

# *Smartface*

# Smartface Middleware Platform

PRODUCT DATA SHEET



## SMARTFACE DIGITAL TRANSFORMATION PLATFORM

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- NEXT GENERATION MIDDLEWARE & API MANAGEMENT
- MULTI-CHANNEL DEVELOPMENT PLATFORM
- MOBILE CI/CD PLATFORM
- ENTERPRISE MOBILE APP STORE
- MOCK API SUITE

HIGHLY AVAILABLE, SCALABLE AND FLEXIBLE

# SMARTFACE MIDDLEWARE

With its next generation and futureproof architecture, Smartface Middleware Platform facilitates digital transformation by alleviating the complexities of connecting traditional architectures to the modern multi-channel frontends.

## SOLUTION ARCHITECTURE

The following components reside in the Smartface Middleware Kubernetes Cluster with rolling updates, rollback capability, scalability and autoscaling, Knative infrastructure and high availability

1

### User Federation

This component is responsible from the synchronization and federation of the user data from the enterprise user directory to the authentication and authorization components.

- Collect the user profile data from the external systems
- Collect the user roles and ID from the enterprise directory
- Sync the user roles with the rule engine
- Record the federation log and the audit data

2

### Rule Engine

The business rules within the developed apps, APIs and authorization requests are managed by the rule engine

- Manage the business rules of the user federation and the developed apps in a declarative manner
- Report the results of the executed rules

3

### Configuration & Secret Management

For any developed app or for any specific middleware component, the configurations are managed in this component. It can store app settings as well as app keys and secrets in a secure dynamic storage.

4

### Authentication & Authorization

This component handles all the authorization and the authentication requests of the apps and APIs as an identity and access management module.

## ANALYTICS & REPORTING

5

### Realtime Metrics

Realtime access for the infrastructure and app metrics collected on the time series metric database.

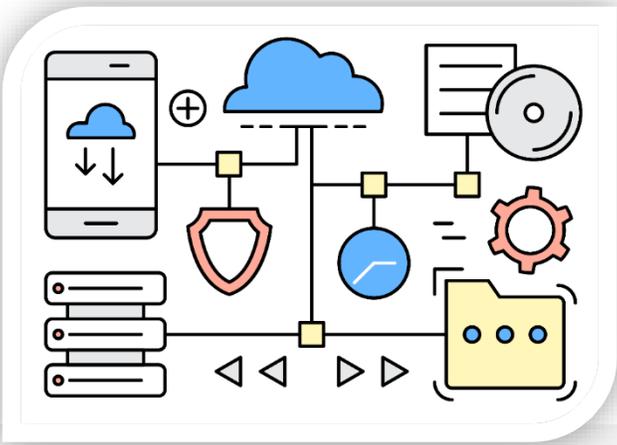
- Querying and visualization of the realtime metrics
- Alerts and notifications based on the metric analysis

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### Analytics Dashboard

The visual reporting dashboard for the metrics collected on Elasticsearch for the visibility of the Elastic Stack.

- Visualization of the collected data on Elasticsearch
- Data queries, reports and dashboards creation
- Creation of analytics analysis reports



Smartface Middleware Platform eliminates cross cutting concerns by providing a full suite of features in a centralized platform.

## API MANAGEMENT

### 7 API Gateway

All external API consumption requests are handled by the gateway with

- Security management (authentication, authorization, policies)
- Performance management (throttling, rate limiting, quota, cache, QoS)
- Monitoring (request & response logging, status, stats, monitoring)
- API compositing (aggregation, transformation, EIP)
- API mediation (SOAP to REST and decoding)

### 8 In-Memory KV Database

This component is an accelerator for API performance management

- API response and app data caching
- Custom caching implementation as needed

### 9 API Proxies

External business/legacy API management with mediation & translation (e.g. SOAP to REST), API composition and transformation and managing Kubernetes pods based on the requests for autoscaling & monitoring.

### 10 Admin APIs

Provides administrative APIs to manage the entire platform as well as the integrations with the backends with the readily available and customized infrastructure and middleware APIs.

### 11 Mock API Server

Mock API management for rapid development with Mock API generation with Open API spec files and serving generated Mock APIs in persistency.

## DATA LAYER

### 1 Time Series Metric Database

Metric data collected from the infrastructure, the middleware and the apps are stored as time series data for monitoring and alerts.

- Metric query and alert manager
- Integration with the realtime dashboard for data visualization and reporting

### 2 Log Management

Log data collected from the infrastructure, the middleware and the apps are stored in this component for the centralization of all the component and application logs in the cluster.

- API request and response logging from the API Gateway based on the integrations
- Integration with Elasticsearch

### 3 Search Engine

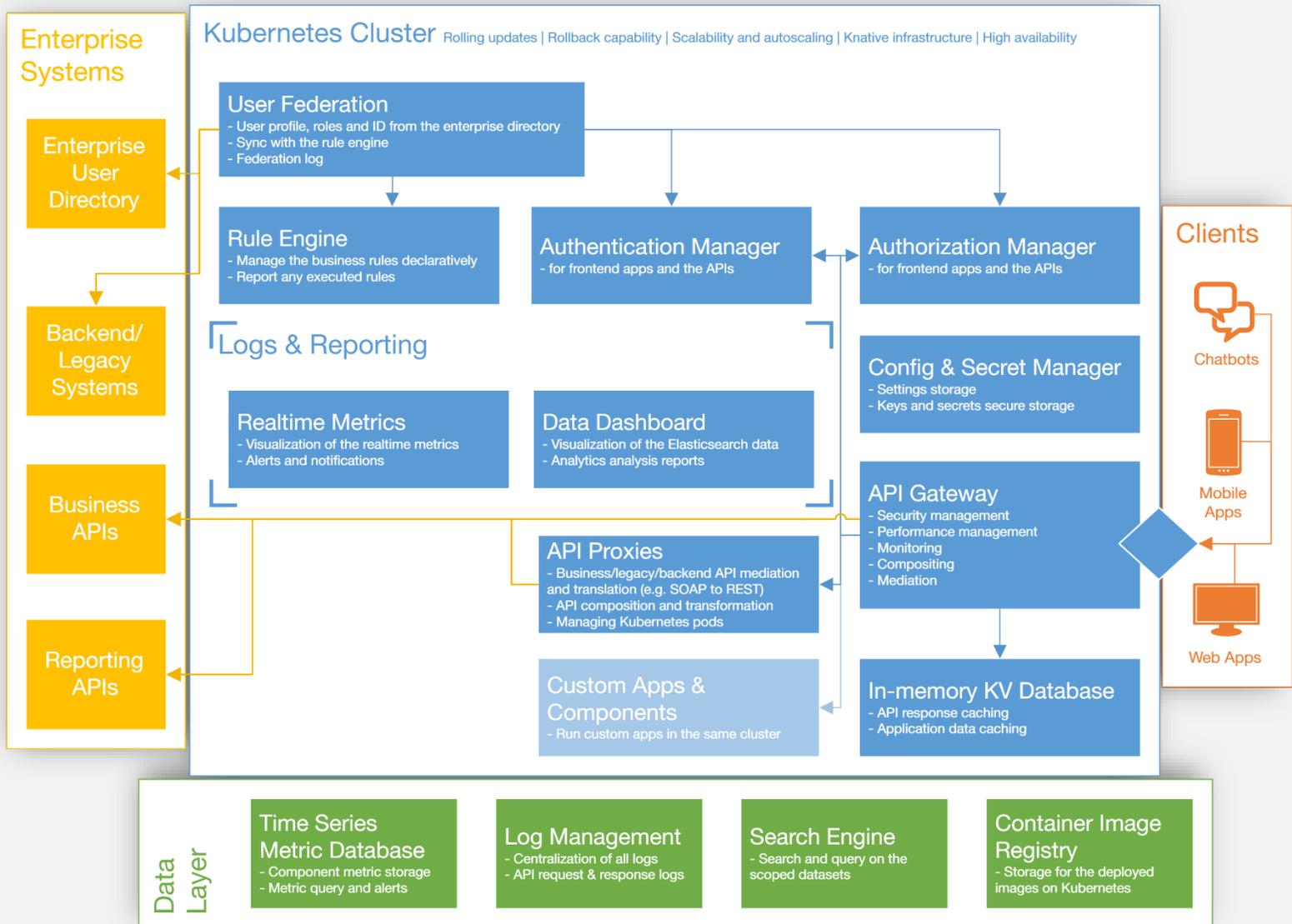
Search and analytics engine for all data collected from the infrastructure, the middleware and the apps. Enables search and query on the scoped datasets.

### 4 Container Image Registry

This component acts as the storage for the deployed images on Kubernetes. The Docker images are sent here with CI/CD, which are then processed by the nodes in the Kubernetes cluster to run a specific version.

## TYPICAL DEPLOYMENT ARCHITECTURE

Below is a typical deployment of the middleware solution including apps developed with the Smartface multi-channel platform, for an end-to-end digital transformation initiative.



## ABOUT SMARTFACE

# Smartface: The Cloud Pioneer of Enterprise Mobility

Smartface provides a fully cloud-based, cloud native, continuously integrated platform with multi-channel app development & lifecycle management and middleware & API management. With Smartface, it is possible to develop native iOS/Android mobile and single-page web applications and mobile backends just with JavaScript/TypeScript knowledge and centrally manage all enterprise mobility and frontend management processes. The platform can run on compatible Kubernetes or OpenShift environments for the maximum flexibility.