

Yukti Backup Scheduler

Technology Stack:

1. Spring boot 2
2. Quartz scheduler
3. Spring Cloud Microservices
4. Netflix Eureka OSS
5. JAVA 8

Design Patterns we will adhere:

1. Factory design pattern
2. Dependency injection pattern
3. MVC pattern

UI Backup Scheduler Fields:

Schedule backup:

1. Hourly Policy

Every 1h - 23h drop-down
Starting date picker
At 1 - 12 spinner 0 - 59 spinner AM- PM spinner

2. Daily

Every 1 - 365 days input
Starting date picker
At 1 - 12 spinner 0 - 59 spinner AM- PM spinner

3. Weekly

Every Mon - sun drop-down with check box
Starting date picker
At 1 - 12 spinner 0 - 59 spinner AM- PM spinner

4. Monthly

Days 1-31 (multiple values with comma separated) input box
Every Jan - Dec drop down with check-boxes selected all
Starting date picker
At 1 - 12 spinner 0 - 59 spinner AM- PM spinner

5. On Demand

Python Rest API:

1. GET list of backup jobs
2. GET policies list
3. POST Trigger backup
4. GET App con-fig list
5. POST Create cron job for backup job
6. PUT Update backup history

Backup Scheduler Microservices

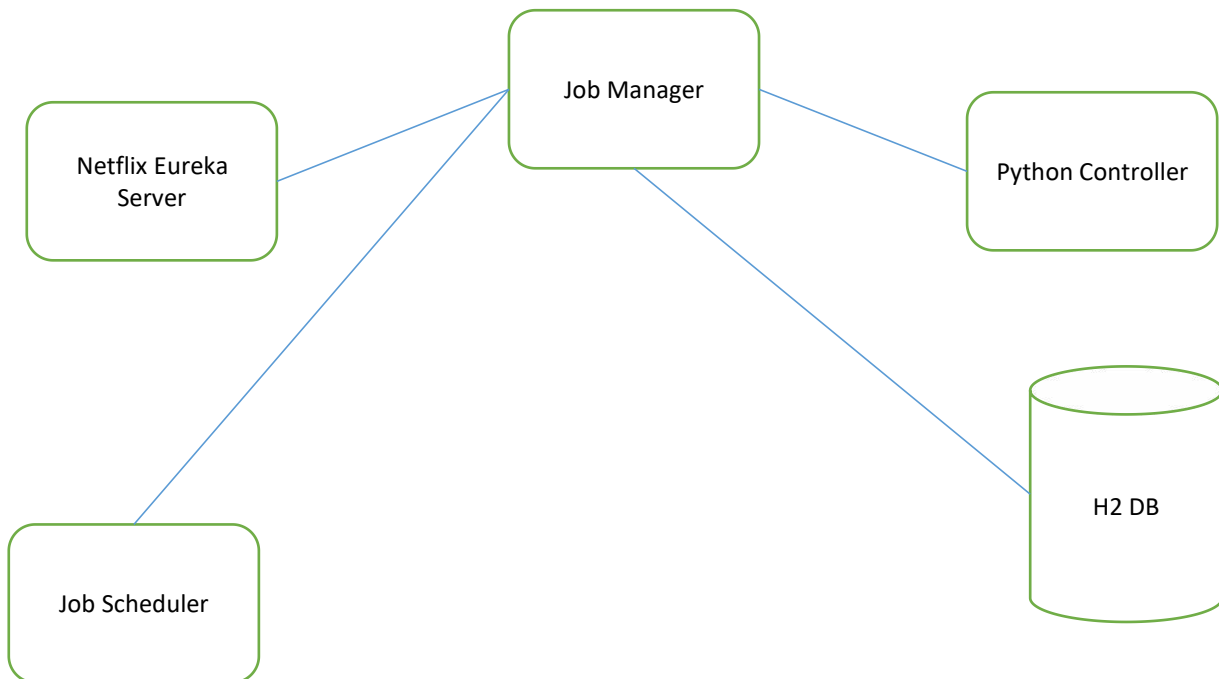


Job Manager:

Job Manager microservice will manage following work-flows:

1. Create Job for backup Job
2. Trigger backup work-flow
3. Create Cron expressions for Job Scheduler
4. Handle interaction between python controller microwaves

Job Manger microservice is a spring boot application which act as a Netflix Eureka client. It has its own H2 database to store relationships between backup job and Job. It also define the work for a job and when a Job triggered it will initiate backup work-flow and keep it records of triggered backups.

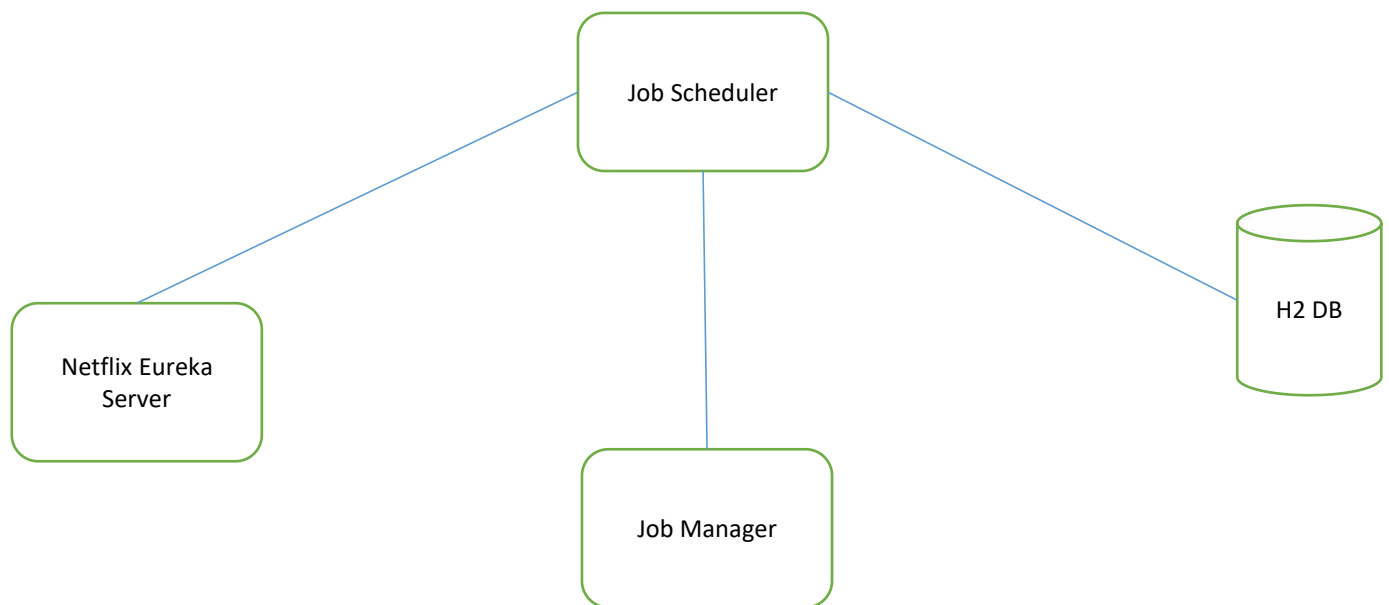


Job Scheduler:

Job Scheduler microservice will manage following features:

1. Create cron job for scheduler
2. Store cron expressions for cron job
3. Manage scheduler factory
4. Trigger Job as per scheduled cron expression

Job Scheduler microservice is a spring boot application which acts as a Netflix Eureka client. It has its own H2 database to store jobs and cron triggers. It triggers cron jobs as per the cron expression. When a cron job triggers, it will call Job manager microservice to initiate backup workflow.



Python Controller Microservice:

Python Controller Microservice is a spring boot application which communicates with yukti python restful web services and serves the data to Job manager. This will also expose all rest endpoints for backup scheduler application which can be consumed by legacy yukti python controller.

Netflix Eureka Server:

Eureka Server is a spring boot application which acts as a discovery server and holds the information about all client-service applications. Every Micro service (Job manager, Scheduler, Python controller) will register into the Eureka server and Eureka server knows all the client applications running on each port and IP address.

Netflix Eureka Server provides a dashboard to monitor all servers' status in the ecosystem and their replicas in case we are using a load balancer.

Backup Scheduler Workflow

