Production Requ			
Sl	**Type**	**Quantity**	**Specification**
1	Containerization Platfrom Kubernetes Master	3	• 16 GB vRAM • 8 vCPU
2	Containerization Platfrom Kubernetes Porxy	1	• 4 GB vRAM • 2 vCPU
3	Containerization Platfrom Kubernetes Worker	16	• 32 GB vRAM • 16 vCPU
4	ArcGIS Enterprise	6	•32 GB vRAM • 8 vCPU
5	DB Convertaion, CDC Pipeline Kafka, Debizium, Airbytes Servers	2	• 32 GB vRAM • 16 vCPU
6	ETL Processing Server	1	• 16 GB vRAM • 8 vCPU
7	MySQL 8.2 Database Cluster DB LB for Cluster-1 and Cluster-2	2	• 4 GB vRAM • 2 vCPU
8	MySQL 8.2 Database Cluster DB Node for Cluster-1 and Cluster-2	6	• 32 GB vRAM • 16 vCPUe
9	Oracle Database for Central-DB	1	• 192 GB RAM • 48 OCPU
10	Oracle Database for NoteSheet,Change log, activity Log	1	• 96 GB RAM • 24 OCPU
11	MongoDB Server	3	• 16 GB vRAM • 8 vCPU
12	Matamo Tools and DB	1	• 16 GB vRAM • 8 vCPU
13	Postgress Server for GIS	3	• 32 GB vRAM • 16 vCPU

14	Postgress Server for Keycloak and Kong	1	• 16 GB vRAM • 8 vCPU
15	Elasticsearch nodes for Computing and processing	1	• 32 GB vRAM • 16 vCPU
16	Minio Object Storage required 4 nodes for standard setup.	4	• 128 GB vRAM • 16 vCPU
17	Application Proxy	4	• 8 GB vRAM • 4 vCPU
18	Storage for Minio	1	• 300 TB
19	CICD Server	1	• 8 GB vRAM • 4 vCPU
20	Docker Repository	1	• 8 GB vRAM • 4 vCPU
21	ML Server	1	• 128 GB vRAM • 32 vCPU • 48 GB GPU
22	eMutation Related Other Systems	4	• 32 GB vRAM • 16 vCPU
23	SIEM Server	1	• 16 GB vRAM • 8 vCPU
24	NMS Server	1	• 8 GB vRAM • 4 vCPU
	Total	**66**	**2372 GB RAM** **842 vCPU** **72 OCPU** **48 GB GPU**

Licenses

Sl	Type	
1	Oracle Database	
2	Matamo	
3	NGINX Plus	
4	Mirantis	
5	ArcGIS	
6	Elasticsearch	
7	Minio	

ıirements

Remarks
In Kubernetes, using three master nodes is used to ensure high availability (HA) and fault tolerance, load balancing & scalability & kubernetes best practices
Kubernetes proxy is needed to manage network communication inside the cluster implements load balancing & manages network rules.
In Kubernetes cluster, worker nodes are responsible for running application workloads. They play a crucial role in scalability, fault tolerance, resource availability, and performance.
ArcGIS Enterprise is a powerful GIS (Geographic Information System) platform designed to securely store, manage, analyze, and share spatial data within an organization's infrastructure while providing mapping, geospatial analysis, and data visualization capabilities.
Kafka use for efficiently handle and process of large volumes of real-time data streams with high throughput and low latency.
NiFi use for automate and manage complex data flows between systems with ease, scalability, and real-time processing capabilities.
MySQL use for its reliability, ease of use, and efficient handling of structured data in relational databases.
MySQL use for its reliability, ease of use, and efficient handling of structured data in relational databases.
Oracle use for its scalability, security, and advanced features in managing enterprise-level data.
Oracle use for its scalability, security, and advanced features in managing enterprise-level data.
MongoDB use for its flexible schema, scalability, and efficient handling of unstructured or semi-structured data.
Matomo use for its privacy-focused, open-source analytics platform that provides detailed insights into website traffic and user behavior.
PostgreSQL used for its advanced features, reliability, and support for complex queries in handling structured data.

PostgreSQL used for its advanced features, reliability, and support for complex queries in handling structured data.
Elasticsearch use for its powerful full-text search and real-time analytics capabilities on large volumes of data.
MinIO used for its high-performance, scalable, and cloud-native object storage solution designed for unstructured data.
Application Proxy is use for its high-performance web serving, reverse proxying, and load balancing capabilities.
Store data for miniO service.
CICD server used for its automation capabilities in building, testing, and deploying software efficiently.
Docker Repository used for its secure, scalable, and efficient management of container images and artifacts in a private registry.
ML Server used to efficiently deploy, manage, and scale machine learning models for production workloads.

Mutaion payment gateway service is used for managing MySQL server operations.

Wazuh for its comprehensive security monitoring, threat detection, and compliance management capabilities.

LibreNMS used for its scalable, open-source network monitoring and management capabilities.

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Licenses
Oracle 19c/21c
On-Premise
For WAF if Required
For Kubernetes
Enterprise licensing
Enterprise
Enterprise

Received Resources

Name	Quantity	Specification	Remarks
Containerization Platfrom Kubernetes Master	3	• 16 GB vRAM • 8 vCPU	Received as as requir
Containerization Platfrom Kubernetes Porxy	1	• 4 GB vRAM • 2 vCPU	
Containerization Platfrom Kubernetes Worker	9	• 32 GB vRAM • 16 vCPU	we've intially receive
	4	• 24 GB vRAM • 12 vCPU	
ArcGIS Enterprise	0		not applicable
DB Convertaion, CDC Pipeline Kafka, Debizium, Airbytes Servers	1	• 32 GB vRAM • 16 vCPU	project office allow us
ETL Processing Server	2	• 16 GB vRAM • 8 vCPU	
MySQL 8.2 Database Cluster DB LB for Cluster-1 and Cluster-2	4	• 4 GB vRAM • 2 vCPU	
MySQL 8.2 Database Cluster DB Node for Cluster-1 and Cluster-2	6	• 32 GB vRAM • 24 vCPU	
	6	• 24 GB vRAM • 12 vCPU	
Oracle Database for Central-DB	2	• 32 GB vRAM • 16 vCPU	
Oracle Database for NoteSheet,Change log, activity Log	0		
MongoDB lb and Server	1	• 4 GB vRAM • 2 vCPU	
	3	• 16 GB vRAM • 8 vCPU	
Matamo Tools and DB	1	• 32 GB vRAM • 16 vCPU	
Postgress Server for GIS	0		

Postgress Server for Keycloak and Kong	1	• 16 GB vRAM • 8 vCPU
Elasticsearch nodes for Computing and processing	0	
NFS Server	1	• 8 GB vRAM • 4 vCPU
Application Proxy	2	• 8 GB vRAM • 4 vCPU
Storage for Minio	0	
CICD Server	1	• 24 GB vRAM • 12 vCPU
Docker Repository	1	• 8 GB vRAM • 4 vCPU
ML Server	0	
eMutation Related Other Systems	1	• 16 GB vRAM • 8 vCPU
SIEM Server	1	• 16 GB vRAM • 8 vCPU
NMS Server	1	• 8 GB vRAM • 4 vCPU
JUMP-WINODWS	1	• 8 GB vRAM • 4 vCPU
EM-PROD-JUMP	1	• 4 GB vRAM • 2 vCPU
Repository Server	1	• 16 GB vRAM • 8 vCPU
Total	**54**	**1132 GB RAM** **610 vCPU**

as per project requrni
