Dockerizing Project Develop □□

Table of Contents

1. Local □□□□ . . . 1
   1-1. □□ IDE . . . 1
   1-2. □□ □□ □ □□ . . . 1
   1-3. □□□ □□ . . . 2
2. □□□□□ □□□□ . . . 2
   2-1. Spring MSA □□□□□ □□ . . . 2
   2-2. □□□□ (Docker □□ □□) . . . 2
3. □□□□ □□ . . . 3
   3-1. nginx-proxy . . . 4
   3-2. front . . . 4
   3-3. api-server . . . 6
   3-4. domain-service . . . 7
   3.X Springboot □□□□ . . . 9
4. □□□□ □□□□ . . . 13
   4-1. File Agent . . . 13
5. □□ . . . 14
   5-1. AsciiDoc . . . 14
   5-2. Notion . . . 14

Content entered directly below the header but before the first section heading is called the preamble.

1. Local □□□□

1-1. □□ IDE

IDE	□□
Visual Studio Code	DockerFile □ Vue.js □□ □□□ □□ □□ □□ □□
IntelliJ IDEA	Java Spring Boot □□ □□□ □□ □□□ □□ □□ □□

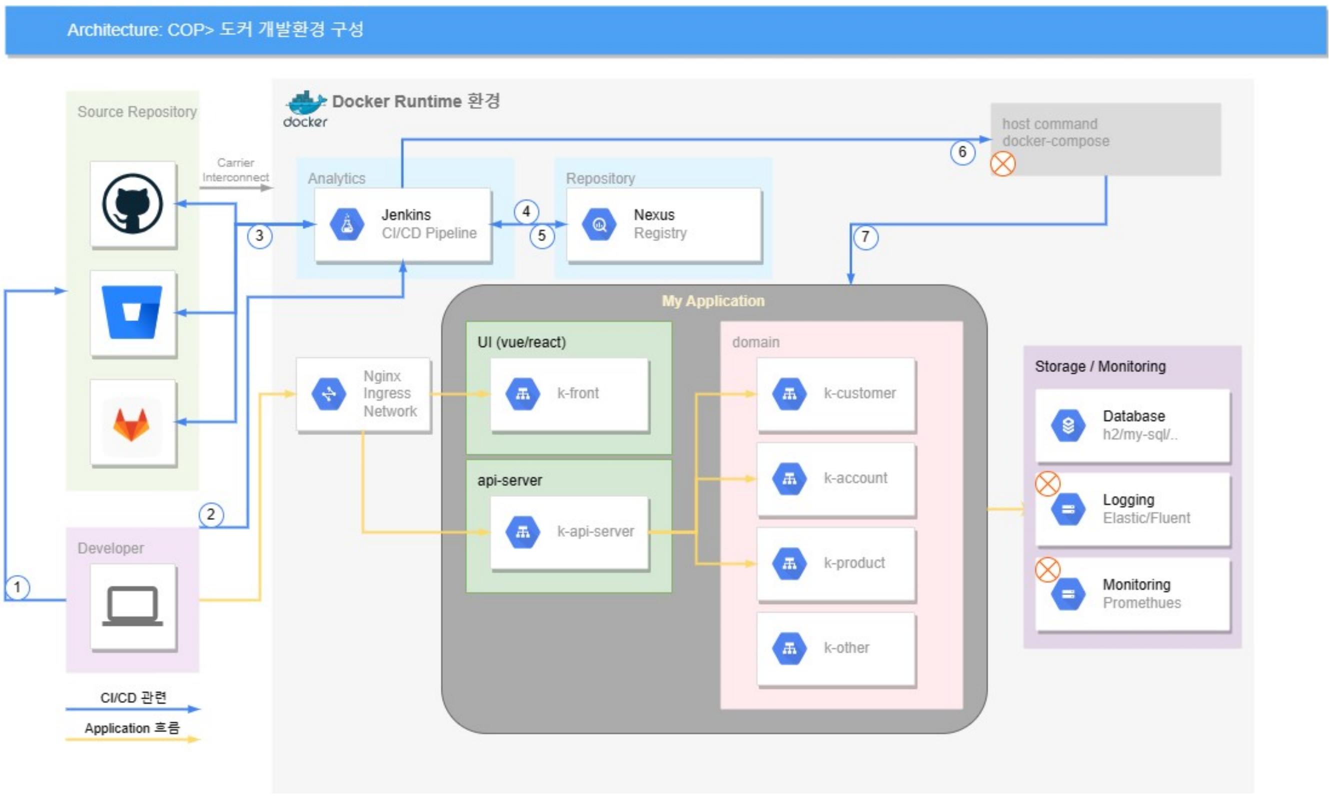
1-2. □□ □□ □ □□

□□/□□	□□
Node.js	Frontend □□□ □□ □□(npm □□□ □□, vue □□)
Docker	□□□□□□ Docker Desktop□ □□□□ □□□□ □□□

1-3. □□□ □□

- Postman API □□□□ □□ Postman □□□ □□□□ □□□□.

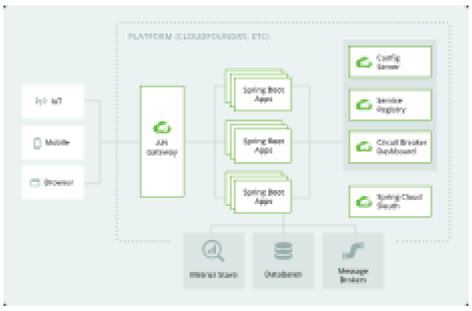
2. □□□□□ □□□□



2. □□ □□□□ □□

1. □□□ □□ □□□□ □□ □□ □□□□ □□, □□□ CI/CD □□□ □□□ □□□.
2. □□□ □□ □□ □ □□□□□□□□ □□□ □□□□.
   - (X)□ 2023□ COP□□ □□□□ □□.

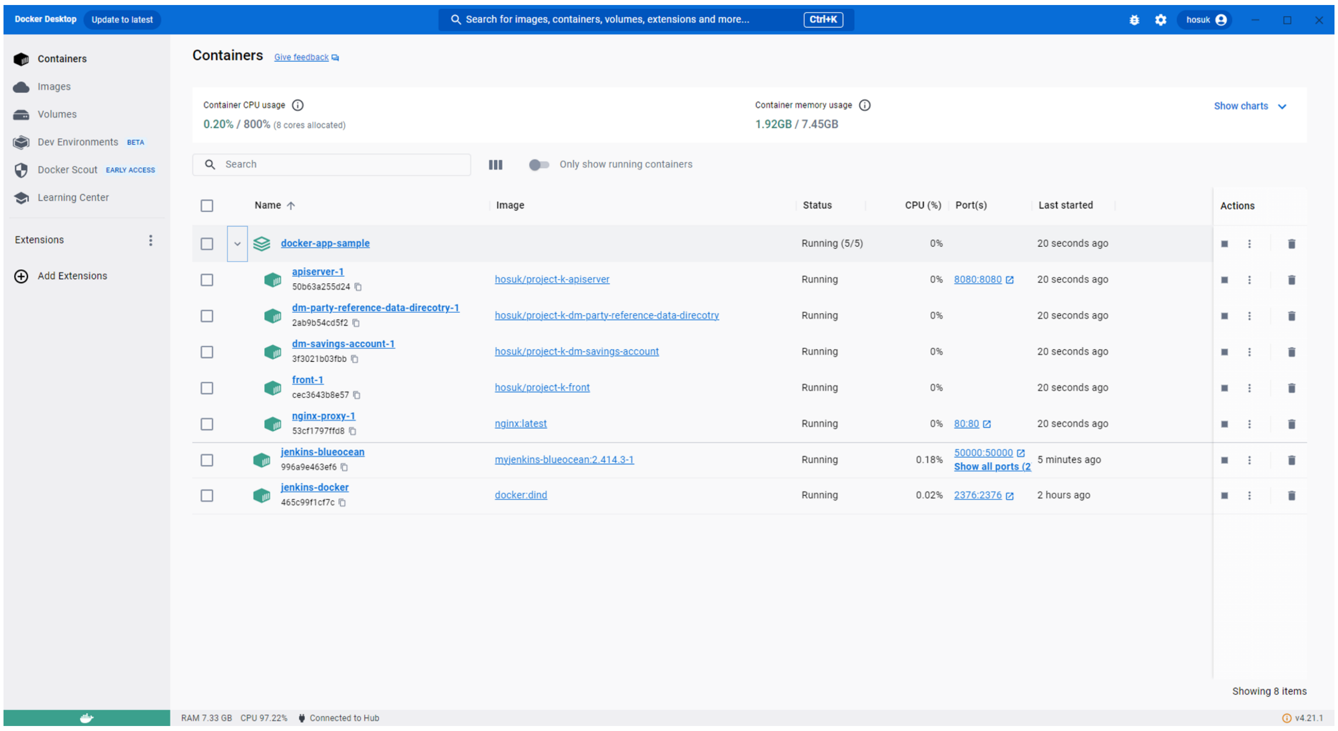
2-1. Spring MSA □□□□□ □□



- □□ 2□ Spring □□ □□□□ MSA□ □□ □□□ □□.

2-2. □□□□ (Docker □□ □□)

- □□



Docker Desktop · Update to latest · Search for images, containers, volumes, extensions and more... Ctrl+K · hosuk

Containers · Images · Volumes · Dev Environments BETA · Docker Scout EARLY ACCESS · Learning Center · Extensions · Add Extensions

Containers Give feedback

Container CPU usage: 0.20% / 800% (8 cores allocated) Container memory usage: 1.92GB / 7.45GB Show charts

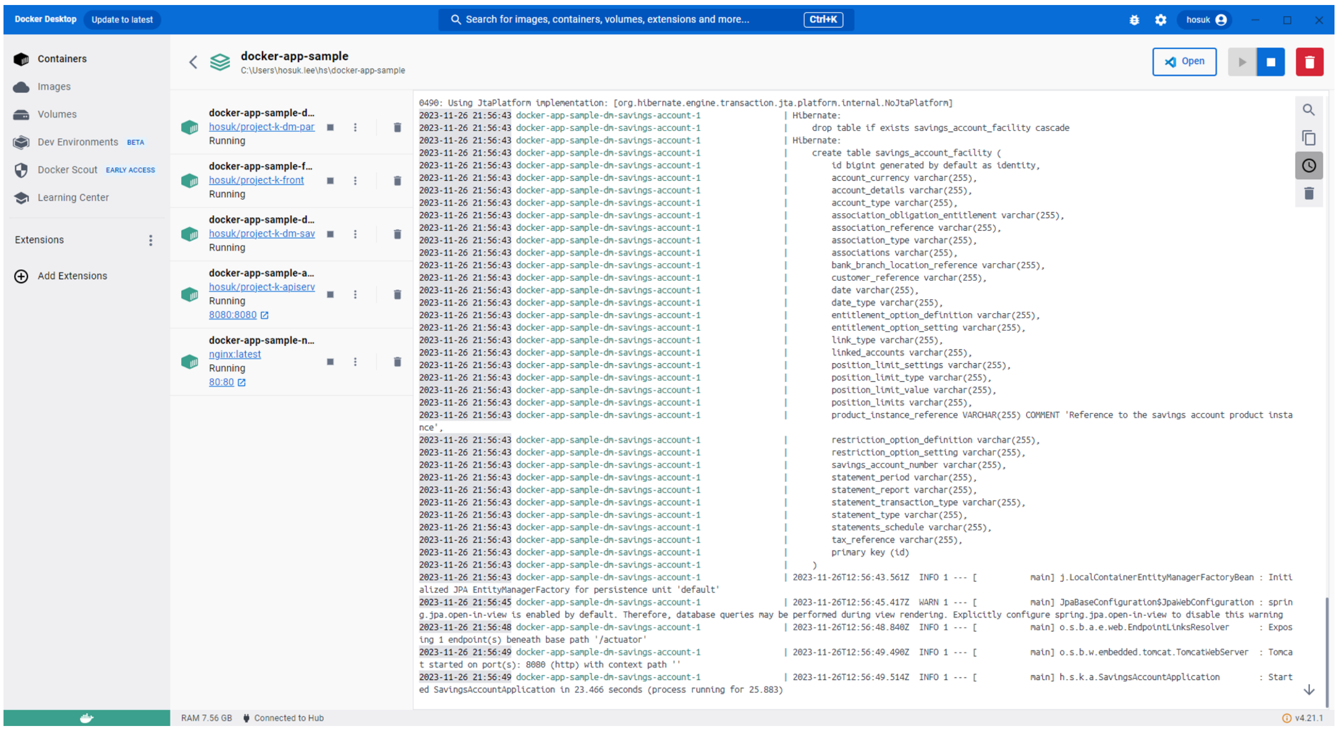
Search Only show running containers

	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
	docker-app-sample		Running (5/5)	0%		20 seconds ago	
	apiserver-1 50b63a255d24	hosuk/project-k-apiserver	Running	0%	8080:8080	20 seconds ago	
	dm-party-reference-data-direcotry-1 2ab9b54cd5f2	hosuk/project-k-dm-party-reference-data-direcotry	Running	0%		20 seconds ago	
	dm-savings-account-1 3f3021b03fbb	hosuk/project-k-dm-savings-account	Running	0%		20 seconds ago	
	front-1 cec3643b8e57	hosuk/project-k-front	Running	0%		20 seconds ago	
	nginx-proxy-1 53cf1797ffd8	nginx:latest	Running	0%	80:80	20 seconds ago	
	jenkins-blueocean 996a9e463ef6	myjenkins-blueocean:2.414.3-1	Running	0.18%	50000:50000 Show all ports (2	5 minutes ago	
	jenkins-docker 465c99f1cf7c	docker:dind	Running	0.02%	2376:2376	2 hours ago	

Showing 8 items

RAM 7.33 GB CPU 97.22% Connected to Hub v4.21.1

- Docker Logs □□



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docker-app-sample
C:\Users\hosuk.lee\hs\docker-app-sample

Open

docker-app-sample-d... hosuk/project-k-dm-par Running
docker-app-sample-f... hosuk/project-k-front Running
docker-app-sample-d... hosuk/project-k-dm-sav Running
docker-app-sample-a... hosuk/project-k-apiserv Running 8080:8080
docker-app-sample-n... nginx:latest Running 80:80

```
0490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  | Hibernate:
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |     drop table if exists savings_account_facility cascade
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  | Hibernate:
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |     create table savings_account_facility (
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         id bigint generated by default as identity,
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         account_currency varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         account_details varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         account_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         association_obligation_entitlement varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         association_reference varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         association_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         associations varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         bank_branch_location_reference varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         customer_reference varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         date varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         date_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         entitlement_option_definition varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         entitlement_option_setting varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         link_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         linked_accounts varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         position_limit_settings varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         position_limit_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         position_limit_value varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         position_limits varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         product_instance_reference VARCHAR(255) COMMENT 'Reference to the savings account product insta
nce',
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         restriction_option_definition varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         restriction_option_setting varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         savings_account_number varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         statement_period varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         statement_report varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         statement_transaction_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         statement_type varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         statements_schedule varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         tax_reference varchar(255),
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |         primary key (id)
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  |     )
2023-11-26 21:56:43 docker-app-sample-dm-savings-account-1                  | 2023-11-26T12:56:43.561Z  INFO 1 --- [           main] j.LocalContainerEntityManagerFactoryBean : Initi
alized JPA EntityManagerFactory for persistence unit 'default'
2023-11-26 21:56:45 docker-app-sample-dm-savings-account-1                  | 2023-11-26T12:56:45.417Z  WARN 1 --- [           main] JpaBaseConfiguration$JpaWebConfiguration : sprin
g.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2023-11-26 21:56:48 docker-app-sample-dm-savings-account-1                  | 2023-11-26T12:56:48.840Z  INFO 1 --- [           main] o.s.b.a.e.web.EndpointLinksResolver      : Expos
ing 1 endpoint(s) beneath base path '/actuator'
2023-11-26 21:56:49 docker-app-sample-dm-savings-account-1                  | 2023-11-26T12:56:49.490Z  INFO 1 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomca
t started on port(s): 8080 (http) with context path ''
2023-11-26 21:56:49 docker-app-sample-dm-savings-account-1                  | 2023-11-26T12:56:49.514Z  INFO 1 --- [           main] h.s.k.a.SavingsAccountApplication        : Start
ed SavingsAccountApplication in 23.466 seconds (process running for 25.883)
```

RAM 7.56 GB Connected to Hub v4.21.1

3. □□□□□ □□

- □□□□ □□
  - https://github.com/Hosuk-Lee/docker-app-sample.git

```
docker-app-sample
 ├──── nginx-proxy
 ├──── database (h2 or postgresql)
 ├──── front
```

```
├──── api-server
├──── dm-party-reference-data-direcotry
├──── dm-product-directory
└──── dm-savings-account
```

3-1. nginx-proxy

□ □□□ Nginx □□□ □□ □□□ □□ □ □□□, □□ □□□ □□□□ □□□ □□ □□□□ □□□□ □□□ □□□. □□□□ □□□□ □ □ □□ □□□ □□□ □□□□:

1 `listen 80;`

- □□ 80□□ □□□□ □□□ □□□□□. □□ □□□□□ HTTP □□□□ □□□□ □ □□□□ □□ □□□□□.

2 □□□□□ □□ □□ □□□ □□:

- `/` □□□ □□□□ □□ □□□ `http://docker-front`□ □□□□□□.
- `proxy_redirect off;`□ □□□ □□□□ □□□□□ □□□□□□□□.
- `proxy_set_header`□ □□□ □□□ □□□ HTTP □□□ □□□□□. □□ □□ □□□ □□□ □□□□ □□ □□□□□.

```
location / {
    proxy_pass          http://docker-front;
    proxy_redirect      off;
    proxy_set_header    Host $host;
    proxy_set_header    X-Real-IP $remote_addr;
    proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;
}
```

3 **API □□□ □□ □□□ □□:**

- `/api` □□□ □□□□ □□□ `http://docker-apiserver`□ □□□□□.
- `rewrite` □□□□ □□□□ `/api` □□□ □□□□ □□□□□ □□ □□□ □□□ □□□ □□□.

```
location /api {
    rewrite ^/api(/.*)$ $1 break; # /api □□□ □□□□□.
    proxy_pass          http://docker-apiserver;
    proxy_redirect      off;
    proxy_set_header    Host $host;
    proxy_set_header    X-Real-IP $remote_addr;
    proxy_set_header    X-Forwarded-For $proxy_add_x_forwarded_for;
}
```

□□□ □□□ Nginx□ □□□□ □□□ □□□ □□□ □□ □□ □□□□ □□□□□ □□□ □□□□□. □□□ □□ □□□□□□□ □□□□ □□□ □□ □□□ □□ □□□ □□□□ □□ □□□□□.

3-2. front

1 Frontend □□□□

Frontend □□□□□ Vue.js 3□ □□□□ □□□□□□, □□□ API□□ □□□ □□ □ UI□ □□□□ □□□□□□□□□□□.

2 Vue.js 3

Vue.js 3□ □□□□□ □□□ □□□ □□□□□□□ □□□□ □□ JavaScript □□□□□□□□□. □ □□ □□□ □□□ □□□ □□□□:

- □□□ □□□ □□□: Vue.js□ □□□□ DOM □□ □□□ □□□ □□□□ □□ □□□□ □□□ □□ □□□□ DOM□ □□□□□.
- □□□□ □□ □□□□: □□□□□□□□ □□□□ □□ □□□□□□□ □□□□ □□□ □□□□□. □□□□□ □□□□□□□ □□□□ □□□□□.
- □□ **DOM:** □□□ □□ □□□□ □□ DOM□ □□□□ □□□□ □□□□ □□□□□.
- **Vue Router □ Vuex □□:** □□□ □ □□ □□□ □□ Vue Router□ Vuex□ □□□□ □□□ □□□□□□□ □□□ □□□ □ □□□□.

3 CSS □ □□□□□□

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- □□ □ □□□□□ □□: □□□ □□□ □□□□ □□□ □□ □□□□ □□□□□□□□ □ □□□□.

4 Axios

[Axios](https://axios-http.com/)□ □□□□□□□□ API□ □□□□ □□ □□□□□□ HTTP □□□□□ □□□□□□□□□. □□ □□□ □□□ □□□□:

- **Promise □□ API:** □□□ □□□ □□ □□□ □ □□□ Promise□ □□□□ □ API□ □□□□□.
- **HTTP □□ □ □□ □□:** □□□ HTTP □□□□ □□□□ □□□ □□□ □□□, □□□ □□ □□□ □ □□□□.
- □□/□□ □□□□□: □□□ □□□ □□□□□□□ □□□ □□□ □□□□□□ □□□ □ □□□□.

5 Vue Router

[Vue Router](https://router.vuejs.org/)□ Vue.js□□ □□□□ □□□ □□□□□□, SPA(Single Page Application)□□ □□□ □□ □□□□□□ □□□□□. □□ □□□ □□□ □□□□:

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6 Vite□ npm run dev □□□

[Vite](https://vitejs.dev/)□ □□□ □□ □ □□□ □□ □□ □□□, Vue.js□ □□□ □□□ □□□□□□□ □□□□□. `npm run dev` □□□□ □□ □□ □□ □□□ □□□□□ □□ □□□□□. □□ □□□ □□□ □□□□:

- □□□ □□ □□□: □□ □□ □□□ □□□□□□ □□□□ □□ □□□ □□□□□.
- **ES □□ □□:** ES □□□ □□□□ □□ □□□ □□□□ □□□□ □□□□□.
- **HMR(Hot Module Replacement):** □□□ □□□□□ □ □□ □□□□ □□ □□□ □□□ □□□ □□□□ □□ □□ □□□□ □□□□□.
- □□□ **Legacy □□:** □□□□ □□□□ □□ □□□□□ □□□ □□□ □□□□□.

7 □□ □□□□□ □□

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```
npm run dev
```

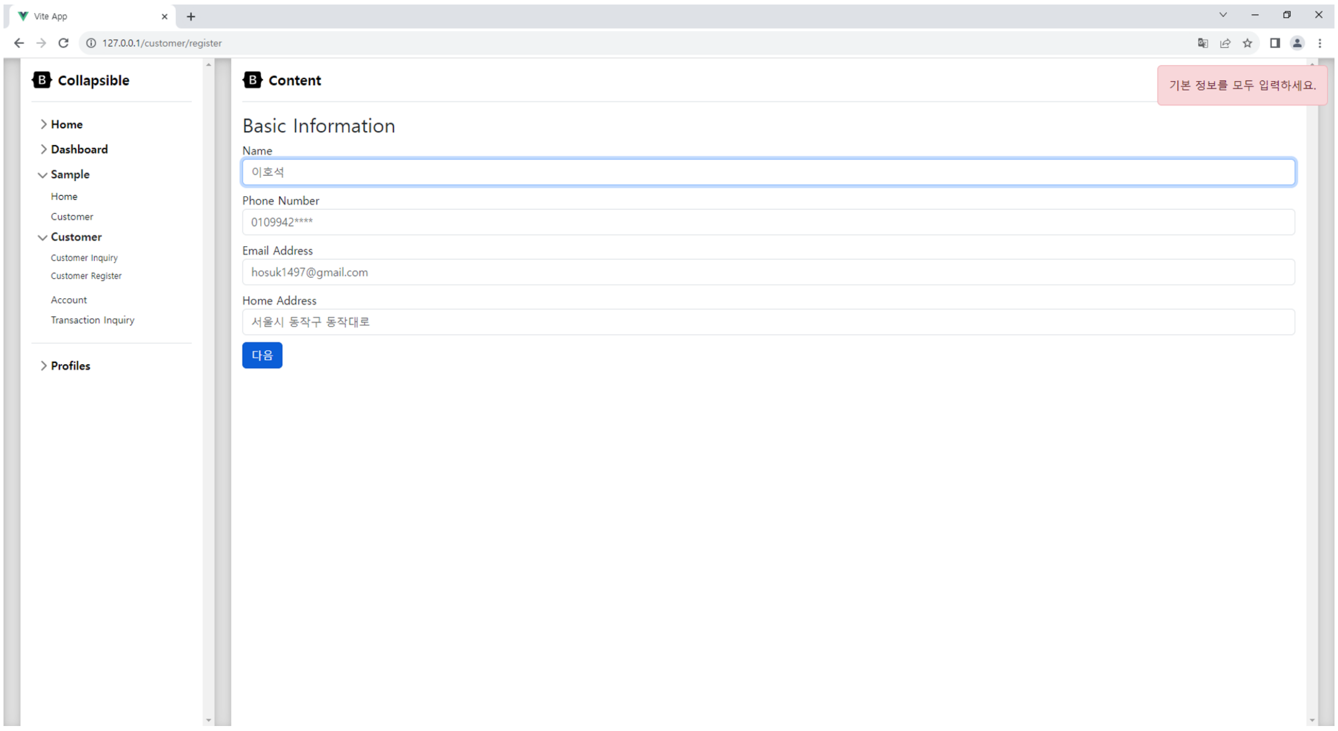
8 □□□ □□□ □□-□□ □□

- npm □□□ : **"npm ls"**

```
front@0.0.0 ./docker-app-sample/front
├─── @rushstack/eslint-patch@1.4.0
├─── @vitejs/plugin-vue@4.3.4
├─── @vue/eslint-config-prettier@8.0.0
├─── axios@1.5.1
├─── bootstrap@5.3.2
├─── eslint-plugin-vue@9.17.0
├─── eslint@8.50.0
├─── prettier@3.0.3
├─── vite@4.4.9
├─── vue-router@4.2.5
├─── vue@3.3.4
└─── vuex@4.0.2
```

9 □□

- □□□□ Page



기본 정보를 모두 입력하세요.

Basic Information

Name: 이호석

Phone Number: 0109942****

Email Address: hosuk1497@gmail.com

Home Address: 서울시 동작구 동작대로

3-3. api-server

1 □□□□

□□ □□□□□ API Gateway □ □□ □□□ □□□□□. □□□□ nginx-proxy□ api-server□ proxy □□□ □□□□□. □□□□□ API Gateway □□ □□ □ □□□ □□□ □□□□.

- UI → Ingress → API-Gateway → API Composition → Micro Service
- API Composition □ □□□ □□□□ □□□□□ Micro Service □ □□ □□□ □□□.
- Facade Pattern □□□□□□ □□ □□□ □□□ □□□ □□ □□□□□ □□□□□□ □□□ □□□ Client □ □□□ □□□ □□□.

2 □□□□

- springboot / gradle plugin □ □□□□ □□
- image build
  - gradle□ □□ localhost□ □□ □□□ □□□ □□□, openjdk □□□□ □□□□ □□ □□□□ □□□.

```
# □□ □□□ □□ (Java□ □□□□ □□)
FROM openjdk:17

# □□ □□□□ □□
WORKDIR /app

# Gradle □□ □□□□ □□ □□□□□ □□
COPY build/libs/*.jar app.jar

# □□□□ □□□□ □□□ □□
CMD ["java", "-jar", "app.jar"]
```

3-4. domain-service

1 BIAN □□□ □□□ □□□ □□

- DDD□□ □□□ □□□ □□

3-4.1. dm-party-reference-data-direcotry

1 □□□□ □□□

- □□□□□ Asset□ Directory□□ Functional □□□□ □□□□ □□□□ □□□□ □□□

2 □□□□

- springboot / gradle plugin □ □□□□ □□
- image build
  - gradle□ □□ localhost□ □□ □□□ □□□ □□□, openjdk □□□□ □□□□ □□ □□□□ □□□.

```
# □□ □□□ □□ (Java□ □□□□ □□)
FROM openjdk:17

# □□ □□□□ □□
WORKDIR /app

# Gradle □□ □□□□ □□ □□□□□ □□
COPY build/libs/*.jar app.jar
```

```
# □□□□ □□□□ □□□ □□
CMD ["java", "-jar", "app.jar"]
```

3-4.2. dm-product-directory

1 □□□□ □□□

- □□□□□ Asset□ Directory Functional □□□□ □□□□ □□□□ □□□□ □□□

2 □□□□

- springboot / gradle plugin □ □□□□ □□
- image build
  - maven builder image □ □□□□ □□□ □□□□ openjdk □□□□ □□□□ □□□□ □□ □□□□ □□.

```
# BUILD
FROM maven:3.9.3-eclipse-temurin-17 AS builder
WORKDIR /workdir
# Maven POM □□ □□
COPY pom.xml /workdir/pom.xml
#RUN mvn dependency:go-offline
# □□ □□□□ □□
COPY src /workdir/src
RUN mvn install

# IMAGE BUILD
FROM openjdk:17
#EXPOSE 8080
#VOLUME /tmp
ARG TARGET_DIR=/workdir/target
COPY --from=builder ${DEPENDENCY}/*.jar app.jar
CMD ["java", "-jar", "app.jar"]
```

3-4.3. dm-savings-account

1 □□□ □□ □□□

- □□□ □□□□ Asset□ Fullfill Functional □□□□ □□□ □□□ □□□□ □□
- □□□□ □□□ □□□ □□□ □□□□ □□ □□□ □□□.
  - □□ □□□□, □□ □□□□, □□ □□□□, □□ □□ □.

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- springboot / gradle plugin □ □□□□ □□
- image build
  - maven builder image □ □□□□ □□□ □□□□ openjdk □□□□ □□□□ □□□□ □□ □□□□ □□.

```
<plugin>
```

```
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-maven-plugin</artifactId>
    <version>${spring-boot.version}</version>
    <executions>
      <execution>
        <goals>
          <goal>build-image</goal>
        </goals>
      </execution>
    </executions>
    <configuration>
      <image>
        <name>hosuk/project-k-dm-product-directory:${project.version}</name>
      </image>
    </configuration>
</plugin>
```

```
mvnw spring-boot:image-build
```

3.X Springboot □□□□

1 Java Application □□ □□

Spring Boot □□□□□□□□ □□ □□□ □□□□□□ □□□□□ □□□ □ □ □□□□□□ □□□□□ □□ □□□□□□. □□□ □□□ □□ □□□ □□□ □□□ □□□□.

```
apiserver
 ├──── api
 │     ├──── account.v1
 │     │     ├──── controller
 │     │     ├──── scheme
 │     │     ├──── facade
 │     │     └──── MyAccountDetailApi
 │     ├──── customer.v1
 │     └──── product.v1
 ├──── global
 │     ├──── aop
 │     ├──── config
 │     ├──── advice
 │     ├──── interceptor
 │     └──── utility
 ├──── model
 └──── service
```

- apiserver: API □□□
- api: □□ API □□□□□□ □ □□ □□□ □□□ □□□□□ □□□□□□□.
    - account.v1: □□ □□ API □□ 1□ □□ □□□.

- controller □□□: RESTful API □□□□□□□ □□□□ □□□□ □□□□□ □□□□ □□□□□□. □ □□□□□ □□ □□□□□□ HTTP □□□ □□□□ □□□ □□□ □□□□ □□□□□ □□□□.
- scheme □□□: □□(Account) API□ □□□□ □□□ □□□□ DTO(Data Transfer Object) □□ □□□□□ □□□□ □□□□□□.
- service □□□: □□□□ □□□ □□□□ □□□ □□□□□ □□□□ □□□□□□. □□□□□ □□ HTTP □□□ □□□□, □ □□□ □□□ □□□□ □□□□ □□ □□□□ □□□ □□□□□.
- MyAccountDetailApi □□□: □ □□□□ □□ API □□□□□□□ □□ □□□ □□□□ □□□□ □□□□□ □□□. Open API□ Swagger□ □□□□ API Document□ □□□□□.

- customer.v1: □□ □□ API □□ 1□ □□ □□□.
- product.v1: □□ □□ API □□ 1□ □□ □□□.
- global: □□□□□□□ □□ □□ □□□ □□□□ □□□.
- aop: □□ □□ □□□□□ (Aspect-Oriented Programming)□ □□□ □□□ □□ □□□.
- config: □□□□□□ □□□ □□□ □□□□ □□ □□□.
- advice: □□□□□□ □□□ □ □□ □□□ □□□□ □□□□□ □□□□ □□□□ □□□.
- interceptor: HTTP □□□ □□□□ □□□□ □□□□ □□ □□□.
- utility: □ □□□□ □□□□□ □□□□ □□□□ □□□□ □□□□ □□□.
- model: □□□ □□ □ □□□□ □□□□ □□□□□□. □□□□ □□□□ □□□□ □□ □ □□□□ □□□□□.
- domain.service: □□□ □□□□ □□□□□ □□ □□□ □□□□ □□□ □□□□ □□□ □□ □□□ □□□□□. □□ □□, □□ □□□ □□ □□□□□ □□□□□ □□ □□□ □□□ □□□□ □ □□□ □□□.

2 database □□□□

JPA(Java Persistence API)□ MyBatis□ □□ ORM(Object-Relational Mapping) □□□ □□□□ □□□□□□. □ □ □□□ □□□□□□□ Java □□ □□ □□□ □□□ □□□ □□□ □□□ □□□□□ □□□□□ □□□□ □□ □□□□□ □□□.

- JPA (Java Persistence API):
  - JPA□ □□□□ □□□ □□□□□□□ □□ □□ □□□ □□□□ API□□□. □□□□ JPA □□□□□ Hibernate□ □□□□.
  - JPA□ □□□□□□ □□□ □□□ □□□ □□□□□□ □□ □□□ □□□□ □□□□, □□□□ □□ SQL □□□ □□□□ □□□ □□□□□□□ □□□ □ □□□ □□□.
  - □□ □□□□□□ □□□ □□□ □□□□ □□□ JPA□ □□□□□. Spring Data JPA□ □□ □□□□□□ □□□□ □□ □□□□ JPA□ □□□ □ □□□□.
- MyBatis:
  - MyBatis□ SQL □□ □□□□□□, □□□□ SQL □□□ □□ □□□□ □□□ □□□□ □□□□□. XML□□ □□□□□□ □□ SQL □□□ □□ □□ □□□ □□□□□.
  - MyBatis□ □□ SQL□ □□□□ □□□□ □□□□, □□□ □□□ □ □□□□ □□□□□ □ □ □□□□□.
  - □□□ □□□ □□ □□ □□□ □□□ SQL□ □□□□□ □□ □□□ MyBatis□ □□□□ □□ □□□□□.

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□□/□□	JPA (Hibernate)	MyBatis

□□ □□	□□-□□ □□ (ORM)	SQL □□
SQL □□ □ □□	□□ □□ □ □□, □□□□ □□ □□□ □□□ □□	□□□□ SQL □□ □□□□ □□□ □□□□ □□
□□□ □□ □ □□	□□□ □□□□□□□ □□ □□ □□	□□ SQL □□□□ □□□ □□ □□ □□
□□□□ □ □□ □□	□□ □□	XML□□ □□□□□□□ □□ □□
□□	□□□ □□ □□□ □□ □□ □□□ □□□ □ □□	□□ SQL □□□□ □□□ □□
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□□□ □□ □□□ □□□□	NamedQuery □□ □□□□ □□□ □□ □□ □□	XML□□ □□□□□□□ □□ □□ □□ □□
□□□□ □ □□□	□ □□□□, □□□ □□ □□ □ □□□□ □□	□□□ □□, □□□□ □□□ □□□□□□ □□

3 Microservice Logging

Microservice Logging □ □□ Elastic Stack□ □□□□ □□

- Logback□ □□□□ Logstash□ □□□ □□□□□□ Logstash Encoder□ □□□□ □□ □□□□ JSON □□□□ □□□□, LogstashAppender□ □□□□ □□□□ Logstash□ □□□□ □□□. □□□ Logback□ Logstash□ □□□□ □□□ logback.xml □□□ □□□□□.
- □□□ □□: □□ Maven □□ Gradle □□□□□ □□□□ Logstash Logback Encoder□ □□□□□.
    - Maven/Gradle

```
<dependency>
    <groupId>net.logstash.logback</groupId>
    <artifactId>logstash-logback-encoder</artifactId>
    <version>6.6</version>
</dependency>
```

```
implementation 'net.logstash.logback:logstash-logback-encoder:6.6'
```

- logback.xml □□: □□□ Logback□ logback.xml □□□□ Logstash□□ □□□ □□□□ □□□□□.

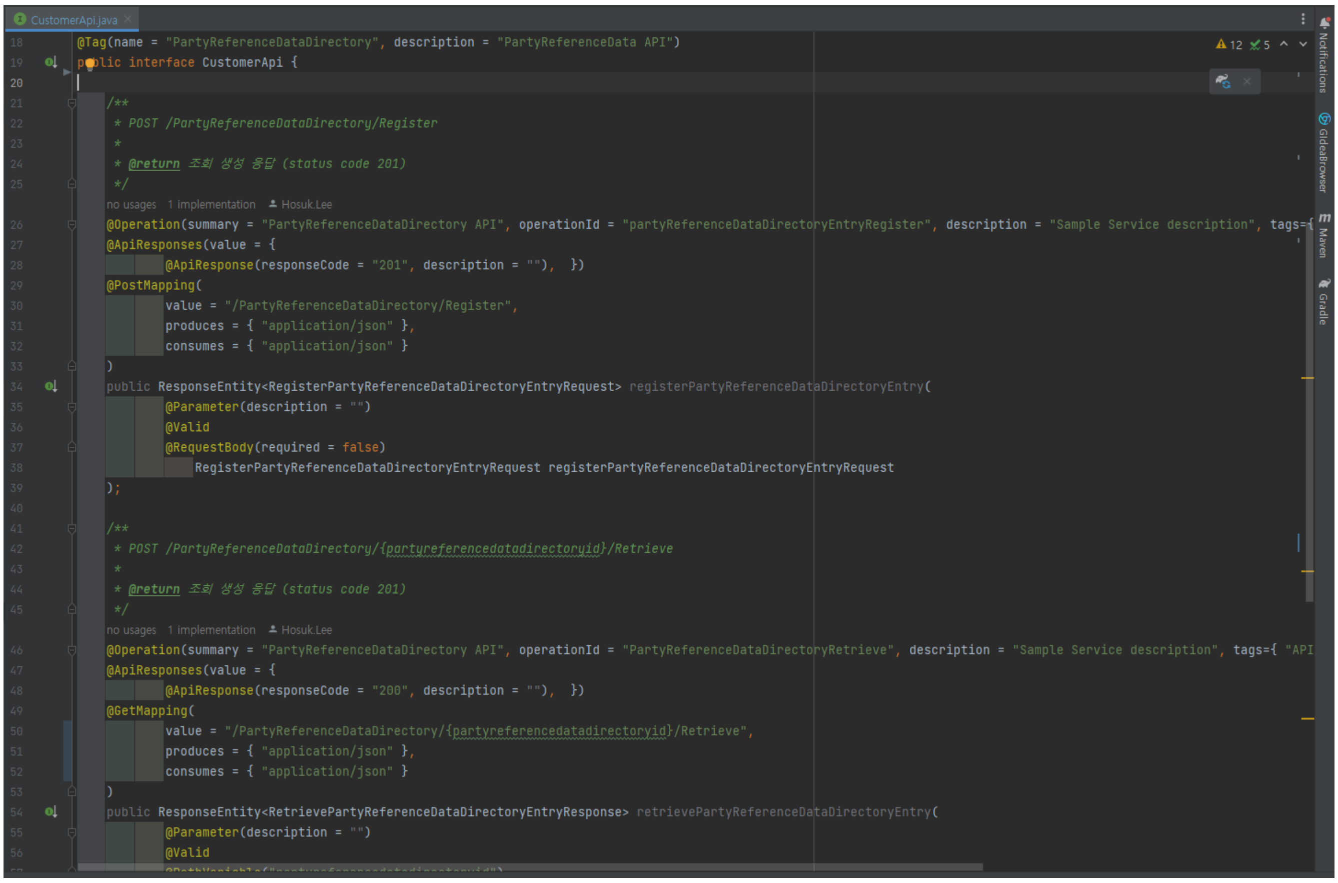
```
<configuration>
    <appender name="LOGSTASH" class=
"net.logstash.logback.appender.LogstashTcpSocketAppender">
        <destination>your-logstash-host:your-logstash-port</destination>
        <!-- Logstash□ □□□ □□□□ □□□ □□□□□ -->
        <encoder class="net.logstash.logback.encoder.LogstashEncoder" />
        <!-- Logstash□ □□□ □ □□□ Encoder□ □□□□□ -->
    </appender>

    <root level="info">
        <appender-ref ref="LOGSTASH" />
        <!-- Root □□ □□□□□ LOGSTASH Appender□ □□□□□ -->
    </root>
```

```
</configuration>
```

- logstash □ □□□□ elasticsearch□ forward □□ □□□□□□ □□□□□ □.

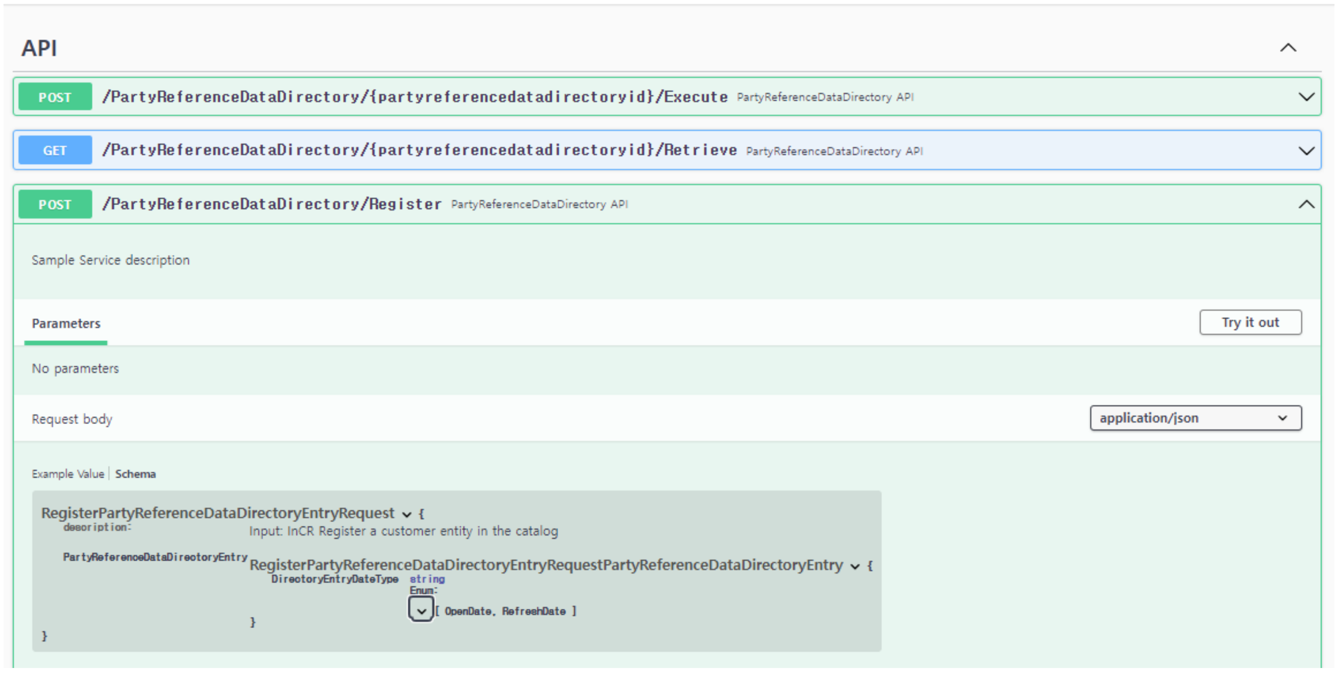
4 □□□□□□□ □□□ □□

- Java Code □ API Document □□□ □□



```java
@Tag(name = "PartyReferenceDataDirectory", description = "PartyReferenceData API")
public interface CustomerApi {

    /**
     * POST /PartyReferenceDataDirectory/Register
     *
     * @return 조회 생성 응답 (status code 201)
     */
    @Operation(summary = "PartyReferenceDataDirectory API", operationId = "partyReferenceDataDirectoryEntryRegister", description = "Sample Service description", tags={
    @ApiResponses(value = {
            @ApiResponse(responseCode = "201", description = ""),  })
    @PostMapping(
            value = "/PartyReferenceDataDirectory/Register",
            produces = { "application/json" },
            consumes = { "application/json" }
    )
    public ResponseEntity<RegisterPartyReferenceDataDirectoryEntryRequest> registerPartyReferenceDataDirectoryEntry(
            @Parameter(description = "")
            @Valid
            @RequestBody(required = false)
                RegisterPartyReferenceDataDirectoryEntryRequest registerPartyReferenceDataDirectoryEntryRequest
    );

    /**
     * POST /PartyReferenceDataDirectory/{partyreferencedatadirectoryid}/Retrieve
     *
     * @return 조회 생성 응답 (status code 201)
     */
    @Operation(summary = "PartyReferenceDataDirectory API", operationId = "PartyReferenceDataDirectoryRetrieve", description = "Sample Service description", tags={ "API
    @ApiResponses(value = {
            @ApiResponse(responseCode = "200", description = ""),  })
    @GetMapping(
            value = "/PartyReferenceDataDirectory/{partyreferencedatadirectoryid}/Retrieve",
            produces = { "application/json" },
            consumes = { "application/json" }
    )
    public ResponseEntity<RetrievePartyReferenceDataDirectoryEntryResponse> retrievePartyReferenceDataDirectoryEntry(
            @Parameter(description = "")
            @Valid
```

- Swagger API □□



API

POST /PartyReferenceDataDirectory/{partyreferencedatadirectoryid}/Execute PartyReferenceDataDirectory API

GET /PartyReferenceDataDirectory/{partyreferencedatadirectoryid}/Retrieve PartyReferenceDataDirectory API

POST /PartyReferenceDataDirectory/Register PartyReferenceDataDirectory API

Sample Service description

Parameters

Try it out

No parameters

Request body

application/json

Example Value | Schema

```
RegisterPartyReferenceDataDirectoryEntryRequest {
    description:                    Input: InCR Register a customer entity in the catalog

    PartyReferenceDataDirectoryEntry RegisterPartyReferenceDataDirectoryEntryRequestPartyReferenceDataDirectoryEntry {
                                        DirectoryEntryDateType  string
                                                                Enum:
                                                                [ OpenDate, RefreshDate ]
                                    }
}
```

5 □□□□/ □□□

4. □□□□□ □□□□□

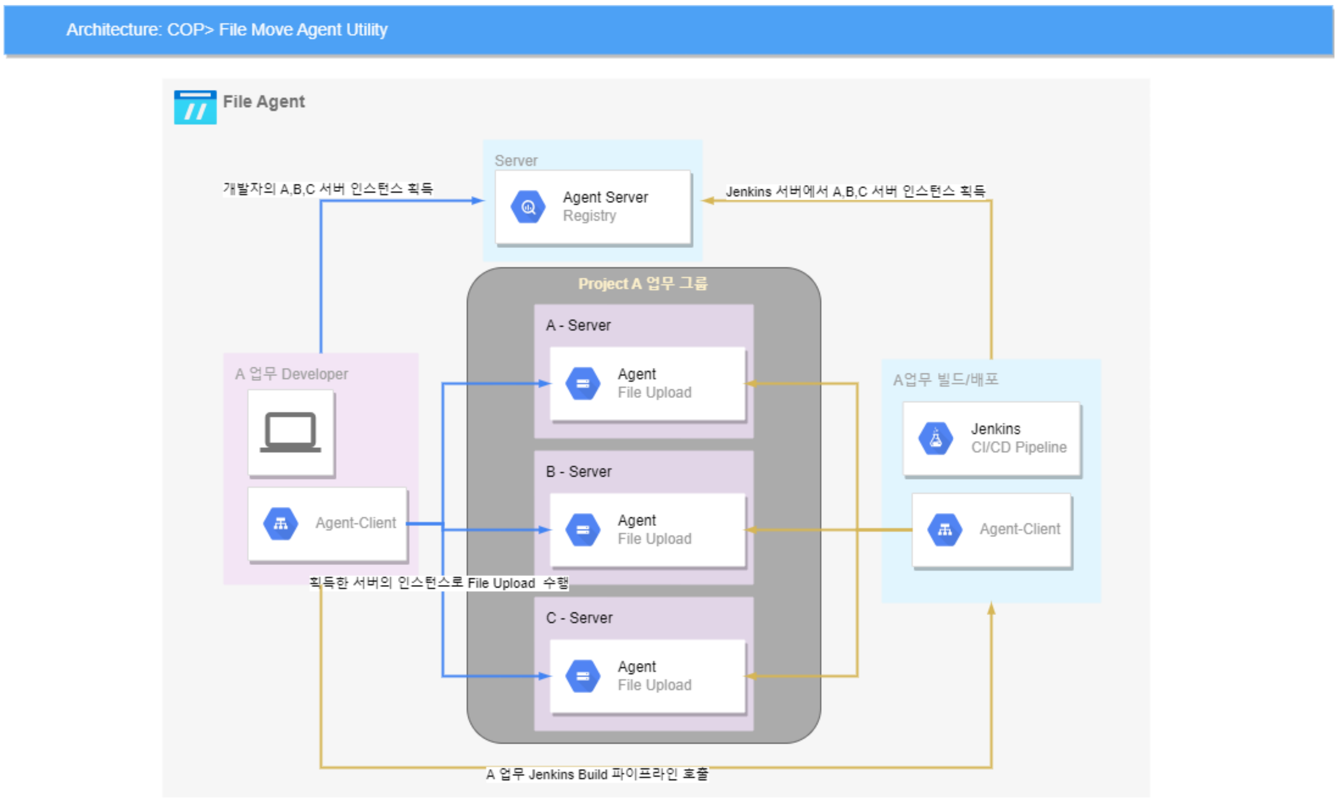
4-1. File Agent

- □□□□ □□
    - https://github.com/Hosuk-Lee/k-filetransfer-agent.git
    - https://github.com/Hosuk-Lee/k-filetransfer-server.git
    - https://github.com/Hosuk-Lee/k-filetransfer-client.git

1 File Agent □□

Agent Utility □□□□□ □□ □□□ Jenkins □□ □□□□ □ Deploy Server □ □□ □□□ □□□□ □□□□□□□.

□□□ □□□□ □□□ □□□□ FTP □□□□ □□ □□, □□ □□□ □□□ □□□.



2 Agent Program □□

- Agent Server
    - □□□ □□□□□ □□□□ □□□ □□□. Agent □□ Target □□□ □□□ □□□ □ □□□ □□□ □□□□□.
- Agnet
    - □□□□ □□□□ Client □□□ □□□□□.
        - □□ □□□ □□ □□□ □□ □□□ □□□□ □□□. (TODO LIST)
        - □□□□ □□□ □□□□□, Bash Shell□ □□(TODO LIST) □□□ □□□ □□□□.
- Agnet Client

- Command □□□□ □□ □ □ □□ □□□□ □□□.
    - Login (TODO LIST), File Upload, Remote Shell □□□□ □□□□ □□□□□.

5. □□

5-1. AsciiDoc

AsciiDoc□ □□ XML□ □□□□□□ □□□□□ □□□ □□□ □□□ □□ □□□ □□□□ □□□ □□ □ □□ □□ □□□□□.

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5-2. Notion

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