

# Cloud Functions

Memilavi  
[www.memilavi.com](http://www.memilavi.com)



# Cloud Functions

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- Functions in the cloud
- Serverless environment for running simple, single purpose functions
- Respond to events
- Supports many programming languages
- Cost effective
- SLA: 99.95%

# Serverless

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- Cloud resource that is completely managed by the cloud
- Users do not need to think about:
  - VMs
  - CPU
  - Memory
  - etc.
- It just works (and autoscales 😊)

# Serverless

Remember:



# Supported Programming Languages

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- Node.js
- Python
- Go
- Java
- Ruby
- PHP
- .NET

# Cloud Functions Versions

v1

- Up to 8GB RAM and 2vCPU
- 1 concurrent request per instance
- No traffic splitting support
- Supports events triggered from 7 sources

v2

- Up to 16GB RAM and 4vCPU
- 1000 concurrent request per instance
- Traffic splitting support
- Supports all events triggered by Eventarc

*Recommended!*

# Cloud Functions Cold Start

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- Functions run on instances
  - Provide the actual vCPU and RAM
- Instances are created:
  - When a new function deploys
  - As part of scaling
  - After an instance crash

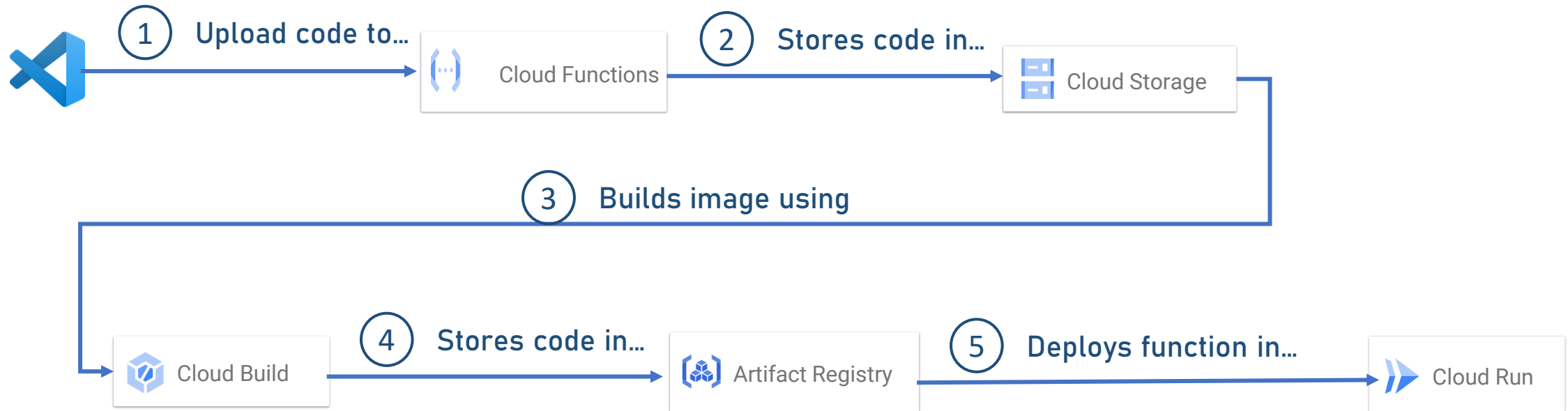
# Cloud Functions Cold Start

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- Unused instances are shut down
- Starting a new instance can take time
- This is called Cold Start
- To avoid cold start:
  - Set minimum number of active instances
  - Make sure your code catches exceptions





# Cloud Functions Build Process



\* Process for Cloud Functions v2. In v1 there are some minor changes

# Cloud Functions Pricing

- Based on Cloud Run pricing

Cloud Functions	
 	
Region: Frankfurt	
Invocations: 500,000	USD 0.00
RAM (GiB-seconds): 31,250 per month	USD 0.00
CPU (GHz-seconds): 50,000 per month	USD 0.00
Minimum number of instances: 1	USD 1.92
<b>USD 1.92</b>	

Architecture: ReadIt Cloud System

