iCEDQ

NextGen Highlights

The 4th generation platform.

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Architecture

Deployment

Microservices
Designed & Developed from ground up with microservice architecture to meet current and future needs of any enterprise.
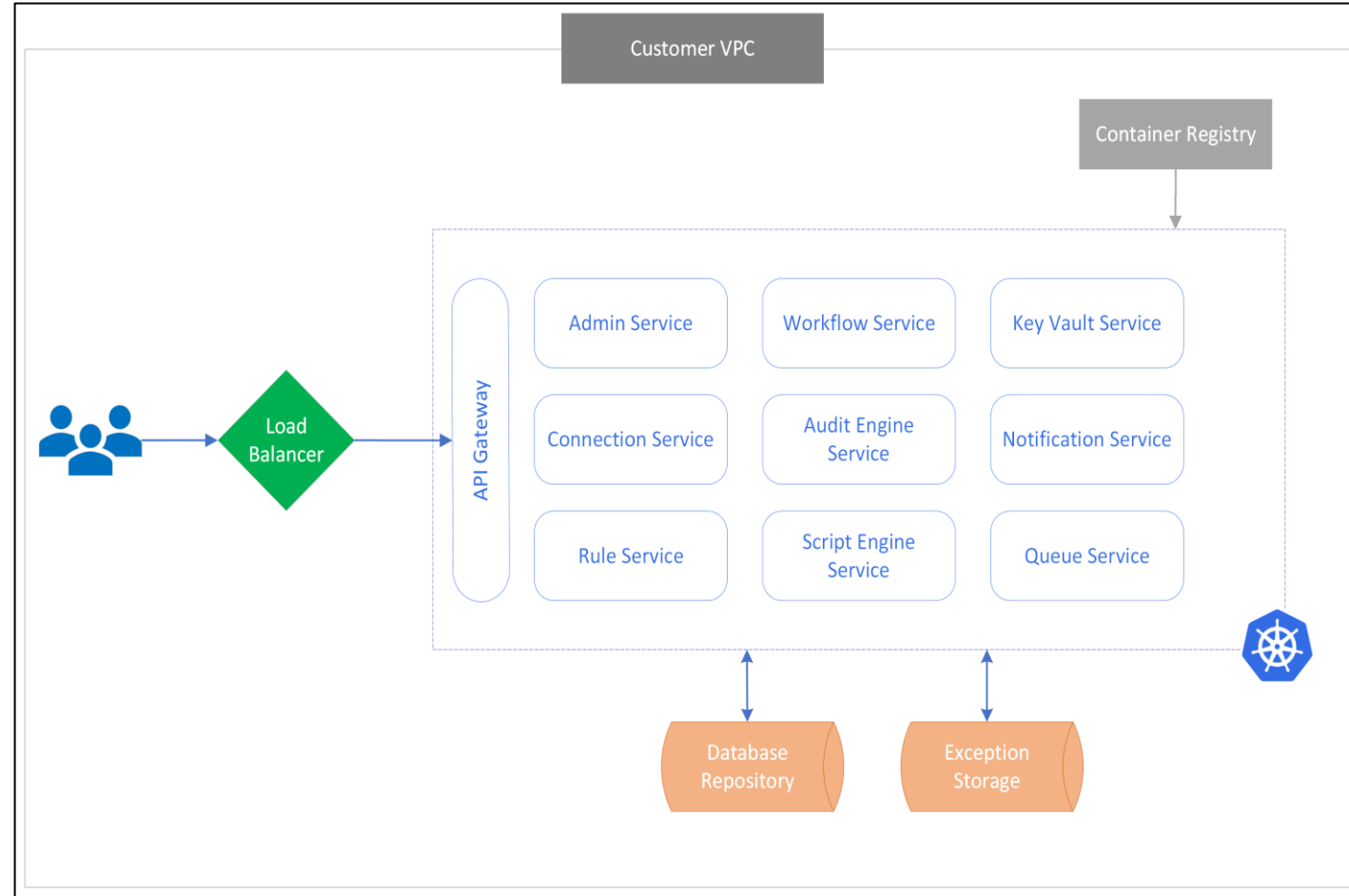
Containerized
Packaged as containerized application to be deployed on-prem or on any cloud platform (EKS, AKS, GKE, OpenShift).

Auto Scaling
Deploy in any Kubernetes environment to get ability to auto scale the application based on demand.

Automated Deployments
Single click installation, upgrade and rollback in any environment. Ability to enable GitOps.

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Security

New RBAC's
Org, Account or Workspace based access controls. Now users can create their own connections, folders and grant access to others.
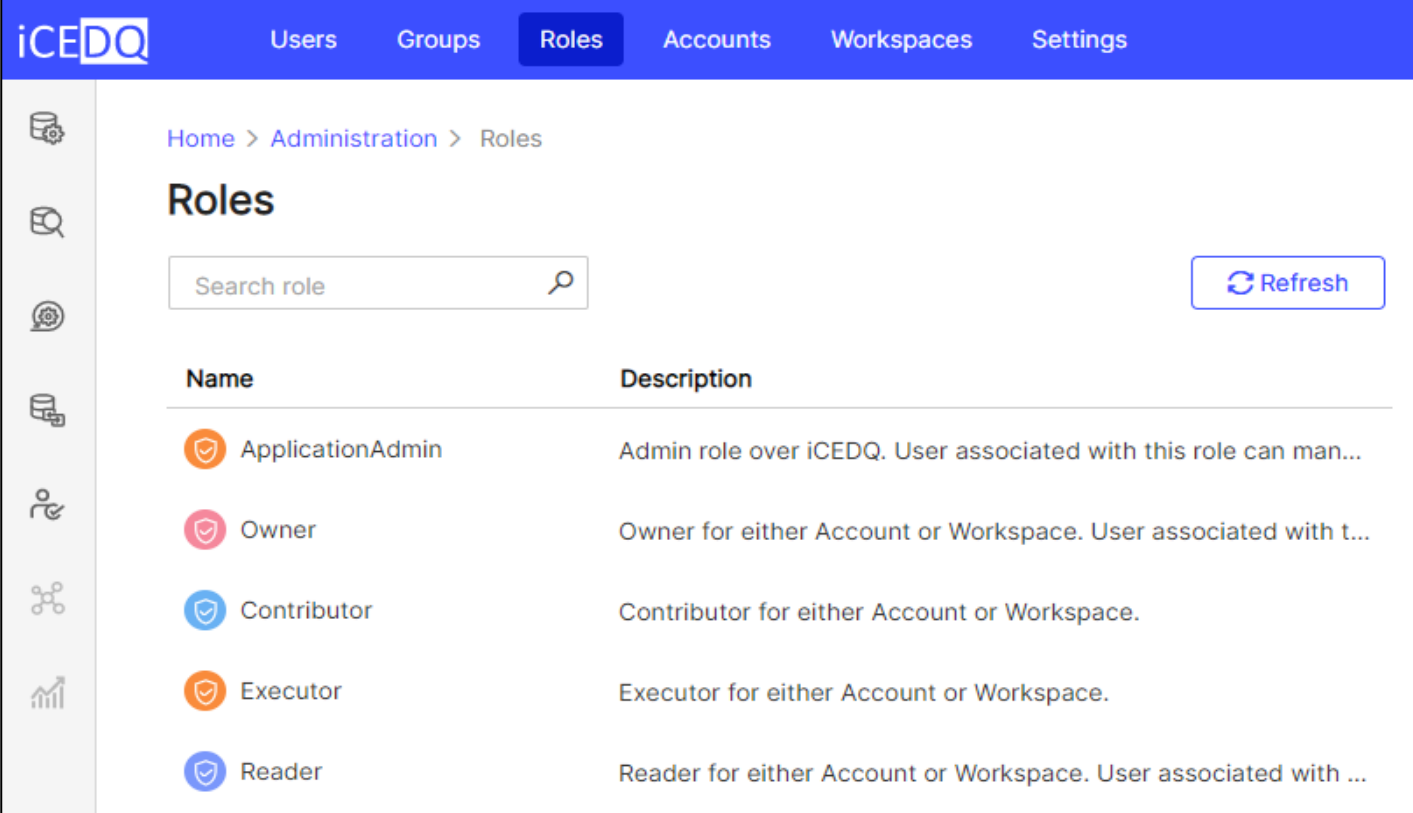
Integrated Key Vault
Key Envelop Encryption for storing credentials and other sensitive information. Customers will be able to bring their own keys.

LDAP & SSO
Sync groups and users from LDAP. Integrate with IDPs like Azure AD, Okta, Ping using OIDC to enable SSO.

Auth Protocol
Access all the Rest API's using OAuth 2.0 protocol

Logging & Monitoring

Logging
Generates detailed logs for all the microservices and allow users to push it to their own logging services.
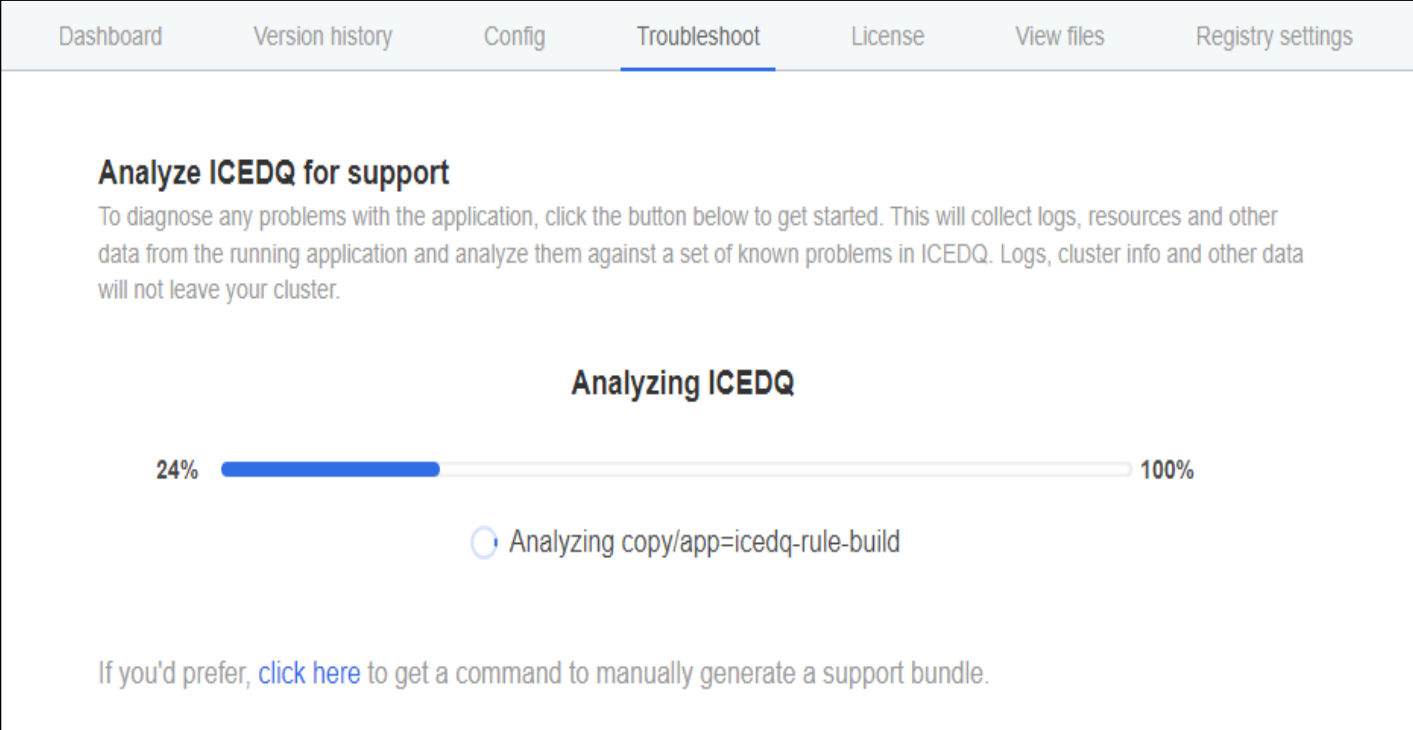
Distributed Tracing
Advance logging and tracing mechanism to track issues across microservices

Support Bundles
Generate support bundle with a click of a button and send it to Torana team for quick analysis and resolution.

System Monitoring
Get a central dashboard to monitor resources of the Kubernetes cluster and stay on top of the system issues.

Dashboard   Version history   Config   **Troubleshoot**   License   View files   Registry settings

Analyze ICEDQ for support
To diagnose any problems with the application, click the button below to get started. This will collect logs, resources and other data from the running application and analyze them against a set of known problems in ICEDQ. Logs, cluster info and other data will not leave your cluster.

Analyzing ICEDQ

24% ▬▬▬▬▬▬▬▬ 100%

⟳ Analyzing copy/app=icedq-rule-build

If you'd prefer, click here to get a command to manually generate a support bundle.

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Data Testing

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Rules

UI/ UX Overhaul
Now businesses and technical users can start creating optimized Rules with minimum training.

Rules – Low Code/ No Code
Click and configure out-of-box Rules for Duplicate checks, Count checks, and more scenarios from an expanding library.

Checks – Low Code/ No Code
Click and configure out-of-box Checks for Completeness, Pattern, Conditional, and many more scenarios from an expanding library.

Easier Maintenance
Keep working on a Rule for multiple days across sessions using the Draft mode and track each change using Versioning.

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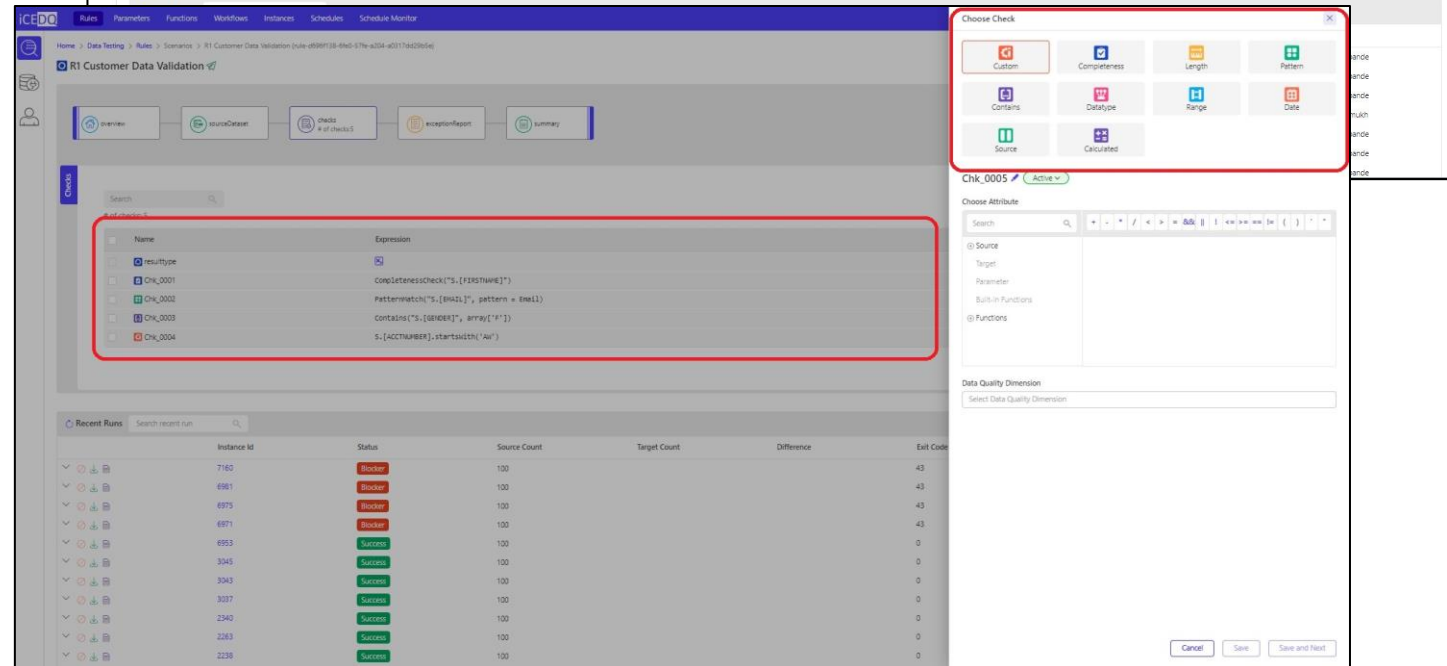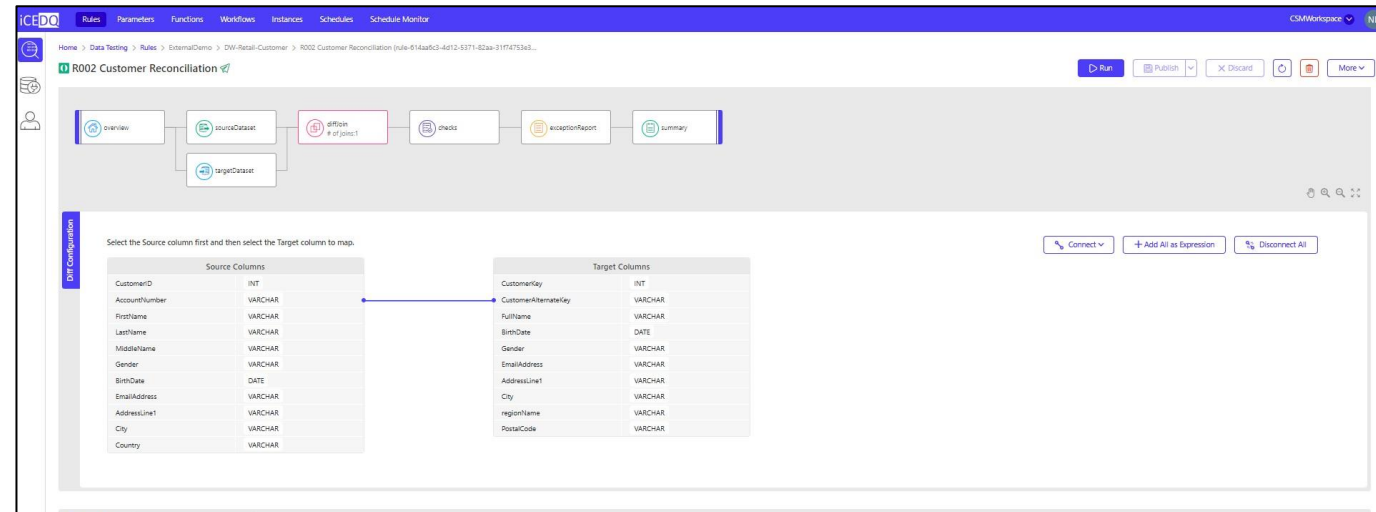
Rules

Query Designer
Auto SQL Query generation for databases to reduce the effort required

Scripting Rule
For those 20% corner cases, use Groovy scripts to perform pre- or post-processing logic, such as fetching values from a reference database and passing them as parameters to other rules.

User Defined Functions
Create User Defined Functions in the workspace through UI or REST APIs.

Rest APIs
API First application. APIs for rule creation, execution, user, and connection creation.

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Workflow

Orchestrate
Create Workflows to orchestration execution of Datasets, Rules and Scripts to achieve end-to-end test automation.

Sequential
Users can configure the Workflow trigger these tasks in a sequential manner.

Parallel*
Users can configure the Workflow to trigger these tasks parallelly.

Runtime Overrides
Trigger workflows externally using APIs and override connections, parameters and variables at runtime.

iCEDQ vs Others

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Architecture

Feature	iCEDQ	Other Products
Application	Microservice architecture that enables scaling based on customer usage.	Monolithic architecture that is not easy to maintain or scale.
Standalone Engine	Processes data in-memory that can scale with "n" number of tests and volume of data.	Loads data into a database that limits it from scaling for high volume data and number of tests.
Cluster Engine	Processes data in EMR, Databricks or Cloudera spark cluster.	Not available.
Data Issue Repository	Uses elastic storage (S3, Blob, NAS) for store high volume and historical data in binary format using parquet.	Stores data in a database so storing high volume and historical data is a bottleneck in application performance.
Scalability	Auto scale based on customer usage by deploying in any Kubernetes Cluster.	Not available
Deployment	GitOps deployment on AKS, EKS, GKE, OpenShift or any LINUX VM.	Deploys only on Windows Server. GitOps not supported.

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Security

Feature	iCEDQ	Other Products
RBAC	Multi-tenant access for departments & BU's. Separation of duties for Admin & Other users.	Single tenant access controls and only admins can create connections.
Encryption	Data is encrypted in transit & rest. Uses KEK at rest with ability for customers to BYOK.	Data is not encrypted at rest.
Auth Protocol	OAuth 2.0	OAuth 2.0
LDAP & SSO	Supported	Supported
User Credential Profile	Each user can manage their own credentials against a connection. Adds an extra security layer.	Not Available. Connection credentials are shared by all the users.
Data Copy	Compliant: Data is only processed in memory not copied.	Not Compliant: All data is loaded and stored in their database repository.

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Application Monitoring

Feature	iCEDQ	Other Products
System Monitoring	Centralized Prometheus Dashboard to monitor all the systems.	Not available.
Logging	Push logs to customer log monitoring applications.	Not available.
Support Bundles	Enable automatic redaction from log files before generating support bundles.	Not available.

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Data Testing

Feature	iCEDQ	Other Products
Rules – Low Code/ No Code	Supported	Supported
Checks – Low Code/ No Code	Supported	Supported
Scripting	Create advance pre/ post processing scripts for end-to-end automation.	Not available.
User Defined Functions	Create complex UDF's and create your own library using Java/ Groovy.	Not available.
Workflows	Create conditional or sequential task executions of tests.	Only support sequential execution.
Datasets	Join access data sources and create a single virtualized data set. Supported.	Supported.

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Data Testing

Feature	iCEDQ	Other Products
Data Issue Visualization	Creates one single exception report that shows issues column-by-column.	Create separates reports that shows issues row-by-row.
Parameterization	Supported	Supported
Query Designer	Supported	Supported
Rest API	All: Rest APIs available for everything action.	Limited: Only available for execution.

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Dashboards

Feature	iCEDQ	Other Products
Integrated DW	Provides an out-of-box data warehouse which is used for dashboard & reporting.	Not available.
Out Of Box Dashboards	Supported	Supported
Build your Own Dashboards	Customers can use any of their favorite reporting tool (Tableau, PowerBI, Qlik) to generate custom dashboards using the integrated DW.	Not available.

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Future Releases

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Data Observability & Monitoring

Table Monitors
Create rules and checks against tables/ views to continuously monitor data issues in production environment.

Anomaly Detection (AI / ML /)
A new engine that continuously captures table metrics and helps identify anomalies in the data without having manually create checks.

Data Profiling
Profile the table on-demand or continuously to help understand the data better and to create checks.

DQ Dimension Reporting
Measure data quality of the table using pre-defined DQ dimensions.

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Task Management

Requirements & Test Cases

Manage requirements, test cases and links Rules to get complete traceability for QA reporting.

Task Management

Assign task for creating Rules, Workflows and other entities and track progress.

Incident Workflow

Open tickets on Rule failures and manage the workflow towards issue resolution.

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Asset Library

Metadata
Centralized repository of metadata of all the data sources, rules, results, tags etc.

Lineage
Captures the relation ship between all the entities and displays the lineage overlapped with data issues.

Business Glossary
Allows users to create glossary of business terms.

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