

CI/CD Pipelines:

What? Why? How?

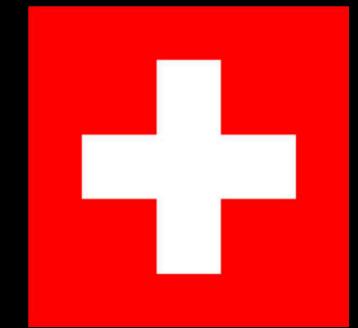


@ixchelruiz



JCrete® 2018

JCrete4Kids

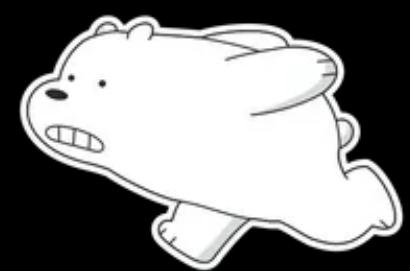


DevOps

Agile



Shift left



Devops Engineer average salary in Switzerland 2021

Find out what the average Devops Engineer salary is

Type in a job title:

Find salary**Salary rate****Annual**

Month

Biweekly

Weekly

Day

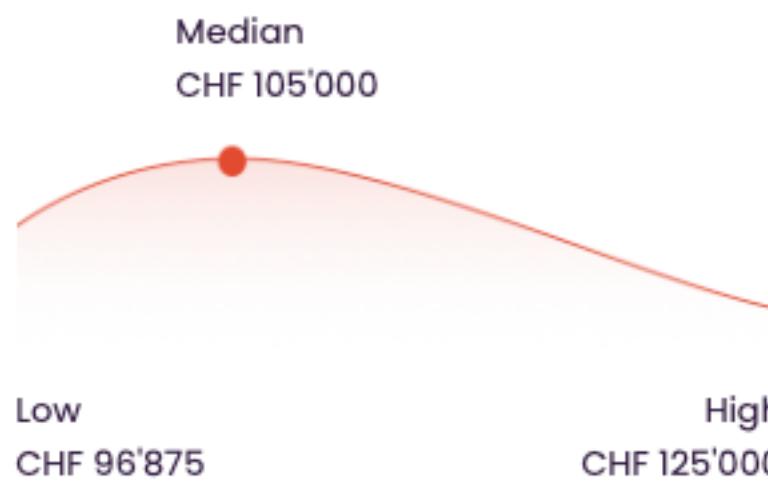
Hour

Devops engineer: Salary

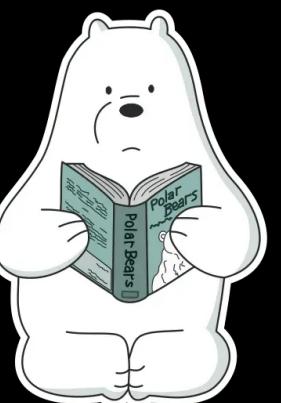
CHF 105'000 / Annual

Based on 162 salaries

The average **devops engineer** salary in Switzerland is CHF 105'000 per year or CHF 53.85 per hour. Entry-level positions start at CHF 96'875 per year, while most experienced workers make up to CHF 125'000 per year.



Definitions: CI / CD / CD

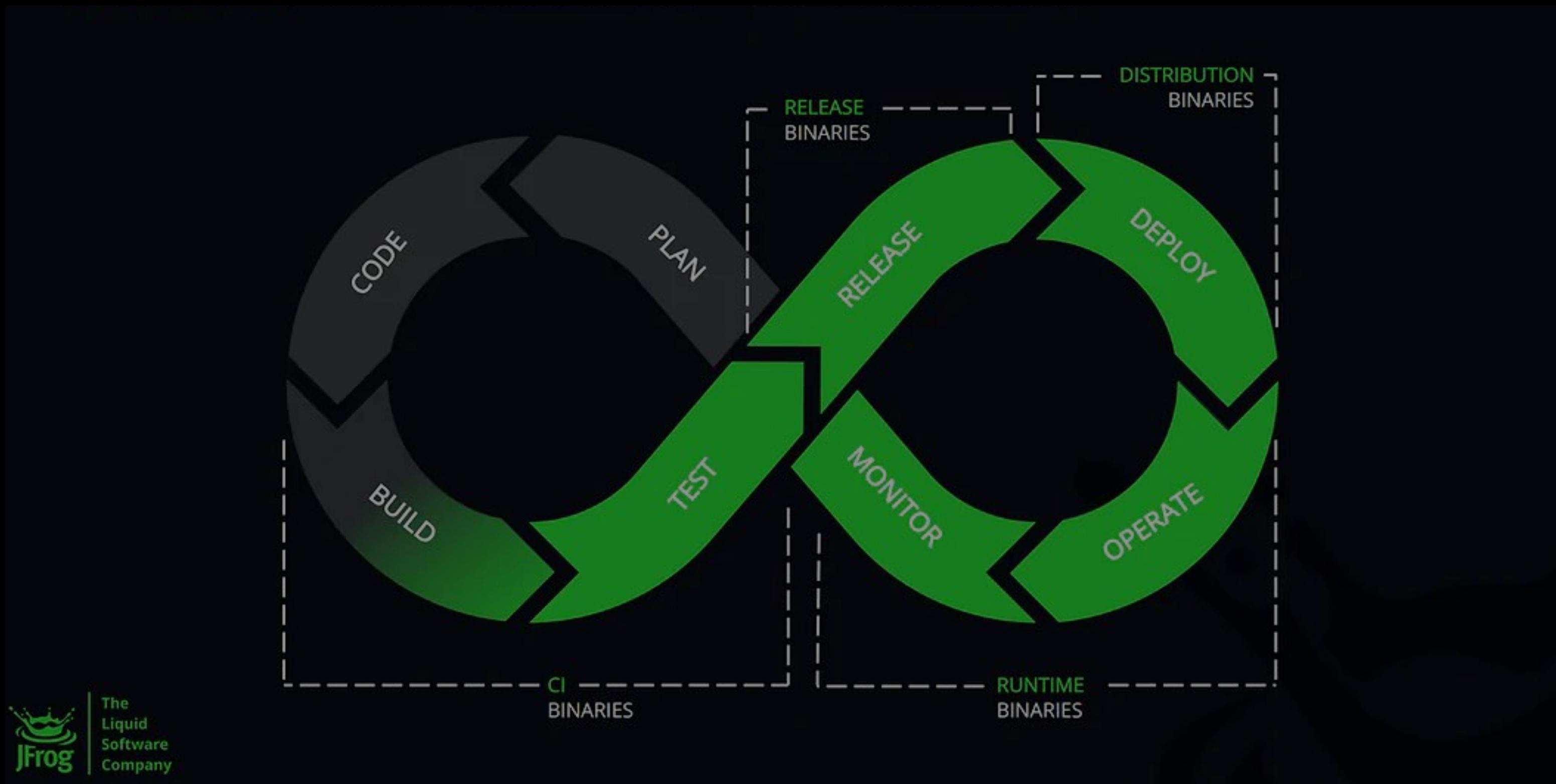


*DevOps is a set of practices, tools, and a cultural philosophy that **automate** and **integrate** the processes between software development and IT teams. increases an organization's ability to **deliver** applications and services at high velocity*

DevOps



Integration Delivery Deployment



DevOps

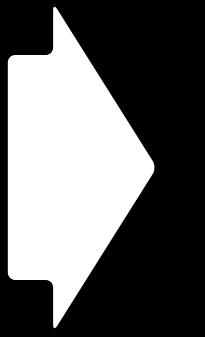


Continuous integration is a practice of **automating** the **integration** of code **changes** from multiple contributors into a single software project.

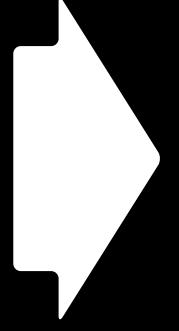
CI



Build



Test



Merge

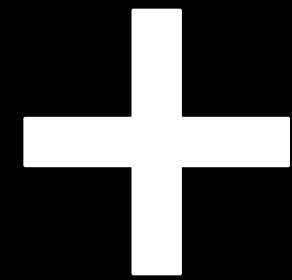


Continuous delivery is the next extension of continuous integration, **automates** the **packaging** & delivery of applications to selected infrastructure **environments** with minimal effort to deploy new code.

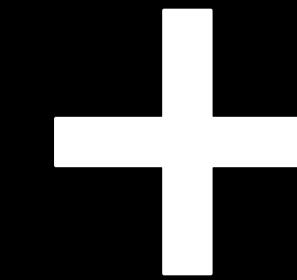
CD



Dependencies



Artifacts

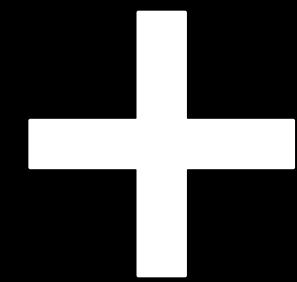


Custom Data

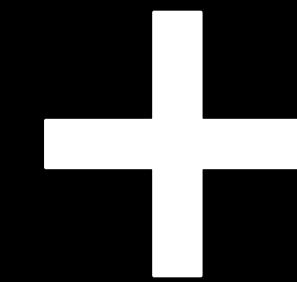




Dependencies

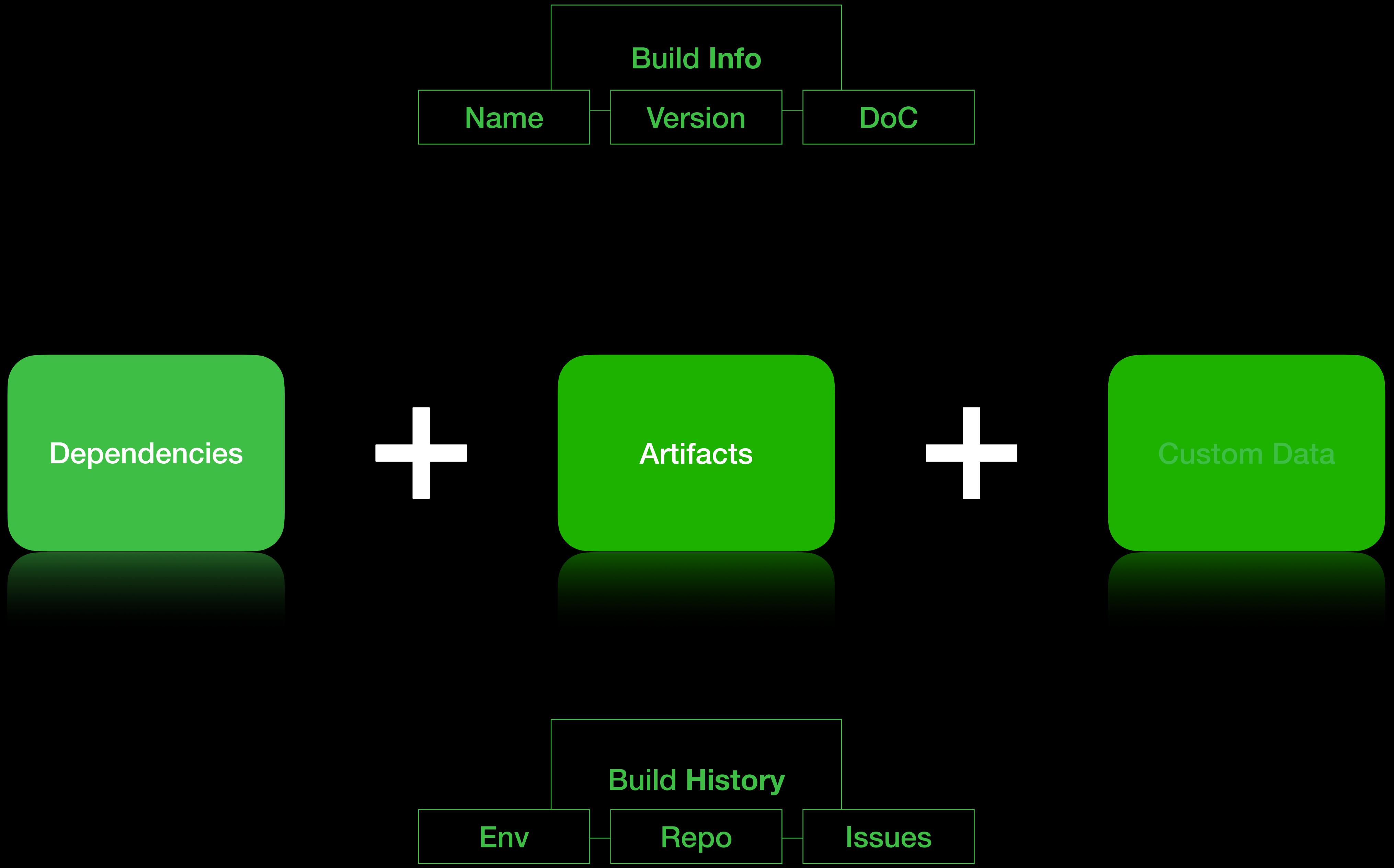


Artifacts



Custom Data





Continuous deployment is the **final phase** of the pipeline.
Is responsible for automatically launching and
distributing the software artifacts based on a codebase
that is always ready for deployment.

CD



*A CI/CD pipeline is a **series** of **steps** that must be performed in order to deliver a new version of software.*

Pipelines



Essential Components

DevOps Pipeline

- Source code management
- Continuous Integration servers
- Build automation
- Test automation
- Deployment



Common Sense

Right?



Tools



Github

Actions



Github Actions

Workflows

Events

Jobs

Steps

Actions

Runners



Screenshot of the GitHub repository page for `actions/starter-workflows`.

The repository is public and has 32 issues, 27 pull requests, and 969 commits.

The code tab is selected, showing a list of branches:

- main (selected)
- 19 branches
- 0 tags

Recent commits:

Author	Commit Message	Date
chenrui333	elixir: refresh dependencies (#1212)	2 days ago
.github	Secure workflows (#1) (#1072)	2 months ago
.vscode	Add script and workflow to sync the set of starter-workflow...	2 years ago
automation	Add a descriptive comment into stale.yml	2 months ago
ci	elixir: refresh dependencies (#1212)	2 days ago
code-scanning	Merge branch 'main' into adding-mobsf-to-codescanning	14 days ago
deployments	Revert "Added new templates for 3 clouds."	20 days ago
icons	Merge branch 'main' into adding-mobsf-to-codescanning	14 days ago
script	removing "deployment" templates from sync-ghes (#1127)	last month
.gitattributes	Include a .gitattributes	2 years ago
.gitignore	Move ghes-sync into subfolder	2 years ago
CODEOWNERS	Update CODEOWNERS	4 months ago

Repository statistics:

- Watch: 326
- Star: 5.3k
- Fork: 4.4k

About section:

- Accelerating new GitHub Actions workflows
- github.com/features/actions
- actions
- Readme
- View license
- Code of conduct

Releases section:

- No releases published

Packages section:

- No packages published

<https://github.com/actions/starter-workflows>



Marketplace / Search results

Types

Apps

Actions x

Categories

- API management
- Chat
- Code quality
- Code review
- Continuous integration
- Dependency management
- Deployment
- IDEs
- Learning
- Localization
- Mobile

Actions

An entirely new way to automate your development workflow.

10584 results filtered by Actions x

Actions

- Setup Go environment**
By actions Setup a Go environment and add it to the PATH
 519 stars
- Download a Build Artifact**
By actions Download a build artifact that was previously uploaded in the workflow by the upload-artifact action
 406 stars
- Close Stale Issues**
By actions Close issues and pull requests with no recent activity
 464 stars
- Upload a Build Artifact**
By actions Upload a build artifact that can be used by subsequent workflow steps
 1.1k stars
- First interaction**
By actions Greet new contributors when they create their first issue or open their first pull request
 140 stars
- Setup .NET Core SDK**
By actions Used to build and publish .NET source. Set up a specific version of the .NET and authentication to private NuGet repository
 3.8k stars

<https://github.com/marketplace?type=actions>



Gitlab

Pipelines

Gitlab Pipelines

Jobs

Stages

```
image: maven:latest

variables:
  MAVEN_CLI_OPTS: "-s .m2/settings.xml --batch-mode"
  MAVEN_OPTS: "-Dmaven.repo.local=.m2/repository"

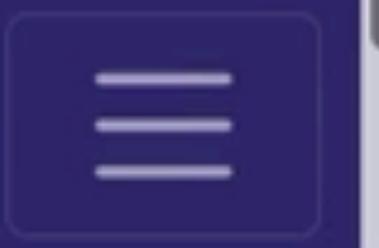
cache:
  paths:
    - .m2/repository/
    - target/

build:
  stage: build
  script:
    - mvn $MAVEN_CLI_OPTS compile

test:
  stage: test
  script:
    - mvn $MAVEN_CLI_OPTS test

deploy:
  stage: deploy
  script:
    - mvn $MAVEN_CLI_OPTS deploy
only:
  - master
```





▼ On this page

Keywords

Global keywords

default

stages

workflow

workflow:rules

workflow:rules:variables

include

include:local

include:file



JFrog
Pipelines

JFrog Pipelines

Resources

Steps

Runs



JFrog

Pipelines : Integration

An **Integration** connects Pipelines to an **external service/tool**.

- Digital Ocean Integration
- Distribution Integration
- Docker Registry Integration
- File Server Integration
- Generic Integration
- GitHub Enterprise Integration
- GitHub Integration
- GitLab Integration
- Google Cloud Integration
- Incoming Webhook Integration
- Jenkins Integration
- Jenkins Server Integration
- Jira Integration
- Kubernetes Integration
- NewRelic Integration
- Outgoing Webhook Integration
- PagerDuty Events Integration
- PEM Key Integration
- Slack Integration
- SMTP Credentials Integration
- SSH Key Integration



JFrog

Pipelines : Resources

Contain **information** needed for a step in a pipeline to execute and can also be used to store information produced by a step.

VCS

File (remote server)

Docker image

Release bundle

Cluster



DEMO

YAY!!



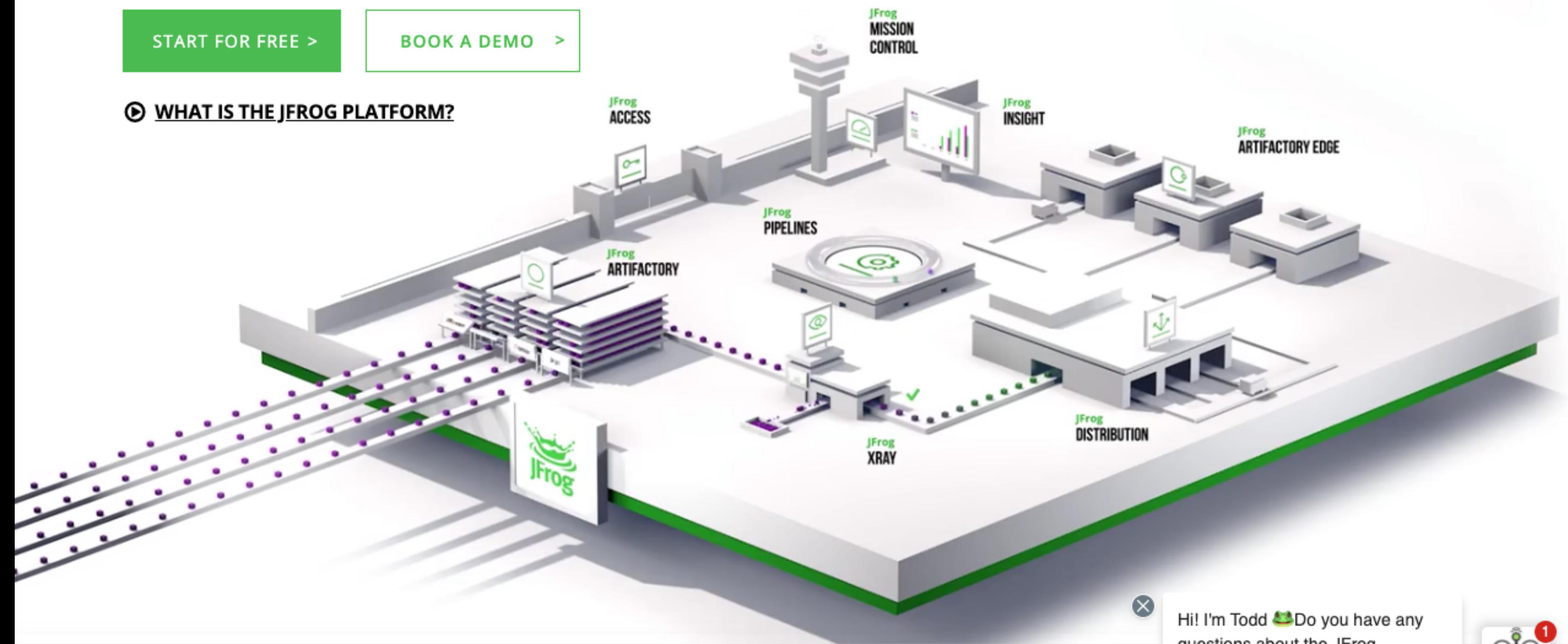
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THE JFROG PLATFORM

The core of DevOps automation.

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⌚ WHAT IS THE JFROG PLATFORM?



<https://jfrog.com/platform/>



Thank

YOU!!!!!!

