

AWS CodeStar experiments

<https://aws.amazon.com/codestar>

Step 1: select a project template from a very small catalog (35 templates only)

[illegible]

Note: “asdf35” is the project name I chose (not a randomly generated name).

Step 2: run the whole wizard (git repo setup)




Project details

Project name

Project ID ⓘ [Edit](#)

Which repository do you want to use?
AWS CodeStar will store the project's source code with the service you choose here.



AWS CodeCommit
Highly available Git source control from AWS.
Includes encryption, IAM integration, and more.



GitHub
Creates a GitHub source repository for this project. Requires an existing GitHub account.

Repository name

Step 2: run the whole wizard (deployment: EC2 vs Lambda vs Beanstalk)

Review project details

[Edit Amazon EC2 configuration](#)

AWS CodeStar includes all of the tools and services you need for a development project.
This project includes an AWS CodePipeline connected with the following tools:

Source

Build

Test

Deploy

Monitoring

AWS CodeCommit

AWS CodeBuild

AWS Elastic Beanstalk

Amazon CloudWatch

☒ AWS CodeStar would like permission to administer AWS resources on your behalf. [Learn more](#)

Previous

Create Project

Amazon EC2 Configuration

Instance type

t2.micro

VPC

vpc-c0810ea4 (Default)

Subnet


subnet-8fbc14d7 (eu-west-1c)

Cancel


Save

Step 2: run the whole wizard (IDE integration)


Pick how you want to edit your code




AWS Cloud9
Edit your AWS CodeStar project code with a cloud-based IDE that includes a command line interface. [More info](#)



Command line tools
Edit AWS CodeStar project code by connecting directly to your project's Git source repository.



Eclipse
Configure the AWS Toolkit for Eclipse to edit your AWS CodeStar project code in Eclipse.



Visual Studio
Configure the AWS Toolkit for Visual Studio to edit your CodeStar project code in Microsoft Visual Studio 2015 and later.

You can switch tools at **any time**.

Skip

See instructions

Clone repository URL

HTTPS ▾

https://git-codecommit.eu-west-1.amazonaws.com/v1/repos/asdf35

Copy

Credential details

Step 2: run the whole wizard (IAM, users, permissions,...)

i Important: You must connect to your projects repository before you can start working on project code.

Connect tools

Set this up so you can commit code and work on your application

Connect tools

Project Details

Name	Stack name	ARN
asdf35	awscodestar-asdf35	arn:aws:codestar:eu-west-1:513518152034:project/asdf35

Project Resources

Type	Name	ARN
AWS CloudFormation	stack/awscodestar-asdf35/c262b9a0-c02...	arn:aws:cloudformation:eu-west-1:513518152034:stack/awscodestar-asdf35/c262b9a0-c02e-11ea-ae6a-02dbc193e...
AWS CloudFormation	stack/awscodestar-asdf35-infrastructure/5...	arn:aws:cloudformation:eu-west-1:513518152034:stack/awscodestar-asdf35-infrastructure/520ea9b0-c02f-11ea-8b...
AWS CodeBuild	project/asdf35	arn:aws:codebuild:eu-west-1:513518152034:project/asdf35
AWS CodeCommit	asdf35	arn:aws:codecommit:eu-west-1:513518152034:asdf35
AWS CodePipeline	asdf35-Pipeline	arn:aws:codepipeline:eu-west-1:513518152034:asdf35-Pipeline
AWS Elastic Beanstalk	application/asdf35app	arn:aws:elasticbeanstalk:eu-west-1:513518152034:application/asdf35app
AWS IAM	role/CodeStarWorker-asdf35-EB	arn:aws:iam::513518152034:role/CodeStarWorker-asdf35-EB
AWS IAM	role/CodeStarWorker-asdf35-EBService	arn:aws:iam::513518152034:role/CodeStarWorker-asdf35-EBService
AWS IAM	role/CodeStarWorker-asdf35-ToolChain	arn:aws:iam::513518152034:role/CodeStarWorker-asdf35-ToolChain
AWS IAM	role/CodeStarWorker-asdf35-CloudFormat...	arn:aws:iam::513518152034:role/CodeStarWorker-asdf35-CloudFormation
AWS IAM	policy/CodeStar_asdf35_PermissionsBoun...	arn:aws:iam::513518152034:policy/CodeStar_asdf35_PermissionsBoundary
Amazon S3	aws-codestar-eu-west-1-513518152034-a...	arn:aws:s3:::aws-codestar-eu-west-1-513518152034-asdf35-pipe
Amazon S3	elasticbeanstalk-eu-west-1-51351815203...	arn:aws:s3:::elasticbeanstalk-eu-west-1-513518152034/resources/environments/e-seachfh7qq

What you get (1/3):
* bunch of AWS resources (S3 buckets, CodePipeline, CloudFormation, JIRA integration,...)

WHAT'S NEW IN 5.2.0

▼

▢ .ebextensions

↔

set-instance-credit-unlimited.config

↔

sshd.config

▼

▢ src

▼

▢ main/java/com/aws/codestar/projecttemplates

▼

▢ controller

🔥

HelloWorldController.java

🔥

Application.java

▼

▢ test/java/com/aws/codestar/projecttemplates/...

🔥

HelloWorldControllerTest.java

📖 README.md

📄

buildspec.yml

↔

pom.xml

📄

template-configuration.json

📄

template.yml

Other files used by
CodeStar or
CloudFormation

ignasi35 / codestar-experiments

<> Code

! Issues

🔗 Pull requests

🎮 Actions

📖 Wiki

🛡 Security

📈 Insights

⚙ Settings

buildspec.yml

Branch: master

codestar-experiments / buildspec.yml

🐙 AWS CodeCommit

Initial commit by AWS CodeCommit

Latest commit

👤 0 contributors

26 lines (25 sloc) | 1011 Bytes

1

version: 0.2

2

3

phases:

4

install:

5

runtime-versions:

6

java: openjdk8

7

commands:

8

Upgrade AWS CLI to the latest version

9

pip install --upgrade awscli

10

pre_build:

11

commands:

12

mvn clean compile test

13

build:

14

commands:

15

mvn war:exploded

16

post_build:

17

commands:

18

cp -r .ebextensions/ target/ROOT/

19

aws cloudformation package --template template.yml --s3-bucket \$S3_BUCKET --output-template-file template-export.yml

20

Do not remove this statement. This command is required for AWS CodeStar projects.

21

Update the AWS Partition, AWS Region, account ID and project ID in the project ARN on template-configuration.json file so AWS

22

sed -i.bak 's/\\$PARTITION\\$/'\${PARTITION}'/g;s/\\$AWS_REGION\\$/'\${AWS_REGION}'/g;s/\\$ACCOUNT_ID\\$/'\${ACCOUNT_ID}'/g;s/\\$PROJECT

23

artifacts:

24

files:

25

template-export.yml

26

template-configuration.json

Build definition

What you get (2/3):

- * skeleton project with extras for CodeBuild, AWS Elastic Beanstalk, ...

<https://github.com/ignasi35/codestar-experiments>

What you get (3/3):

- * the usual (cloudwatch, vpc, etc...)

Dashboard

IDE

Code

Build

Deploy

Pipeline

Team

Extensions

Project

AWS CodeStar ▸ asdf35

Team wiki tile

Edit this tile to save your own project links, code samples and notes to share with your team. You can use markdown to format your text.

Some other things to try in your project...

1. Access your application

2. Read "What do I do next?" in README.md in project source repository

3. Add team members

4. Set up issue tracking (under "Extensions")

5. Customize project dashboard

6. View AWS CodeStar documentation

7. Visit the AWS CodeStar forum

Commit history: asdf35 master

IM

Changed default name
Ignasi Marimon-Clos committed 5 hours ago

338f8b9

AC

Initial commit by AWS CodeCommit
AWS CodeCommit committed 5 hours ago

63a3804

Connect

AWS CodeCommit details

Application activity

CPUUtilization

Amazon CloudWatch

Amazon CloudWatch details

9

AWS Cloud9 environments

See my environments

Application endpoints

http://asdf35app.eba-nzcrmgi.eu-west-1.elasticbeanstalk.com

Continuous deployment

AWS CodePipeline

Release change

Source

2020-07-07, 11:12:48 a.m.
ApplicationSource CodeCommit
Succeeded

Commit history

Build

2020-07-07, 11:13:52 a.m.
CodeBuild CodeBuild
Succeeded

Deploy

2020-07-07, 11:14:37 a.m.
GenerateChangeSet CloudFormation
Succeeded

Deploy history

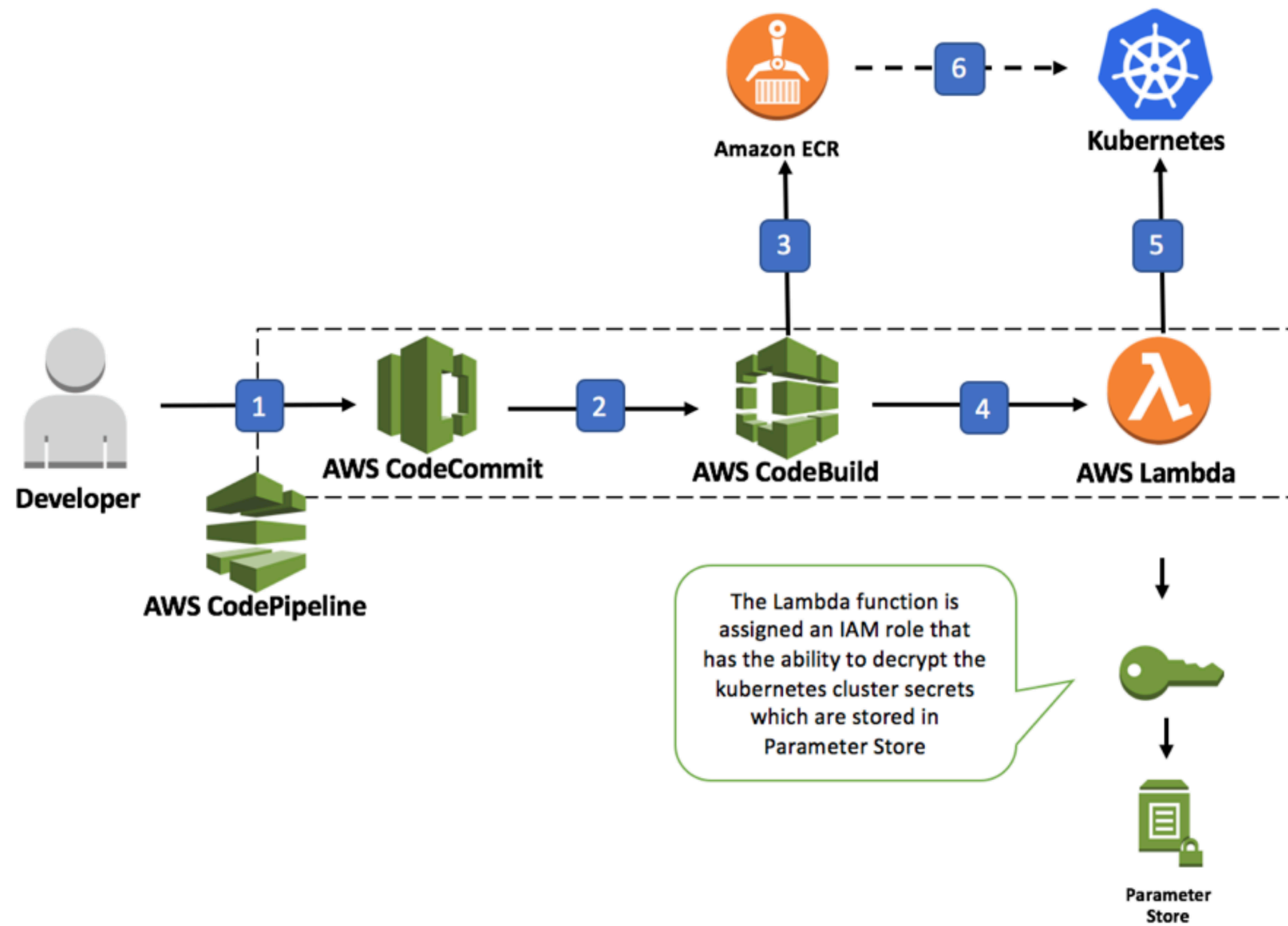
Pipeline history

AWS CodePipeline details

Post-publishing notes

After sharing the slides I also learnt:

- <https://aws.amazon.com/blogs/devops/continuous-deployment-to-kubernetes-using-aws-codepipeline-aws-codecommit-aws-codebuild-amazon-ecr-and-aws-lambda/> —> CI/CD on AWS deploying to EKS:
 - codebuild produces a container and pushes it to ECR
 - a lambda function triggers the deployment on EKS (which fetches the images from ECR)



- AWS Marketplace supports `Cloudformation` as `Delivery mechanism` which could be interesting to create keyspaces/secrets/mks/etc... for Akka Microservices on a single click.

https://aws.amazon.com/marketplace/search/results?page=1&filters=fulfillment_options&fulfillment_options=STACK&ref=header_nav_dm_stack

- EKS is a valid resource on Cloudformation (but creating an EKS cluster for each services is overkill). I think one CloudFormation that spins EKS and installs some Akka goodies (ingresses for gRPC, operator,...) would be enough.
- I mean, Amazon themselves have an EKS-optimized AMI in the marketplace:
 - https://aws.amazon.com/marketplace/pp/B07GRMYQR5?qid=1602066650055&sr=0-1&ref=srh_res_product_title

Prefer codegen over CloudFormation

- <https://aws.amazon.com/cdk/features/>
- <https://github.com/Sceptre/sceptre>

Comparing to GCP

- Build pipelines (CI *and* CD) is **Cloud-Build** (<https://cloud.google.com/cloud-build/docs/deploying-builds/deploy-gke>)
 - they also promote jenkins and tekton in GKE on their intros to DevOps (<https://cloud.google.com/devops/>)
- SCM (git) is **Cloud Source Repositories**
- Hmm, maybe **Spinnaker** is used for the deployment bit
- etc...

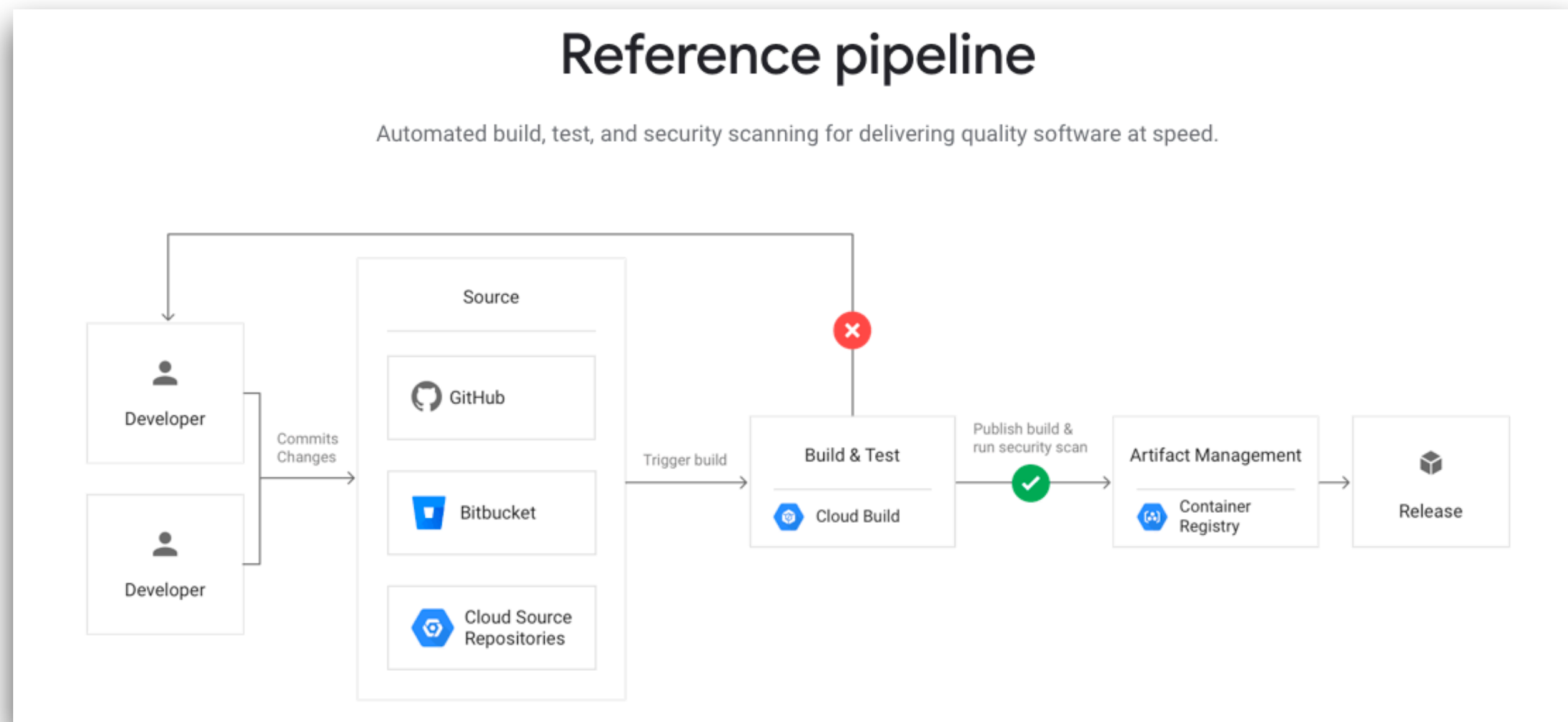


image: <https://cloud.google.com/solutions/continuous-integration>

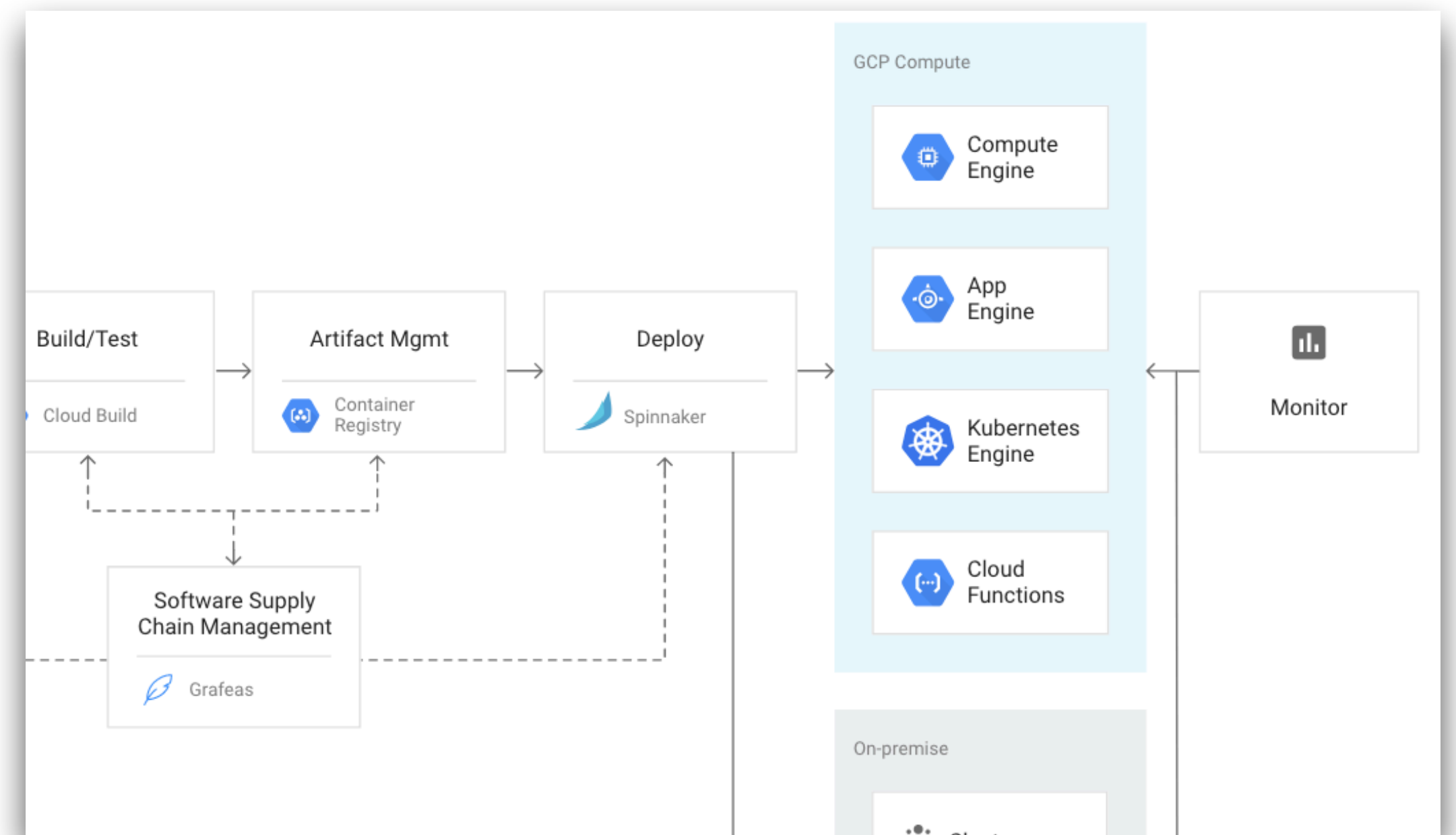


Image: <https://cloud.google.com/solutions/continuous-delivery>

Comparing to GCP

- Early on the Google docs for developers this appears:

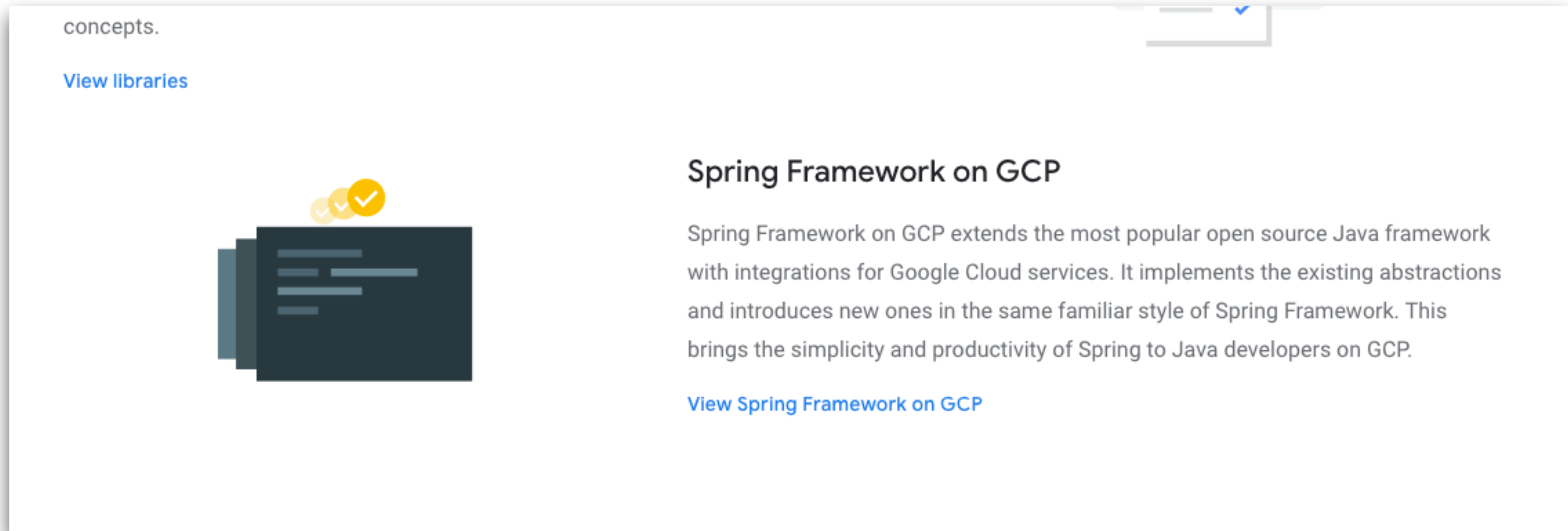


Image: <https://cloud.google.com/products/tools>

TODO

- <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/using-cfn-nested-stacks.html>
- <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/stacksets-concepts.html>
- <https://www.udemy.com/course/aws-cloudformation-step-by-step-beginner-to-intermediate>