Deployment GUIDLINE

Required Services

service	version	PUBLIC_PORT	DEPENDS ON DEPLOYMENT STAGE
Minio	RELEASE.2024-02-04T22-36-13Z		YES
Postgres DB	16.1		YES
PG Bouncer	1.22.0		YES
Ha Proxy	3.0		YES
PG Admin	4.0		YES
Redis Stack	7.2		YES
RedisInsight	1.14		YES
Memchached	1.6.23		YES
memcached-admin	latest		YES
Elasticsearch	8.12.1		YES
Logstash	8.11.0		YES
Knaiba	8.12.0		YES
daphne	4.0.0		YES
nginx	1.23.4		YES
traefik	2.11.0-rc2	80, 443	NO
Jenkins	2.443		NO

Service Role & connected services

Service	Role	Connected Service
Minio	App Helper Service	Logstash
Postgres DB	App Helper Service	Logstash
PG Bouncer	Database helper service	Postgres DB, Logstash
Ha Proxy	Database helper service	PG Bouncer, Logstash

Service	Role	Connected Service
PG Admin	Database helper service	Ha Proxy, Logstash
Redis Stack	App Helper Service	Logstash
RedisInsight	Redis Helper sevice	Redis Stack , Logstash
Memchached	App Helper Service	Logstash
memcached-admin	Memchached helper service	Memchached, Logstash
Elasticsearch	App Helper Service	Logstash
Logstash	App Helper Service	Elasticsearch, Logstash
Kibana	EL Helper service	Logstash, Elasticsearch
daphne	App Service	Ha Proxy, Minio, Redis Stack, Memchached, Elasticsearch, Logstash
nginx	App Helper Service	daphne, Logstash
traefik	App Helper Service	nginx, Logstash
Jenkins	CI/CD Helper Service	Logstash

deployemnt PIPLINE

- 3 Consistant branch will be exist in sorce control (GitHub/GitLab). STAGING, QA, PROD.
- 3 deployment environment and pipline will be setup for CI/CD (STAGING, QA, PROD)
- each deployment should have its unique identifier based on the marge/pull request
- after each successfull marge/pull request unused environment will be detroyed automatically for STAGING, QA, PROD.
- for PROD new deployment will trigured based on the latest image with the latest pull request

PIPLINE

```
git marge/pull request (STAGING)-> **DEPLOY SATAGING** -> git marge/pull
request (QA) -> **DEPLOY SATAGING & DESTROY STAGING** -> git marge/pull
request (PROD) -> **DESTROY QA, PROD & DEPLOY PROD (latest)**
```

Link structure

url	stage	service
jenkins.studygiveway.com	X	Jenkins
studygiveway.com	PROD	daphne

url	stage	service
s3.studygiveway.com	PROD	minio
db.studygiveway.com	PROD	PG Admin
redis.studygiveway.com	PROD	RedisInsight
memchached.studygiveway.com	PROD	memcached-admin
kibana.studygiveway.com	PROD	kibana
<MARGE/PULL_REQUEST_TAG>.studygiveway.com	QA	daphne
s3-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	QA	minio
db-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	QA	PG Admin
redis-<MARGE/PULL_REQUEST_TAG>studygiveway.com	QA	RedisInsight
memchached-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	QA	memcached-admin
kibana-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	QA	kibana
<MARGE/PULL_REQUEST_TAG>.studygiveway.com	STAGING	daphne
s3-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	STAGING	minio
db-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	STAGING	PG Admin
redis-<MARGE/PULL_REQUEST_TAG>studygiveway.com	STAGING	RedisInsight
memchached-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	STAGING	memcached-admin
kibana-<MARGE/PULL_REQUEST_TAG>.studygiveway.com	STAGING	kibana

Deployemnt Note

- Use alpine Image for Docker Containers.
- Use .env file for authentication creandential, configuration, PORT LIST etc.
- Add a sample .env.sample for devlopement team.
- Only PORT 80, 443 will be accessable via internent.
- All services should be Horizontal Scaleable.
- All data should be persistent and stored in set intervel.
- Internally in containerized enviromennt all the default ports should be open for communication from container to container.
- This deployment Guidline is build with Agile Development & industry standarad CI/CD Guidline.