, enabled by architectures that do not require server management to build and run applications. This landscape illustrates a finer-grained deployment model where applications, bundled as one or more functions, are uploaded to a platform and then executed, scaled, and billed in response to the exact demand needed at the moment

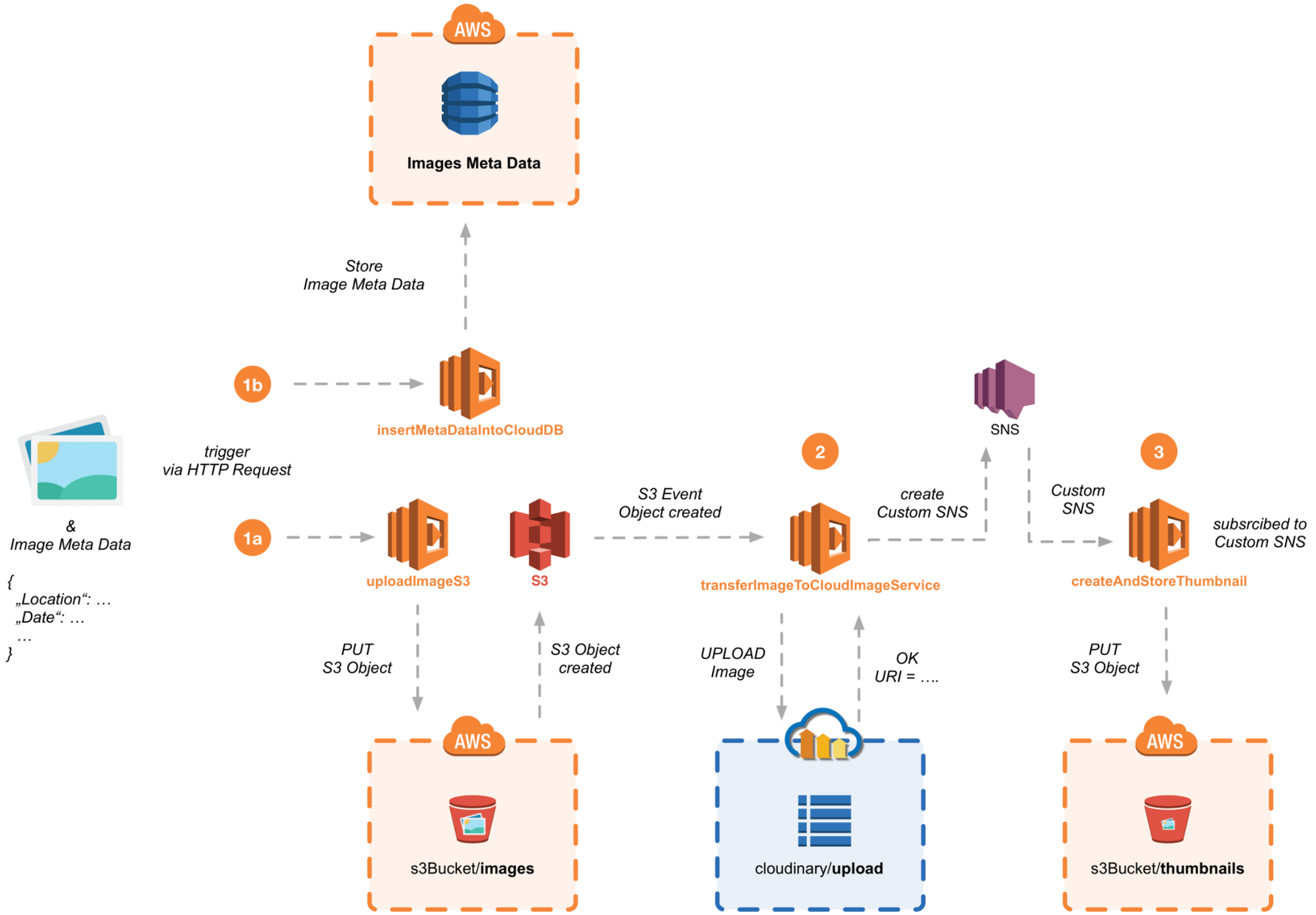
CLOUD NATIVE Landscape

CLOUD NATIVE COMPUTING FOUNDATION

Redpoint

Main Players



CLOUD FUNCTIONS

Create Thumbnails the AWS Lambda Way