

Checklist for turtle DevOps

Đồng Quốc Thắng

Somewhere in 2024

Mục lục

1	Python for Data Science	3
1.1	Panda	3
1.2	numpy	3
1.3	RESTAPI and Web Scraping	3
1.4	Python Packaging, Linting and Unit testing	3
1.5	Flask	3
2	Container and Containerazation	3
2.1	Docker	3
2.2	Kubernettes	4
2.3	RedHat OpenShift	4
3	MicroServices	5
3.1	Building, documenting and testing API	5
3.2	Serverless	5
4	Testing	5
4.1	PyUnit, Pytest	5
4.2	Test Coverage	5
4.3	Factory and Faker	5
4.4	BDD Tools	6

5	CI/CD	6
5.1	CI Tools:	6
5.2	CD Tools:	6
5.3	GitOps: ArgoCD	6
6	Security	6
6.1	Static analysis:	6
6.2	Dynamic analysis:	6
6.3	Secrets	7
7	Monitoring	7
7.1	Prometheus	7
7.2	Grafana	7
7.3	OpenTelemetry	7
7.4	Mezmo	7
8	Roadmap	7

1 Python for Data Science

1.1 Panda

<https://pandas.pydata.org/docs/>

1.2 numpy

<https://numpy.org/doc/stable/>

1.3 RESTAPI and Web Scraping

Requests library:

<https://docs.python-requests.org/en/latest/index.html>

BeautifulSoup:

<https://beautiful-soup-4.readthedocs.io/en/latest/#quick-start>

1.4 Python Packaging, Linting and Unit testing

Packaging:

<https://packaging.python.org/en/latest/>

Linting:

<https://pylint.readthedocs.io/en/latest/>

Unit testing:

<https://docs.python.org/3/library/unittest.html>

1.5 Flask

<https://flask.palletsprojects.com/en/3.0.x/>

2 Container and Containerization

2.1 Docker

Documentation: <https://docs.docker.com/>

List of basic concept:

- Container

- Container Image
- Docker Objects

2.2 Kubernetes

Documentation: <https://kubernetes.io/docs/home/>

List of basic concept:

- Kubernetes Object
- Kubectl
- ReplicaSet
- Autoscaling
- Rolling updates
- ConfigMaps
- Secrets
- Service bindings

2.3 RedHat OpenShift

Documentation: <https://docs.openshift.com/>

List of basic concept:

- Builds
- Operators
- Istio

3 MicroServices

3.1 Building, documenting and testing API

OpenAPI specification is a standard way of representing APIs

Postman:

<https://learning.postman.com/docs/publishing-your-api/documenting-your-api/>

Swagger:

<https://swagger.io/docs/>

3.2 Serverless

AWS:

- <https://docs.aws.amazon.com/>
- <https://www.youtube.com/watch?v=zA8guDqfv40>

4 Testing

4.1 PyUnit, Pytest

PyUnit:

<https://docs.python.org/3/library/unittest.html>

Pytest:

<https://docs.pytest.org/en/stable/>

4.2 Test Coverage

<https://coverage.readthedocs.io/en/7.6.1/>

4.3 Factory and Faker

Factory

<https://factoryboy.readthedocs.io/en/stable/index.html>

Faker <https://faker.readthedocs.io/en/master/>

Note: Mock in Unittest Framework is worth to read.

4.4 BDD Tools

Behave

<https://behave.readthedocs.io/en/stable/>

Selenium

<https://selenium-python.readthedocs.io/>

5 CI/CD

5.1 CI Tools:

- Github Actions
- Circle CI
- GitLab CI

5.2 CD Tools:

Tekton:

<https://tekton.dev/docs/>

5.3 GitOps: ArgoCD

<https://argo-cd.readthedocs.io/en/stable/>

6 Security

6.1 Static analysis:

SonarQube <https://docs.sonarsource.com/sonarqube/latest/>

Snyk: <https://snyk.io/>

6.2 Dynamic analysis:

OWASP ZAP

<https://www.zaproxy.org/docs/>

6.3 Secrets

https://developer.hashicorp.com/vault/docs?product_intent=vault

7 Monitoring

7.1 Prometheus

Prometheus Monitoring system docs:

<https://prometheus.io/docs/introduction/overview/>

7.2 Grafana

Grafana Monitoring Platform:

<https://grafana.com/>

7.3 OpenTelemetry

Open Telemetry can be used with K8s

<https://opentelemetry.io/docs/>

7.4 Mezmo

Mezmo, log analyzer docs:

<https://docs.mezmo.com/>

8 Roadmap

<https://roadmap.sh/devops>