AWS Lambda & API Gateway

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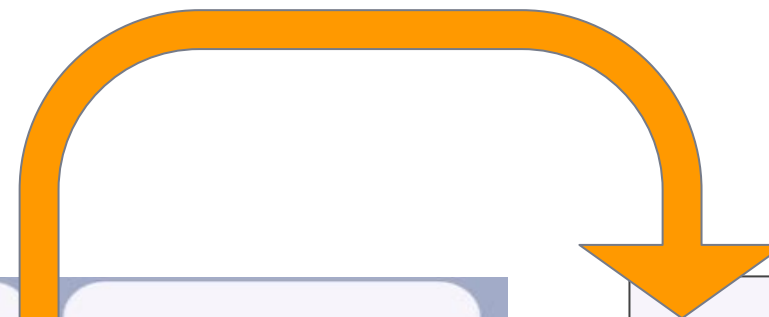
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1 Introduction to Serverless

Introduction to Serverless

What is Serverless?

Introduction to Serverless Infrastructure
What is Serverless Infrastructure and Why?

- Run applications **without servers.**

- **Eliminate infrastructure management**
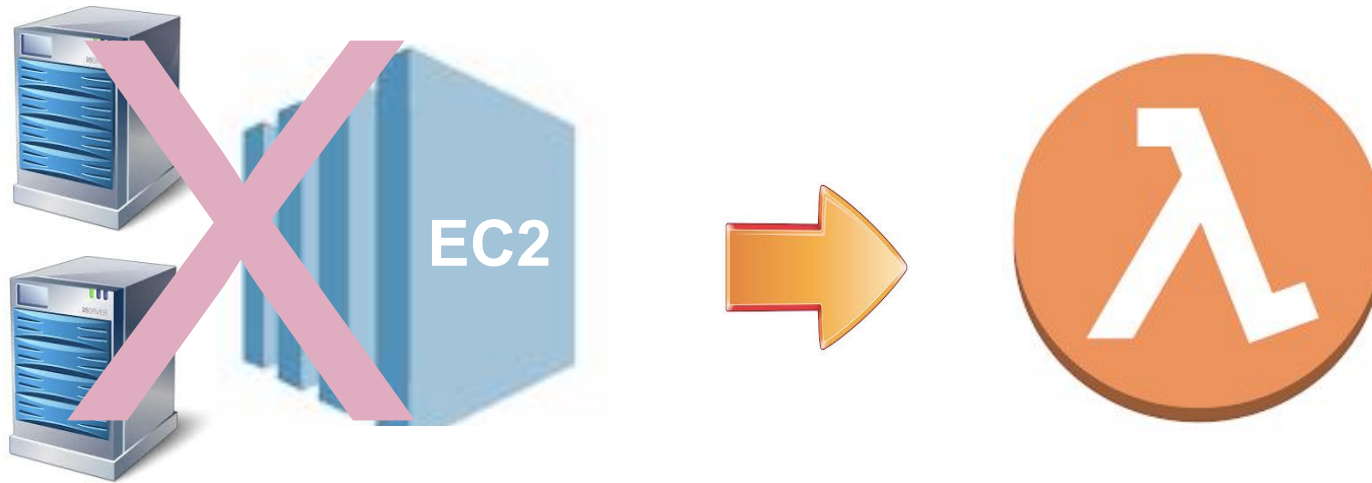
- Cost effective

2 AWS Lambda

AWS Lambda
What is Lambda?

- AWS Lambda is the first FaaS service among the global public cloud products.

- It is a serverless compute service that runs your code in response to programmed events.

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AWS Lambda

What is Lambda?

- AWS Lambda lets you run code without provisioning or managing servers

- Instead of launching an EC2 instance to run your code on it, you can just deploy your code in Lambda services and you can get the same result.

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AWS Lambda
How Lambda function works?

1   **2**   **3**   **4**

Photograph is taken → **Amazon S3** Photo is uploaded to an S3 Bucket → Lambda is triggered → **AWS Lambda** Lambda runs "Image Resizing Code" → Photo is resized into web, mobile, and tablet sizes

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AWS Lambda

Exactly pay as you go

EC2

Pay as you go

You will be charged as long as your instance is running even if your code runs or not.

You will be only charged when the functions that you deployed are run.

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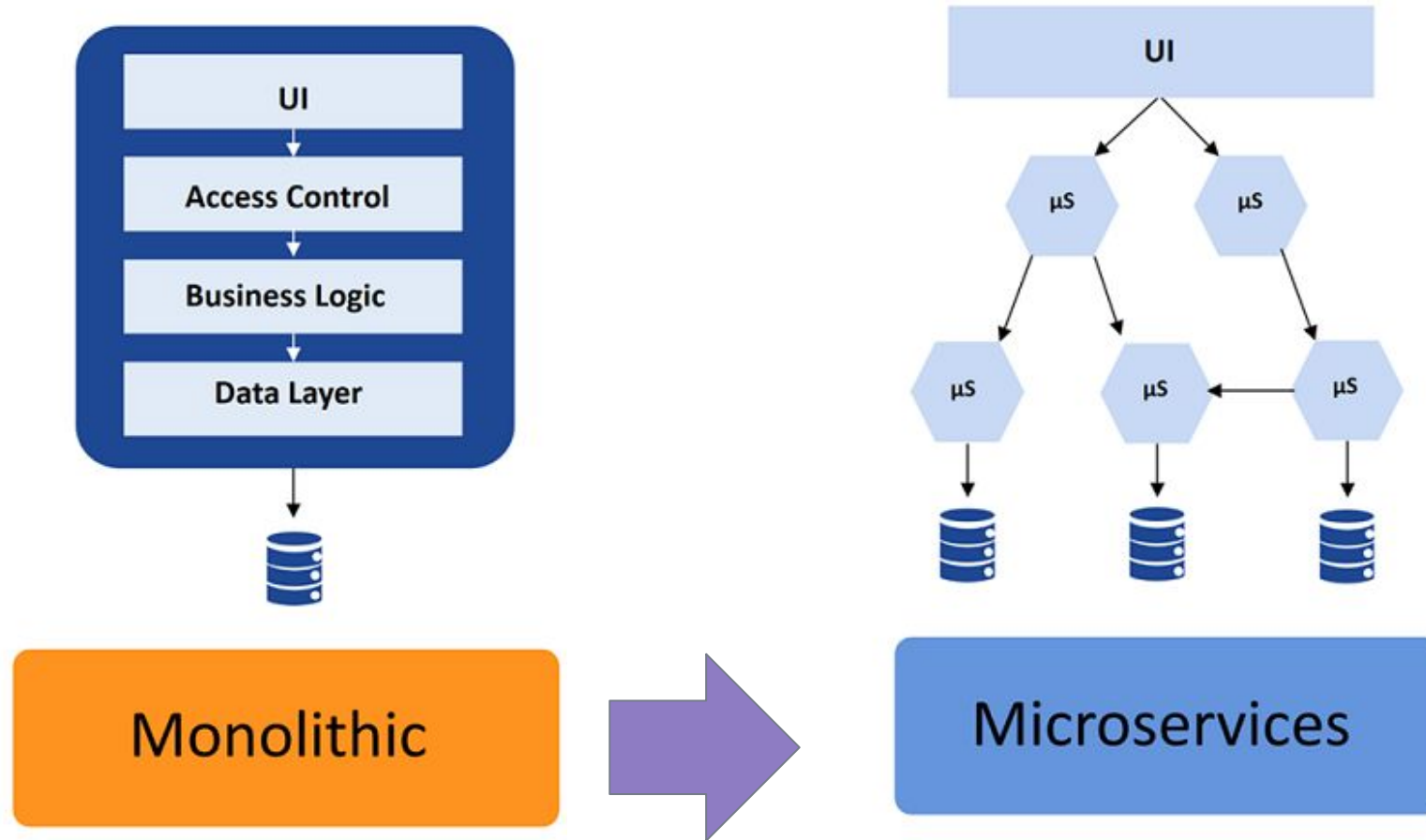WAY TO REINVENT YOURSELF

AWS Lambda

Lambda codes

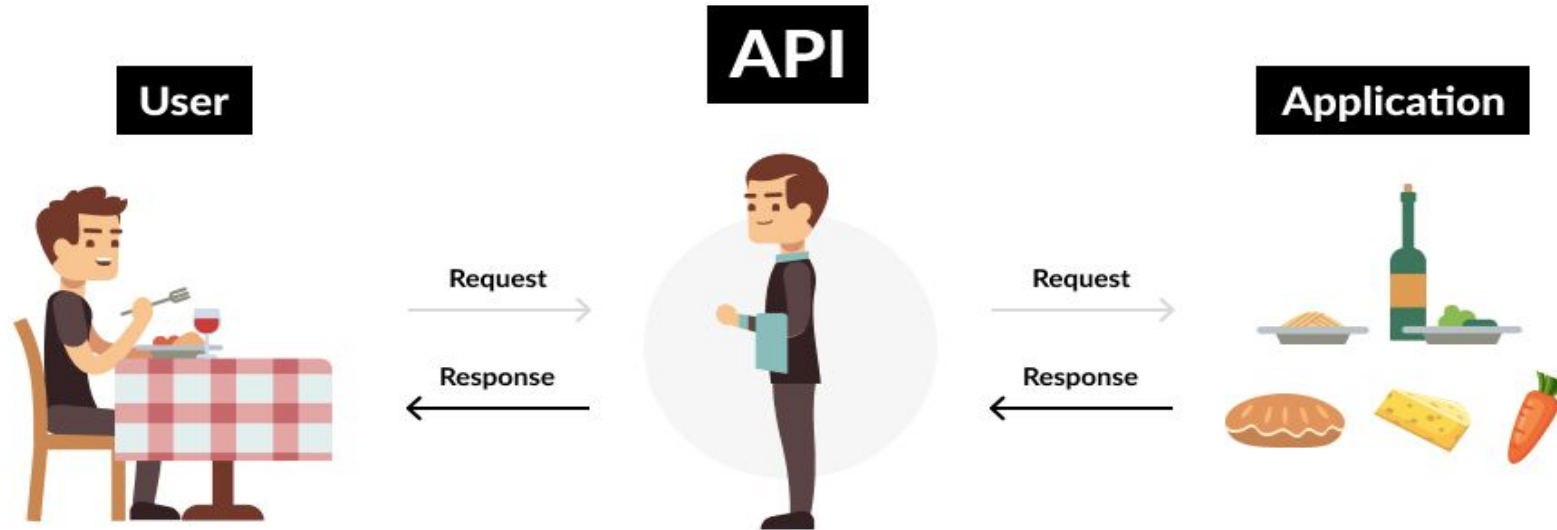Lambda supports Java, Go, PowerShell, Node.js, C#, Python, and Ruby code.

2 API Gateway

API Gateway

API Gateway

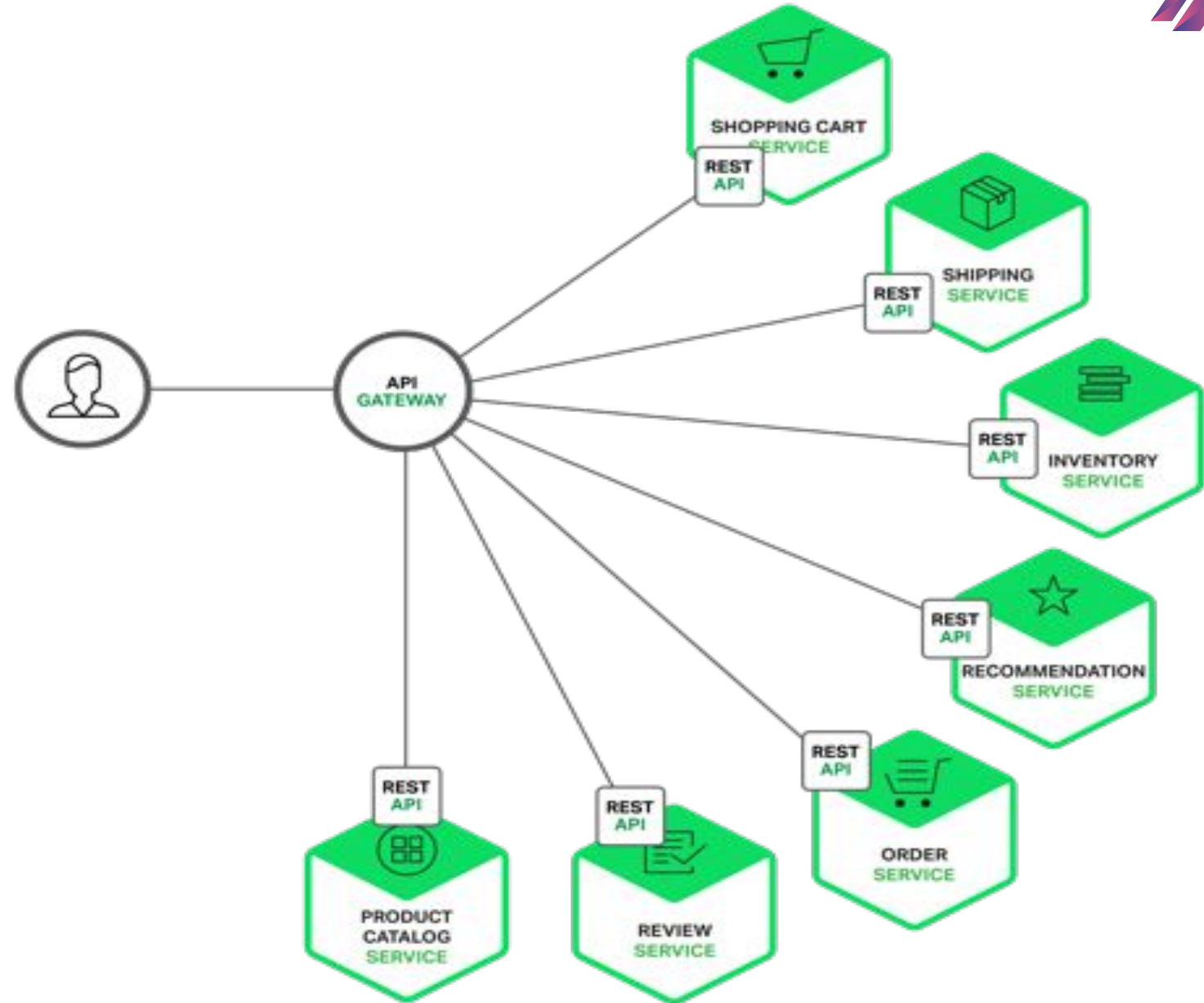API stands for Application Program Interface. Basically, the API defines how device components can communicate with each other.

API Gateway

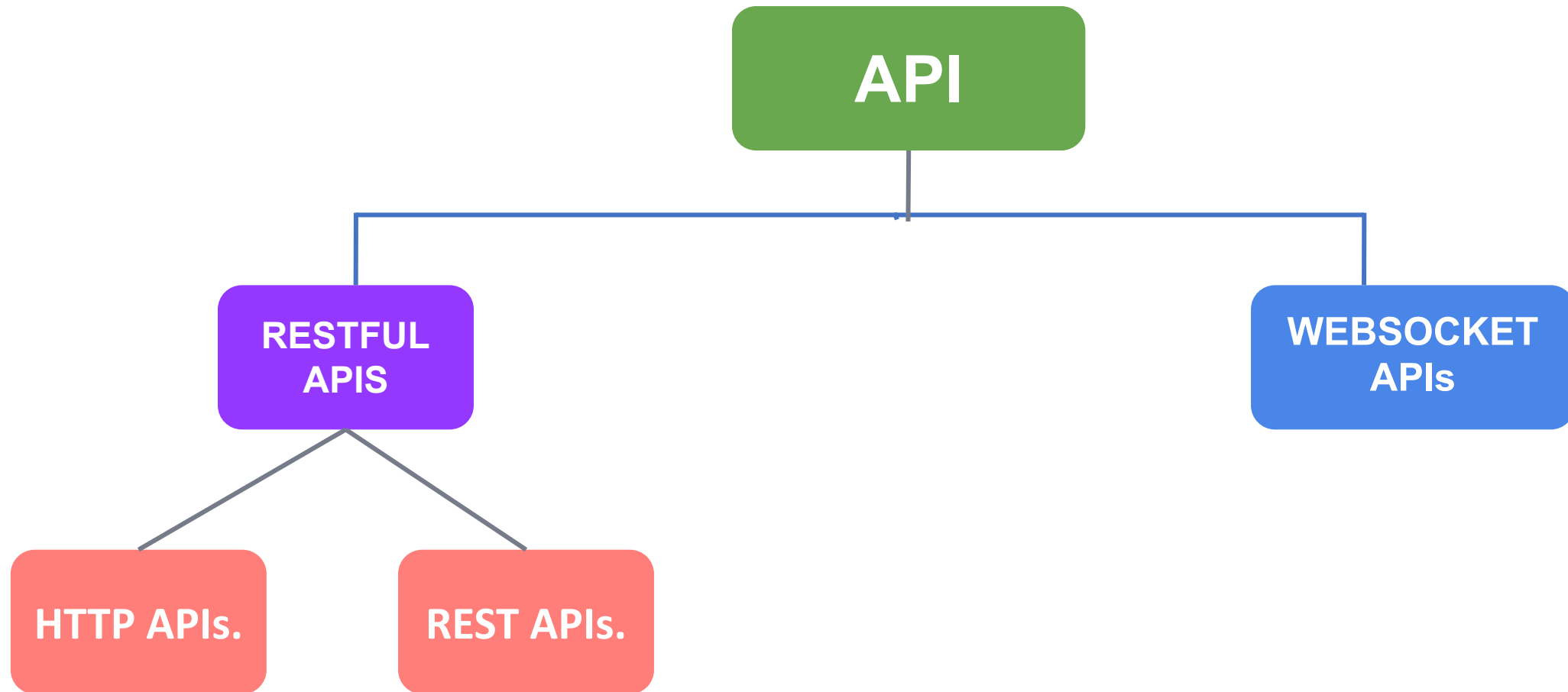## What is API Gateway?

The API Gateway is responsible for routing, design, and interface transfer requests.

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API Gateway
API Gateway in AWS

API

RESTFUL APIS

WEBSOCKET APIs

HTTP APIs.

REST APIs.

API Gateway

What is REST?

- REST (Representational State Transfer) is a service structure that enables easy and fast communication between client and server.

- REST runs on HTTP.

- JSON or XML type

API Gateway

What is RESTful ?

- Web services that use REST architecture are called RESTful services.

- GET,
- POST,
- PUT,
- DELETE

RESTful API
DELETE POST PUT GET

AWS Lambda

Lambda and API Gateway

- Alexa
- **API Gateway**
- CloudTrail
- CloudWatch Events
- CloudWatch Logs
- CloudFormation
- CloudFront (Lambda@Edge)
- CodeCommit
- CodePipeline
- Cognito
- Config
- DynamoDB
- EC2
- ElastiCache
- Elastic Load Balancing

- EFS
- IoT
- IoT Events
- Kinesis Firehose
- Kinesis Streams
- Lex
- RDS
- S3
- S3 Batch
- SES
- SNS
- SQS
- Step Functions
- X-Ray

Although you can trigger Lambda function in different way, the most common trigger of the Lambda function is API Gateway

Thanks to Lambda and API Gateway combination you can create fully automated system.

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Let's get our hands dirty!

THANKS!

Any questions?