Dalet Flex:
High Availability (HA)

Flex Stack / Monitoring & Observability Stack

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CS Cloud Operations

Flex Stack HA – Principles

A Consul service, composed of 3 master servers and clients (one per node) register all available flex components instances.

- All services register to the consul. Consul revert to application the list of available services

MariaDB service acts on a Master/Slave architecture, using amazon RDS on AWS

Flex Stack HA : core services

Each instance is located on a different node

⊃ Redis : Cluster of 3 instances

⊃ MongoDB : Cluster of 3 instances

⊃ ArangoDB : Cluster of 3 instances

⊃ ElasticSearch : Cluster of 3 instances

⊃ RabbitMQ : Cluster of 3 instances

⊃ MariaDB : Master/Slave. Leverage RDS on AWS

⊃ Consul : server: Cluster of 3 instances, client: on each node

Core Infrastructure Stack

MariaDB ArangoDB MongoDB Redis Elastic Search RabbitMQ Consul
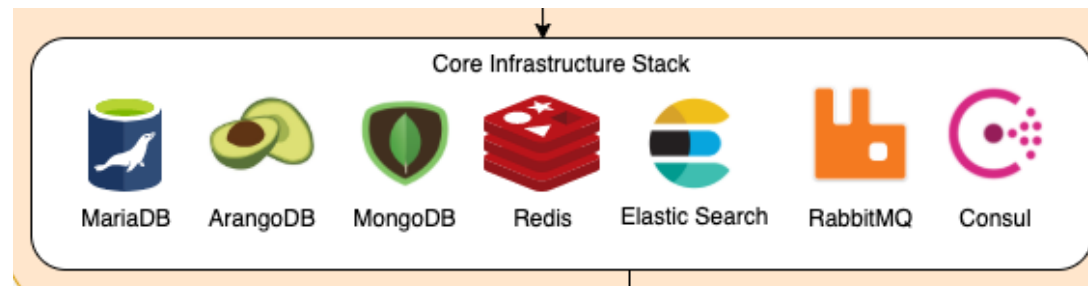
Flex Stack HA : application services

Each instance is located on a different node

⊃ Default configuration is :

– Each application nodes is present twice (2 instances). Can be increased up to 4 **but requires extra nodes**

– The most know services are :

• Master

• Job

• Registry

• Jobasyncexecutor.

• Metadatadesigner

• Thesaurus

• Taxonomy

• ...

Flex Stack HA : Media processing

‚ 2 solutions, depends on the usage load.

– Amazon EKS cluster
  • Based on kubernetes for a fully scalable solution on top of High Availability
 • Every request generates an instance

– Docker Instances
  • Can be set on dedicated node or with the existing flex servers nodes
  • Number of instance can be multiple per node
  • Every instance register to consul and is polled by processes

Administration & Observability Stack

High Availability

- 2 solutions proposed, Both can be used concurrently

- Flex Integrated Administration & Observability stack
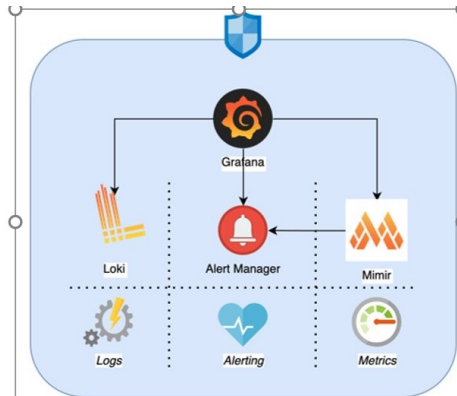
> Integrated administration & observability stack.
>   - Based on a single node (known as "monitoring")
>   - Performs backups (stored on a network share)
>   - Provides alerting and monitoring
>   - Every other node have components shipping logs to the monitoring server

- Dalet Control Tower

> High availability, cloud based observability stack
>   - High availability
>   - Backup remains performed locally on customer premise.
>   - Provides alerting and monitoring on a central platform, more effective for Dalet teams to intervene resolve any issue

Thank you.