Deploying enterprise application in Server based Architecture versus Serverless Architecture

Avinash Chandra, Senior Software Developer, IBM; twitter @softwarecoder
Gautam K Bhat, STSM, Associate Director-Technology, IBM; twitter @bhatgau
Muniyandi Perumal, GTS Development Lead, IBM; twitter @pmuniyandi
Agenda

• Serverless Architecture
  – Why Enterprise Applications need Serverless?

• Use Cases for Serverless Architecture
  – Industry specific Use Cases

• Serverless in Action
  – Working demo

• When Not to adopt Serverless Architecture?
  – No one fit solution for all
WHY SERVERLESS ARCHITECTURE?
Does “Serverless” mean “No Server”?
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Why Serverless? – Event Driven

- **Service on onboarded**
- **UPDATE DB**
- **Service DB**
- **REST API**
- **Producer**
  - `publish(msg)`
  - **Fanout Exchange**
  - **queue**
  - **subscribe**
- **Messaging infrastructure**
- **Console Consumer**
- **Web Application**
- **Update using REST API**

**Event Source**

- **Triggers (Publisher)**
- **Rule (Topic)**
- **Actions (Subscriber)**

**Code resides here**
How to write Serverless code?

Event Source
Triggers (Publisher)
Rule (Topic)
Actions (Subscriber)

Code resides here
Why Serverless?

- Fewer Software
- Self contained & Hardware
- Application product components to manage
- Speed of development
USE CASES
Where do you apply Serverless Arch?

• **Mobile Backend Development**
  • Serverless could help developers better decouple front and backend development by helping enterprises create serverless microservices with API backends

• **Data Processing**
  • Image processes on serverless architecture handles key spikes in need rather than maintain unnecessary compute resources the rest of the time

• **Insurance company for Cognitive Processing**
  • Insurance company using drones to take images of properties and then using cognitive processing in a serverless environment to identify property damages and speed up insurance payment calculations or to carry out risk assessments.

• **Real Time Streaming**
  • System needs to react to streaming real-time data feeds; Integration with Kafka and Bluemix where data posted in Kafka can immediately start being analyzed. Financial use cases are one of the key pure streaming analytics serverless examples
SERVERLESS IN ACTION
Where do you apply Serverless Arch?

1. DOCKER
2. DOCKER
3. DOCKER
4. IBM CLOUD FUNCTIONS
5. IBM CLOUD FUNCTIONS
6. USER

TRANSACTION GENERATOR

ACCOUNT SUMMARY

ACCOUNT DATABASE

COMPUTE INTEREST

NOTIFICATION

KUBERNETES
CODE PATTERN
Serverless Architecture development using Code Pattern

- API Connect
WHEN NOT TO ADOPT SERVERLESS
Serverless is Great but Greatness does not apply everywhere
Download Code

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https://bluemix.net

Stay Connected and continue coding!

Code & instructions
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https://github.com/IBM
https://github.com/IBM-Cloud
https://ibm-cloud.github.io/#!/ 
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