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# Requirements Specification

Doflamingo by Alphadoop

Built based on IEEE Std. 830

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# Introduction

Purpose

Scope

Definitions, Abbreviations

References

Overview

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# Purpose

- To get a common understanding among EXEM, Professor, and Us
  - EXEM
    - who is currently managing bigdata analysis system
    - have professional knowledge in hadoop ecosystem
  - Prof. Choi
    - who has abundant experience in project management
    - understands the purpose of each section of SRS
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# Scope

- Doflamingo
  - Collect Performance Metrics, Visualize it, and Integrate it with Flamingo.
  - Consists of {Kafka, Zookeeper} Monitoring Module
  - Easy-to-use Monitoring tool, not a management tool
  - Keep the internal structure transparent
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# Overall Description

Product perspective

Product functions

User characteristics

Assumptions and dependencies

Apportioning of requirements

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Overall >>

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# Product perspective

Need the tool that can fit into any configuration **Hadoop** ecosystems

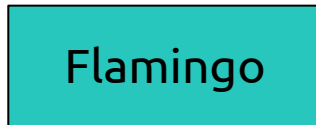
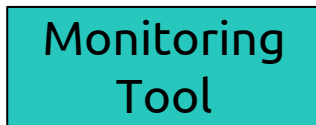
Every app in Hadoop ecosystem should have **corresponding monitoring module**

Functional addition to **Flamingo** -- covering Zookeeper and Kafka

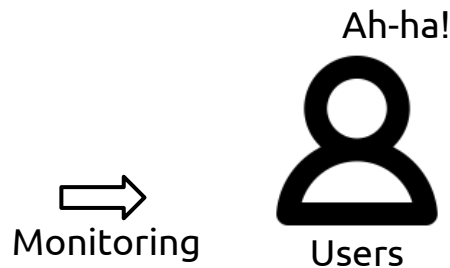


Overall >>

# Product functions



SHOW  
**METRICS**  
OF ZOOKEEPER AND KAFKA  
TO THE **USERS**



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Overall >>

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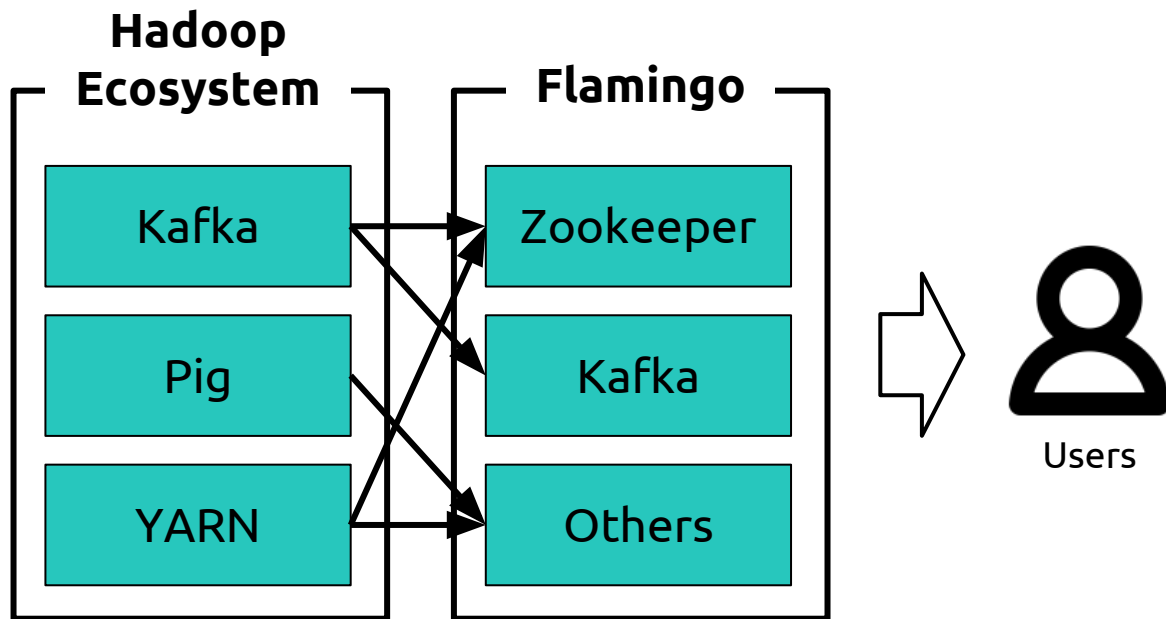
# User characteristics

- **Flamingo Developer**
    - **Knows** about the overall Hadoop ecosystem
    - **Maintains** Flamingo
  - **Hadoop System Developer**
    - **Build** custom configuration of hadoop ecosystem for client
    - **Use** monitoring tool to exactly find the cause of problem
  - **Hadoop System Manager**
    - **Understands** visualized metrics
    - **Monitors** abnormal events
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Overall >>

# Assumptions and dependencies



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Overall >>

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# Apportioning of requirements



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# Specific Requirements

External Interfaces

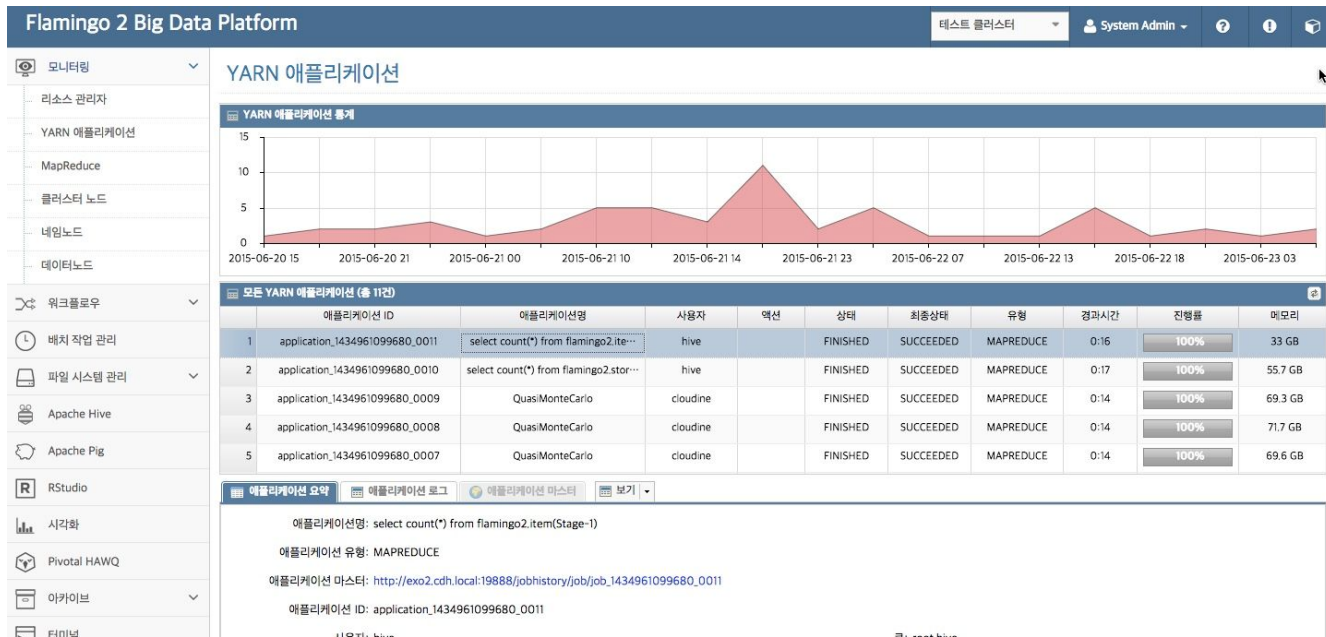
Functions

Performance Requirements

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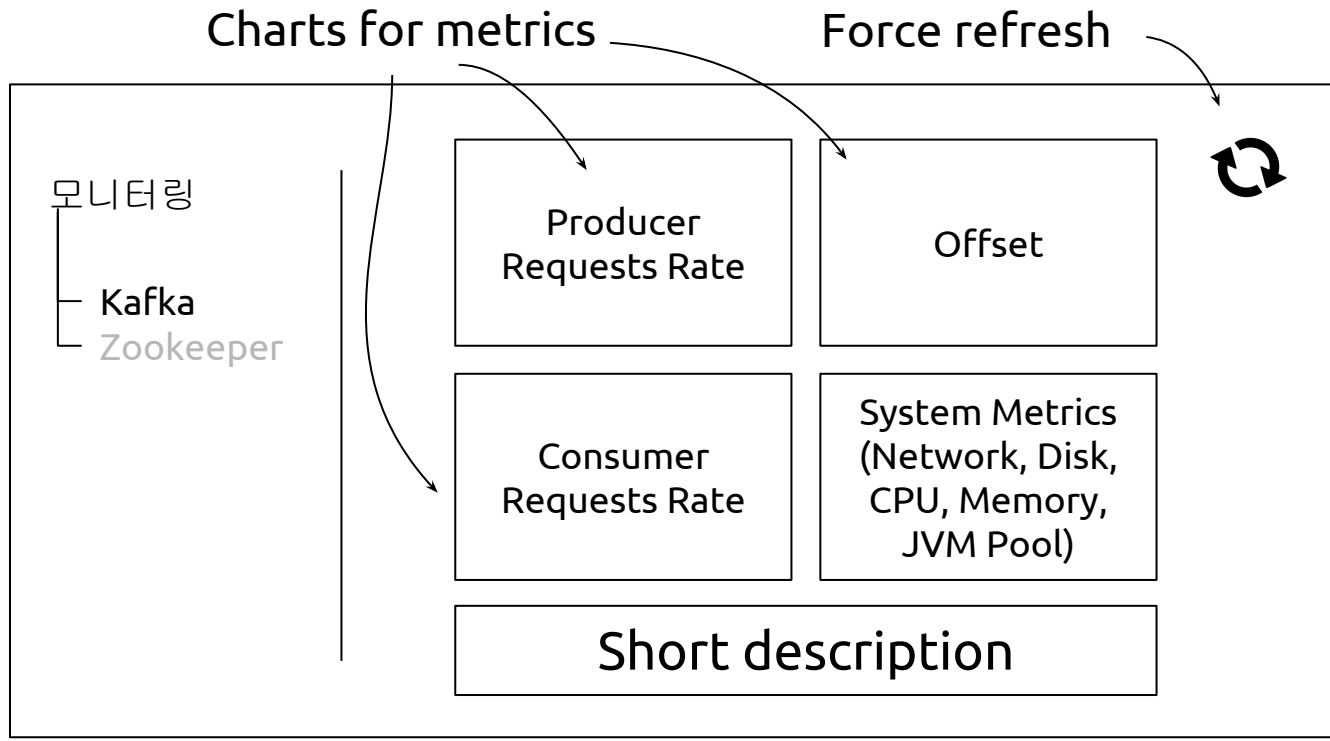
Specific >>

# SRS - External Interfaces



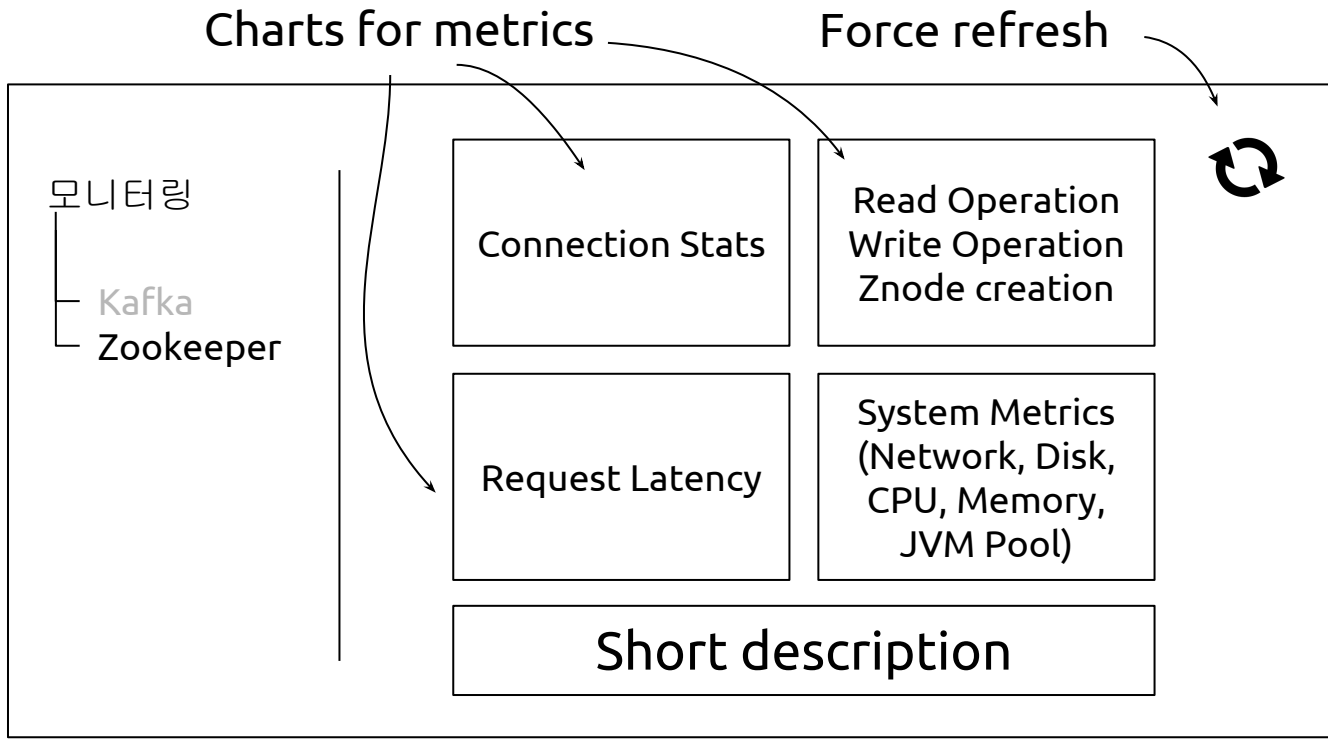
Specific >>

# SRS - External Interfaces



Specific >>

# SRS - External Interfaces



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*Specific >>*

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## **SRS - System Functions**

1. Shows extended monitoring results
  2. Alarms when unexpected behavior detected
  3. Refreshes Kafka, Zookeeper in high-level
  4. Additional functions
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*Specific >>*

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# SRS - Performance Requirements

- **Doflamingo**
    - Must react in **real-time**
    - Should be **stable**
  - **Hadoop System Manager**
    - Could figure out metrics at a glance
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*Bonus >>*

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# GQM - Metrics

[https://docs.google.  
com/document/d/1ZJkLkFKUcO3khHfyUSlPpeWkPEezrE3  
A-E2ZkJVzDzQ/edit?usp=sharing](https://docs.google.com/document/d/1ZJkLkFKUcO3khHfyUSlPpeWkPEezrE3A-E2ZkJVzDzQ/edit?usp=sharing)

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# END

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