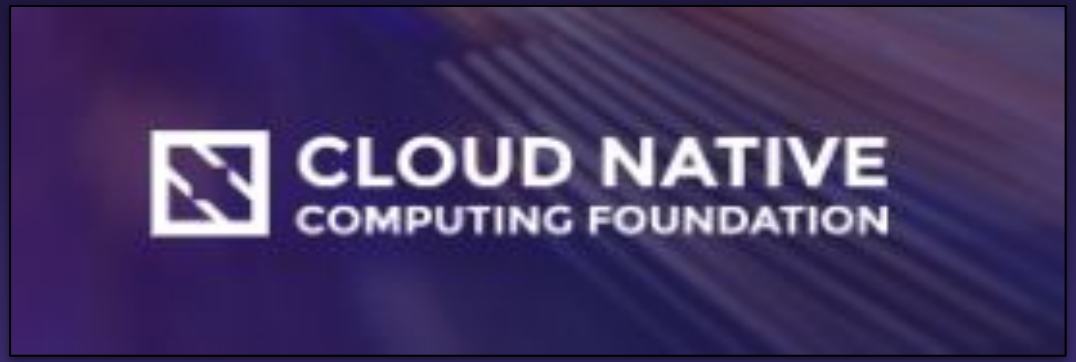

GitLab

The Serverless Landscape

Dee Kumar, Vice President Marketing, CNCF
Priyanka Sharma, Director Alliances, Gitlab

This presentation is available at:

https://github.com/cncf/presentations

About us

Priyanka Sharma

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Dee Kumar

Vice President, Product Marketing

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@deesprinter

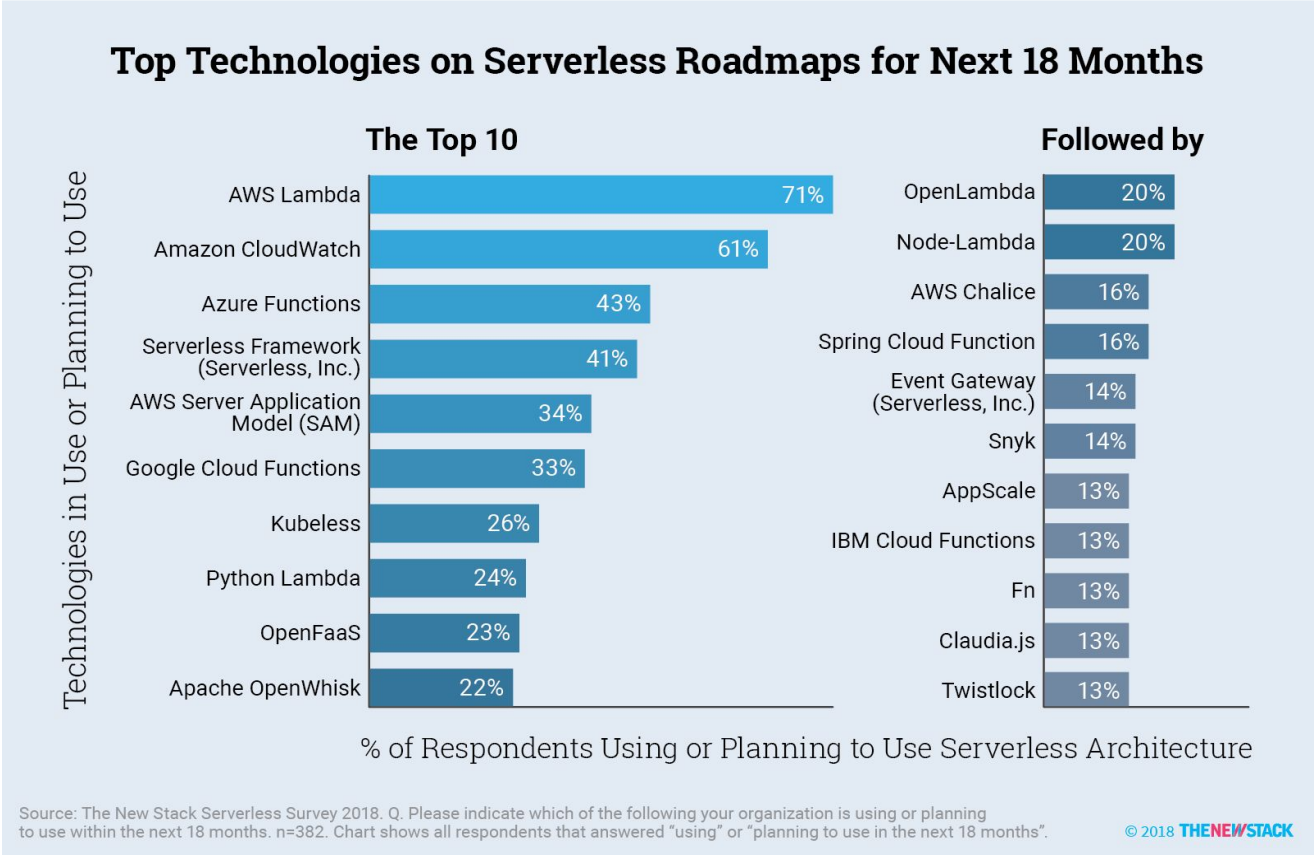
It's not Moonbeams

- Let's get one thing out of the way: **Serverless computing** still **requires servers**
- In serverless architectures the **infrastructure is fully abstracted away** from the user/developer
- Developers can tap into a **limitless pool of compute**, network and storage in the cloud via managed services

It's more than FaaS

- Opinion: **Serverless = FaaS + Applications**
- Anything that needs to **autoscale**
- Anything that **runs sporadically** can be serverless to save costs & vice versa
- Serverless-first is a **new mantra in the enterprise**

Serverless Roadmaps



Source: The New Stack Serverless Survey 2018. Q. Please indicate which of the following your organization is using or planning to use within the next 18 months. n=382. Chart shows all respondents that answered "using" or "planning to use in the next 18 months".

© 2018 THENEWSTACK

CNCF Cloud Native Landscape

2019-03-02T00:11:26Z 36b8610

See the interactive landscape at l.cncf.io

Greyed logos are not open source

App Definition and Development

Database

Vitess (CNCF Incubating)

Streaming & Messaging

NATS (CNCF Incubating)

Application Definition & Image Build

HELM (CNCF Incubating)

Continuous Integration & Delivery

Orchestration & Management

Scheduling & Orchestration

kubernetes (CNCF Graduated)

Coordination & Service Discovery

CoreDNS (CNCF Graduated)

etcd (CNCF Incubating)

Remote Procedure Call

GRPC (CNCF Incubating)

Service Proxy

envoy (CNCF Graduated)

API Gateway

Service Mesh

LINKERD (CNCF Incubating)

Runtime

Cloud-Native Storage

ROOK (CNCF Incubating)

Container Runtime

containerd (CNCF Graduated)

rkt (CNCF Incubating)

Cloud-Native Network

CNI (CNCF Incubating)

Provisioning

Automation & Configuration

Container Registry

HARBOR (CNCF Incubating)

Security & Compliance

Notary (CNCF Incubating)

TUF (CNCF Incubating)

Key Management

Platform

Certified Kubernetes - Distribution

Certified Kubernetes - Hosted

Certified Kubernetes - Installer

PaaS/Container Service

Observability and Analysis

Monitoring

Prometheus (CNCF Graduated)

Logging

fluentd (CNCF Incubating)

Tracing

Jaeger (CNCF Incubating)

OPENTRACING (CNCF Incubating)

Chaos Engineering

Serverless

Public

Cloud

Kubernetes Certified Service Provider

Special

Kubernetes Training Partner

This landscape is intended as a map through the previously uncharted terrain of cloud native technologies. There are many routes to deploying a cloud native application, with CNCF Projects representing a particularly well-traveled path

l.cncf.io

CLOUD NATIVE COMPUTING FOUNDATION

CLOUD NATIVE Landscape

Redpoint Amplify

CNCF Serverless Landscape

2019-03-14T01:22:19Z 6e0ac85

See the serverless interactive display at s.cncf.io

Greyed logos are not open source

Tools

CLOUDBERO, dashbird, Epsagon, event gateway, HASURA GraphQL Engine, IO|pipe, Iron.io, Node Lambda, python-λ, SCAR, SIGMA, STACKERY, THUNDRA

Security

intrinsic, Protego, PURESEC, threat stack

Framework

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

Platform

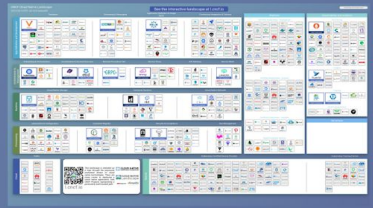
Hosted

ALGORITHMIA, Alibaba Cloud Function Compute, AWS Lambda, Azure Functions, BINARIS, cloudboost, CLOUDFLARE Workers, Google Cloud Functions, HUAWEI FunctionStage, IBM Cloud Functions, kitOne, netlify, PubNub FUNCTIONS, spotinst, stdlib, Tencent Cloud, twilio Functions, ZEIT

Installable

OpenWhisk, AppScale, DISPATCH, fission, fn, GALACTIC FOG, Knative, Kubeless, Kyma, LunchBadger, nuclio, OPENFAAS, PipelineAI, riff, 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

Serverless in CNCF

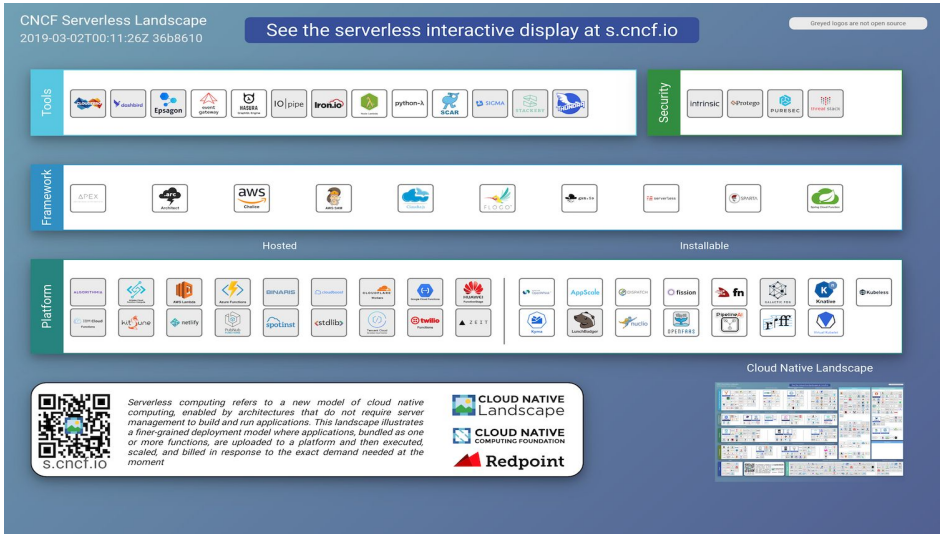
Decomposing Serverless

- Serverless Working Group published an influential whitepaper
- Attributes that developers love about closed serverless platforms (which already run on containers):
    - Infinite scalability
    - Microbilling
    - Easy app updates
    - Event-driven architectures
    - Zero server ops

- **Serverless Fosters a Culture of Autonomy**

Serverless Landscape

The Serverless Landscape s.cncf.io tracks all projects and products in the space



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How to Get Involved

- Participate in the **Serverless Working Group**
- **Start building** serverless apps and functions
- Tell the world what projects you use so we can all **learn from each other**
- **Update the CNCF landscape** anytime, all the time!

github.com/cncf/wg-serverless

Thank you!

This presentation is available at: https://github.com/cncf/presentations

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