

23-05-2019

Ring video doorbell meets Azure serverless

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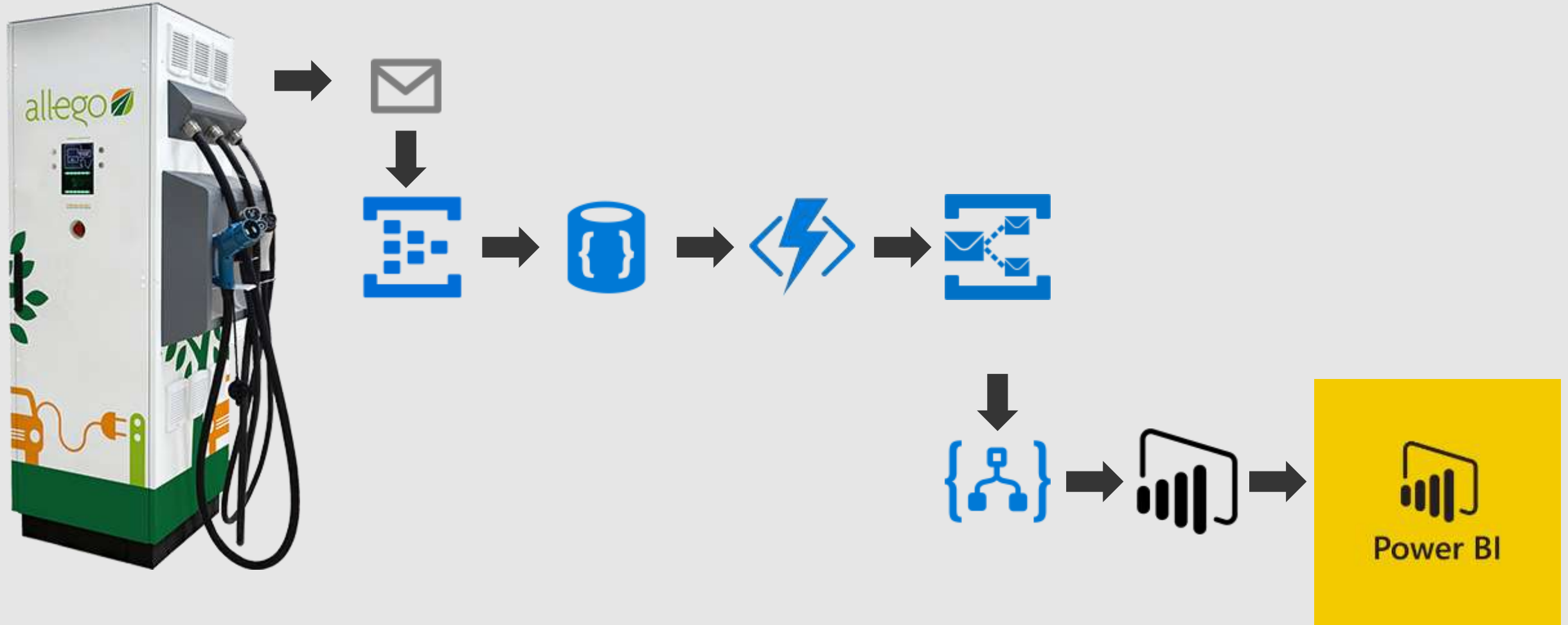


A vibrant underwater scene featuring a diver in a black wetsuit and yellow diving mask, swimming towards the camera. The diver is surrounded by numerous small, bright orange fish. The background is filled with diverse coral reefs, including branching and brain corals, in shades of orange, pink, and blue. The water is clear and blue.

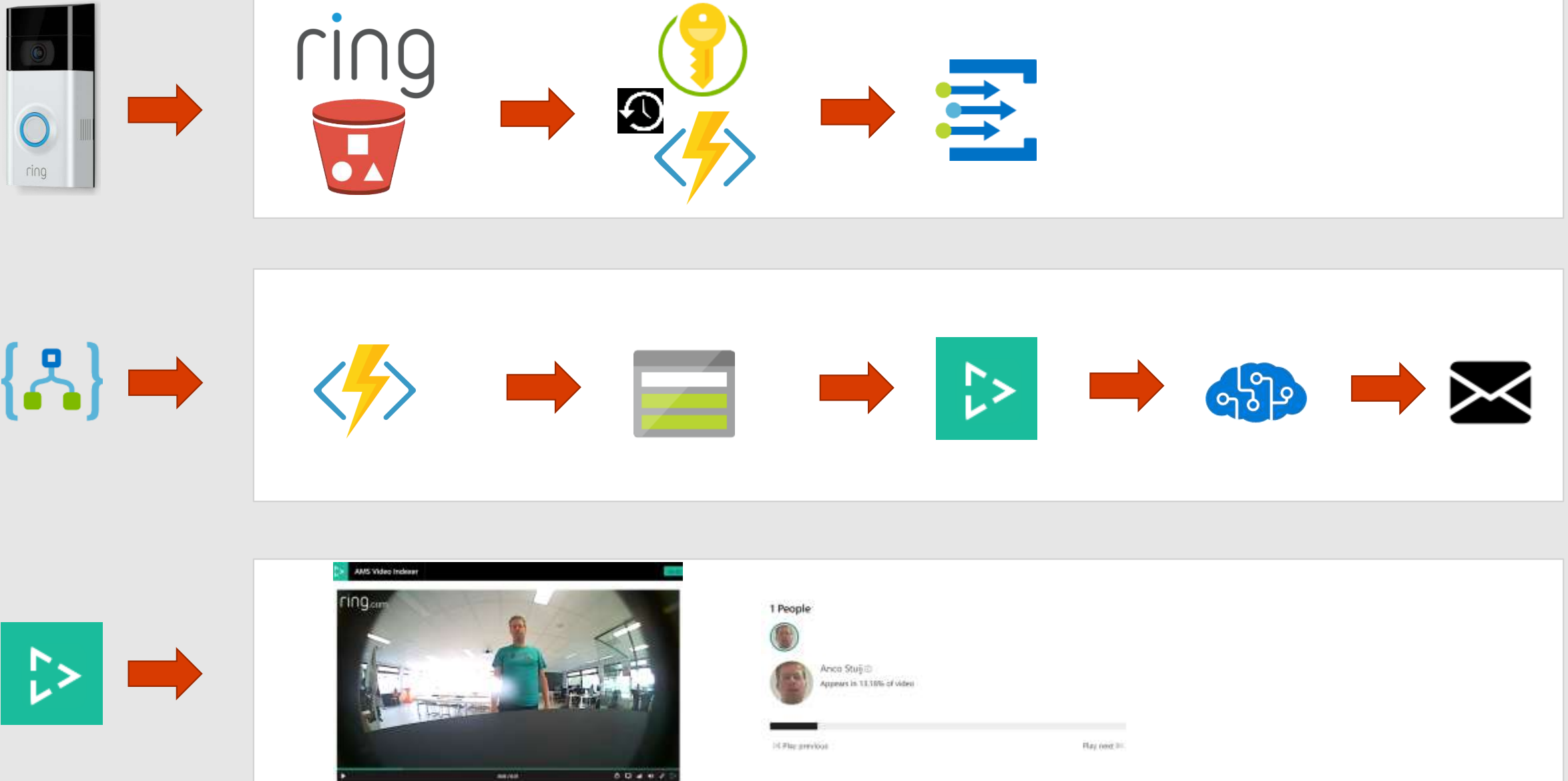
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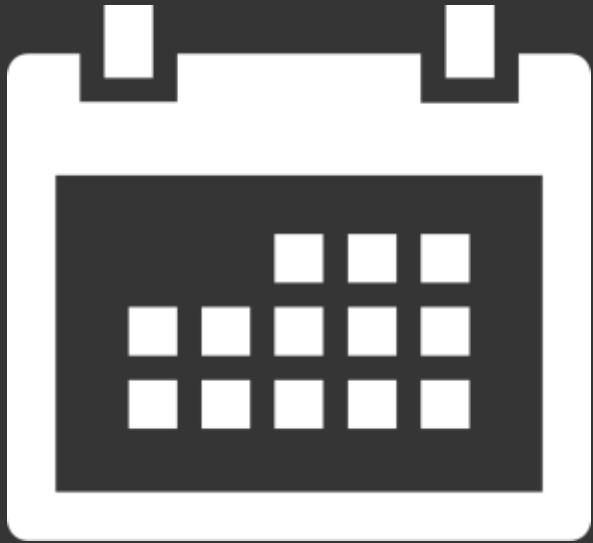
My first Azure serverless experience



Face recognition flow



Agenda



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Ring DEMO

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Drinks & Networking

Ring video doorbell history



Ring versus Nest



amazon

VS



Google

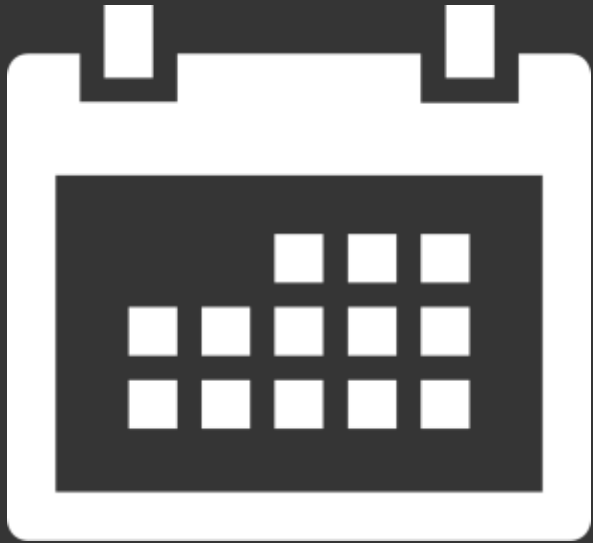
Ring video doorbell



ring



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So what the hell is Serverless? 1/6



So what the hell is Serverless? 2/6



Serverless is a cloud computing execution model where the cloud provider dynamically manages the allocation and provisioning of servers.

Source: Wikipedia

So what the hell is Serverless? 3/6



Serverless computing, is a cloud-based computing model where you only need to worry about code. No servers. No operating systems. Just code!

Source: Paul Harrison (developer)

So what the hell is Serverless? 4/6



CLOUD NATIVE
COMPUTING FOUNDATION

Serverless computing refers to the concept of building and running applications that do not require server management.

Source: CNCF (Cloud Native Computing Foundation)

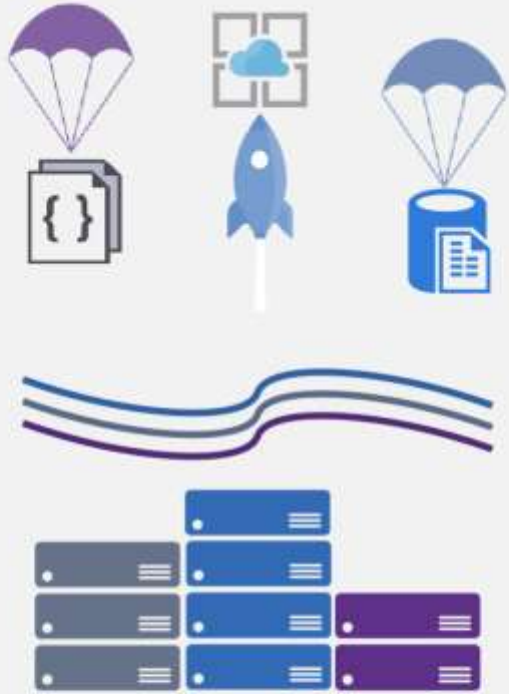
So what the hell is Serverless? 5/6



A serverless solution is one that costs you nothing to run if nobody is using it (excluding data storage costs).

Source: Paul Johnston (former AWS Serverless developer advocate)

So what the hell is Serverless? 6/6



Servers are
fully-abstracted



Scaling is event-driven
not resource-driven



Pay only
for what you use



Serverless to the Max: Doing Big Things for Small Dollars with Cloudflare Workers and Azure Functions

Source: Troy Hunt (founder Have I been pwned?)



Azure serverless



Azure Functions

Run custom code on demand and at scale in the cloud. The runtime is completely open source and can run everywhere.



Logic Apps

Workflow orchestration. Specify the process steps how to run your serverless application.



Event Grid

Fully managed event routing service from Azure services or from your own apps.



Cognitive Services

Add intelligent features such as vision face and speech recognition into your app.



Key Vault

Secure key management, use to encrypt keys and small secrets like passwords.



Event Hubs

Fully managed, real-time data ingestion service. Stream millions of events per second from any source.



Cosmos DB

A globally distributed, multi-model database service that supports document, key-value, wide-column, and graph databases.



Azure Storage

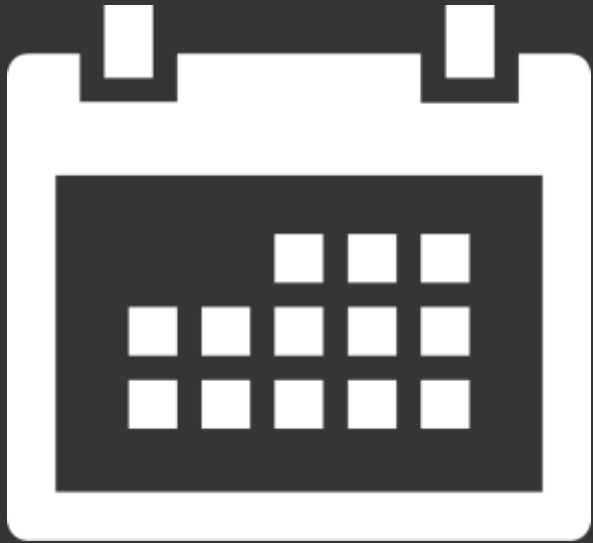
Provides durable, highly available, and massively scalable cloud storage.

Serverless offerings



Solution	Azure	AWS	GCP
Serverless Compute	Functions	Lambda	Cloud Functions
Serverless Storage	Storage	S3	Cloud Storage
Serverless App environment	App Service		App Engine
Serverless Containers	ACI	ECS Fargate	Container Engine
Serverless Kubernetes	AKS	EKS Fargate	Kubernetes Engine
Serverless database	Cosmos DB	Dynamo DB	Cloud Firestore
Serverless messaging	Event Grid	SQS / SNS	Cloud Pub/Sub
Serverless workflow	Logic Apps	Step Functions	
Serverless intelligence	Cognitive Services	Rekognition	Cloud Vision

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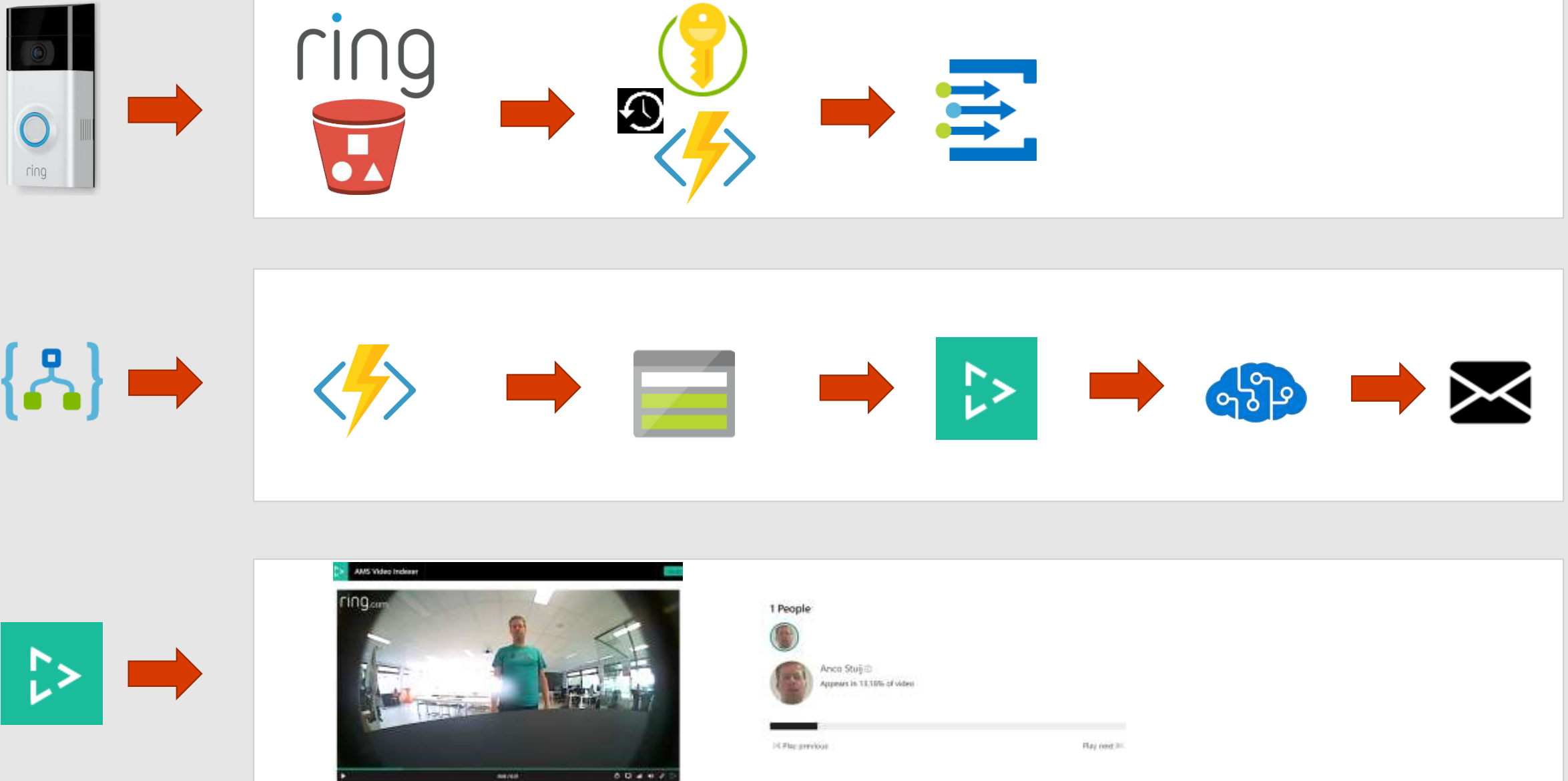
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Wrap-up

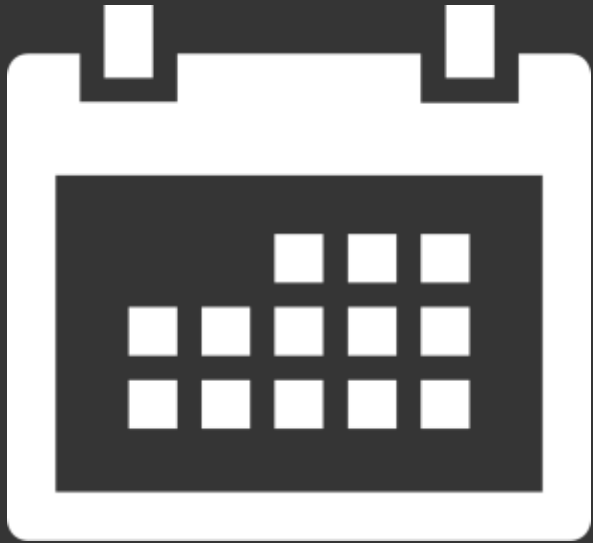
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Thanks to these guys



Jeff Hollan (PM Azure Functions @Microsoft)

For his Serverless Doorbell blog and sharing his code on GitHub.



Dav Glass (Node.js architect @Oath)

For reverse engineering the Ring API and sharing his code on GitHub.



Robin Smits (.NET & Python developer @Rubicon)

For coding and helping me out with the preparation of this session.

Doorbot API



@davglass



Replying to @davglass @loTnerd @ring
is there a working API nowadays? Thanks.

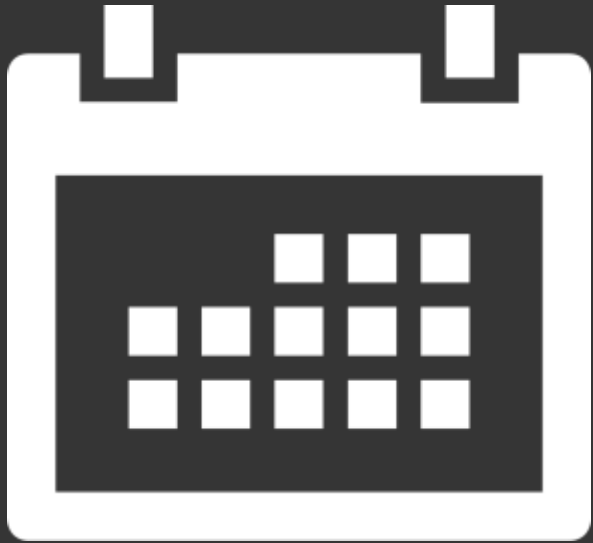
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DEMO

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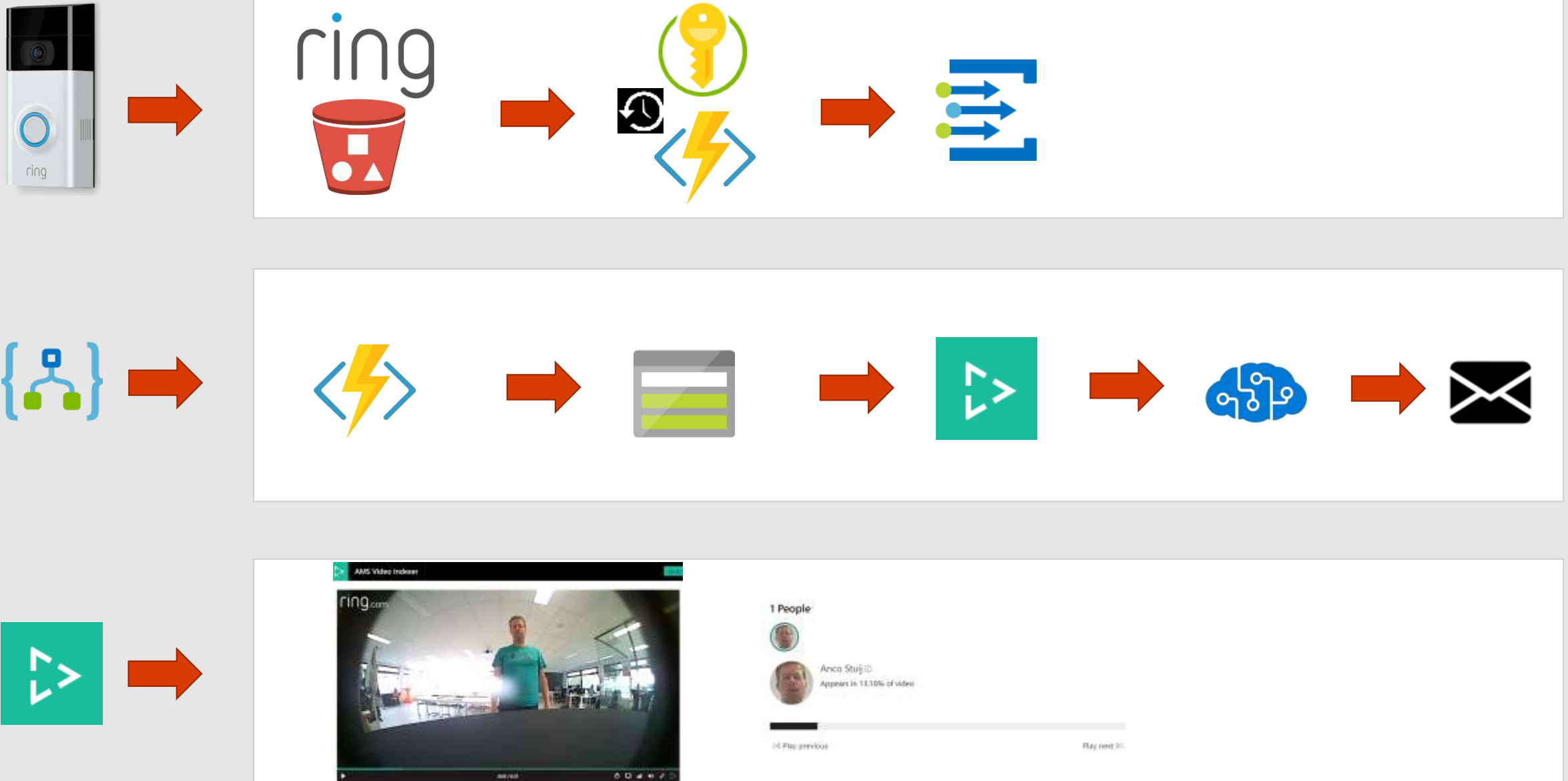
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Wrap-up

- [CNCF Serverless Whitepaper](#)
- [Serverless to the Max: Doing Big Things for Small Dollars with Cloudflare Workers and Azure Functions](#)
- [Serverless Doorbell - Azure Functions and Ring.com](#)
- [Ring.com Doorbell API](#)

The background image is a photograph of a server room. It shows multiple rows of server racks filled with equipment. In the center background, a person is visible, leaning over a desk or workbench. The room has a high ceiling with fluorescent lights and a tiled floor.

Serverless is simplicity, but not necessarily simpler

Source: Paul Johnston (former AWS Serverless developer advocate)

Remember, there are NO servers!

Source: Jeff Hollan (Microsoft PM Azure Functions)

Thank you!

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