June 13, 2023

Creating a Cloud Data Profile Warehouse

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Housekeeping Tips









- Today's Webinar is scheduled for 1 hour
- The session will include a webcast and then your questions will be answered live at the end of the presentation
- All dial-in participants will be muted to enable the speakers to present without interruption
- Questions can be submitted to "All Panelists" via the Q&A option and we will respond at the end of the presentation
- The webinar is being recorded and will be available on our INFASupport YouTube channel and Success Portal where you can download the slide deck for the presentation. The link to the recording will be emailed as well.
- Please take time to complete the post-webinar survey and provide your feedback and suggestions for upcoming topics.



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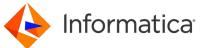
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Cloud Data Profile Warehouse

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- Traci Spindler, Solutions Architect, Professional Services



Agenda

- What is a Profile Warehouse
- Why build a Profile Warehouse
- Who would use a Profile Warehouse
- How is it built
- Design Solution
- Technical Walk-Thru
- Aggregation and Dashboard



What is a Cloud Data Profile (CDP) Warehouse

- A collection of metadata regarding the Profiles run in IDMC/Cloud Data Profile (CDP)
- It provides the necessary data about an Org's Profile runs to build custom dashboards for Data Quality trend analysis, and Overall Data Quality Metrics (Completeness, Timeliness, Validity, Uniqueness, Accuracy and Consistency)



Why build a CDP Warehouse?

- Provides an overall picture of the health of the data
- If you have 3rd Party Vendor's that provide your business data, it can track how complete/accurate their data is and it can show trends to see if data is being "cleaned up"
- It can send reports to different areas of your business.
- It can act as an Audit Tool
 - Did the anomaly data get corrected after it was identified and agreed upon to fix the data?
- The data will still be saved in your infrastructure.
 - If you run out of space and need to delete old profiles within CDP
 - If your IDMC Org expires



Who would use a CDP Warehouse?

- Data Owners
- Data Stewards
- Data Scientists
- Business Analysts
- Technical IT Resources
- Leadership, Directors, VP's, CEO's



How is the CDP Warehouse Built?

- A set of Cloud Data Integration (CDI) mappings call a series of REST API's to obtain the data
- The REST API response data is written to csv files and then loaded into a Reporting Database (CDP Warehouse) of your choosing, i.e., PostgreSQL, Snowflake, SQL Server
- BI Reporting Dashboards are then created using the metrics out of the CDP Warehouse



Design Solution:

- Part 1: Runs a series of CDI mappings that call REST API's that pertain to CDP and writes to csv files
- Part 2: Runs a series of CDI mappings that read the csv files and load database tables.
- Part 3: Runs a series of CDI mappings that aggregates the data from the database tables
- Part 4: Showcases the results in a BI Dashboard/s



List of Rest API's Used – this will be explained more in the Walk-Thru

API Seq #	API Name	Profile Standard or Custom API's	Variable names	Parameter name
1	IDMC Login	https://dm-us.informaticacloud.com/ma/api/v2/user/login	NA	NA
2	Profile List	https://use4-dqprofile.dm-us.informaticacloud.com/profiling-service /api/v1/profile	NA	NA
3	Profile execution status **	https://use4.dm-us.informaticacloud.com/jls-di/api/v1/Orgs('{OrgId}')/JobLogEntries?\$top={top}&\$filter=(startswith(instanceName,'{profile_name}')	profile_name	Top Orgld
4	Profile metadata details	https://use4-dqprofile.dm-us.informaticacloud.com/profiling-service/api/v1/profile/{id}	id	NA
5	Column profiling details	https://use4-dqprofile.dm-us.informaticacloud.com/metric-store /api/v1/odata/Profiles('{profileid}')/Columns?\$top={top} &runKey= {runKey}	profileid	top runKey
6	Top frequent values	https://use4-dqprofile.dm-us.informaticacloud.com/metric-store /api/v1/odata/Profiles('{profileid}')/Columns('{columnid}')/ValueFrequencies?runKey={runKey}	profileid columnid	runKey
7	Column pattern data	https://use4-dqprofile.dm-us.informaticacloud.com/metric-store/api/v1/odata/Profiles('{profileid}')/Columns('{columnid}')/Patterns?\$top={top}&runKey={runKey}	profileid columnid	top runKey
8	All profile runs	https://use4-dqprofile.dm-us.informaticacloud.com/profiling-service /api/v1/runDetail?profileId={profileid}	profielid	NA
9	Profile additional metadata **	https://use4.dm-us.informaticacloud.com/frs/v1/Documents('{frs_id}')?\$expand=userInfo,tags	frs_id	NA
10	Rule additional metadata **	https://use4.dm-us.informaticacloud.com/frs/v1/Documents('{frs_id}')?\$expand=userInfo,tags	frs_id	NA



Cloud Data Profile Warehouse Technical Walk-Thru



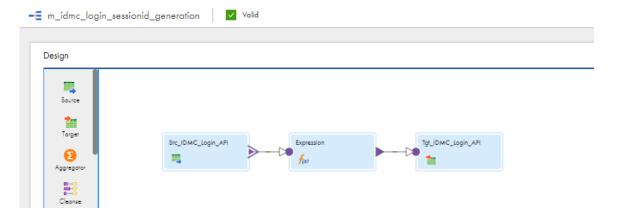
Cloud Data Profile

Profile run 2 of 2 | 23 of 23 Columns | 2 of 2 Rules | 2500 Rows (All rows) | Jun 4, 2023, 10:00:07 PM Profile_All_Custom... Save Definition Rules Schedule Insights • £ ▼ with: All Statistics Rules View: Columns Columns Value Distribution % Null # Null % Distinct # Distinct % Non-disti... # Non-disti... # Patterns % of Top Pa... Minimum Le... Maximum L... Minim Trend ▼ Columns % Change Type Trend 99.96% 2499 0.04% 99.84% 10 10,11: CustomerID 0% 171 0.36% 92.8% 2320 5 38.2% 7 CustomerTier Lastname 10.96% 274 89.04% 2226 22.96% 12 Abedi 0% Firstname 8.28% 207 91.72% 2293 29.76% Aaron 51 86.28% 2157 13.72% 343 100% 3 #INPL Company 0% Non-distinct Address 1 90.04% 2251 9.96% 249 1 100% 1 60 #1 TC 1 Address2 2500 0% 0 0% 0 100% 0 0 ▼ Data Types (1) Address3 2500 0 0% 0 100% 0 0 0% ** SY City 22.12% 553 77.6% 1940 8 29% 3 20 varchar(100) Documented Data Type 2 City2 2496 0.12% 0.04% 2 99.84% 2 FL String(12) 100% 13 ΑK 107 2.56% 93.16% 2329 3 93.08% State 64 Zip 0 42.12% 57.88% 1447 2 96.44% 5 10 0090 ▼ Patterns (7) 10 PrefDelivMethod 0.48% 12 99.52% 2488 17.96% 35 Courie Country 58 0.16% 97.52% 2438 3 94.4% U.S. X(7) 22.96% 10 CreateDate 661 1839 4 1/10 26.44% 73.56% 71.48% X(5) 21.68% 21 #inpu 82 0.2% 96.52% 2413 3 96.56% Currency 3 6 -470€ X(6) OrderAmount 87.16% 2179 12.84% 321 81.16% 16.96% Status 0.24% 99.76% 2494 96.92% Α X(4) 11.84% 8 31/12 0.04% 99.96% 100% 8 MiscDate 2499 X(8) 10.6% Email 0.2% 99.76% 2494 48.92% 19 26 dumm Website 0.12% 99.84% 2496 37.88% 24 32 http:/ Others 8.96% PhoneNum 0.12% 99.84% 2496 37.88% (+1)-8 7% 100% 19 19 06/0 LastUpdateDate 0.04% 99.96% 2499



API: IDMC Login

Mapping



Response

"icSessionId"

"i2g6Q6kXUCwkQ65NzAau0S"

Request

Request Message

Operation: IICS_Login_API

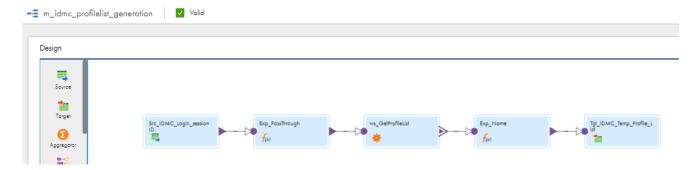
```
{
"body" : {
    "@type" : "xxxxxxx",
    "username" : "xxxxxxxx",
```

"password" : "xxxxxxxxx"

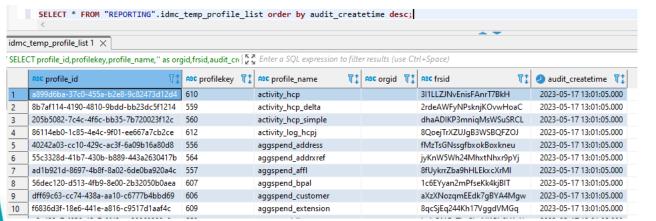


API: Profile List

Mapping



Response



Request

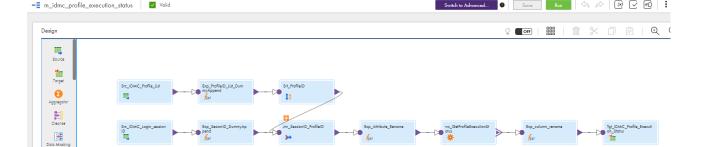
No input required for this API



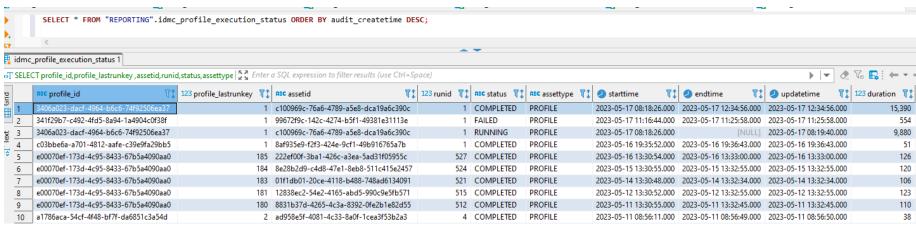
API: Profile execution status

Mapping





Profile Name Org ID

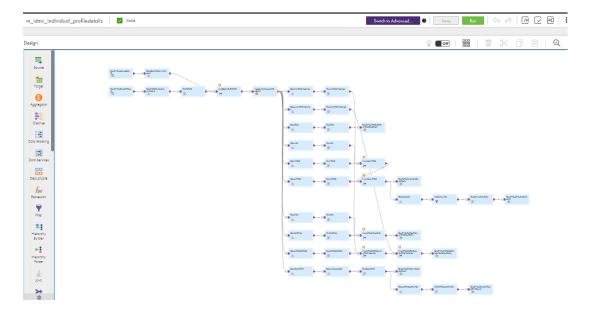






API: Profile metadata details

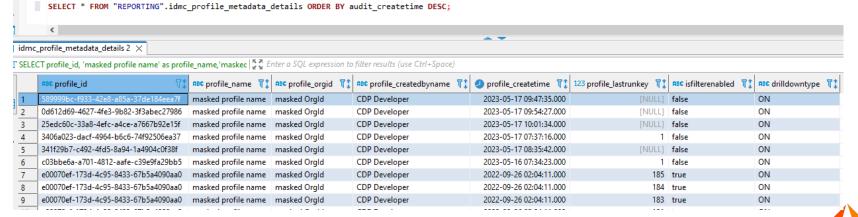
Mapping



Request

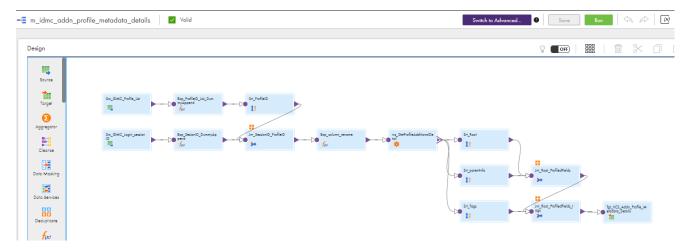
Profile ID

Informatica



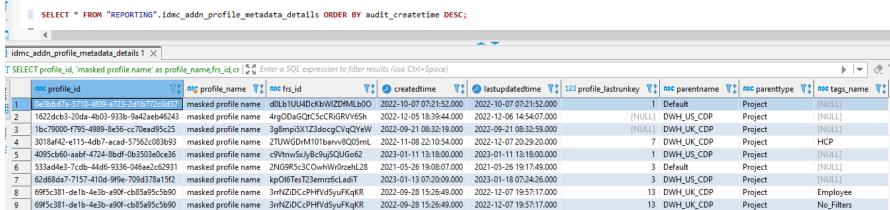
API: Profile additional metadata

Mapping



Request

FRS ID

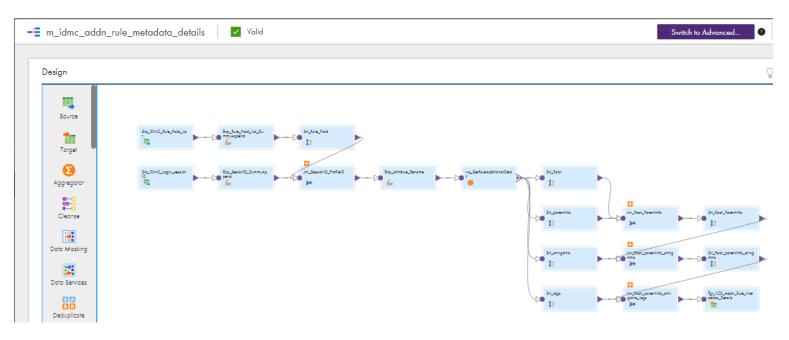




API: Rule additional metadata

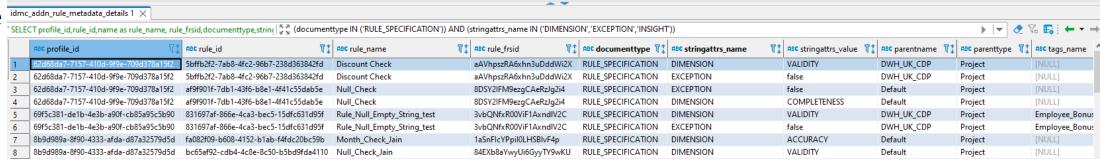
SELECT * FROM "REPORTING".idmc_addn_rule_metadata_details ORDER BY audit_createtime DESC;

Mapping



Request

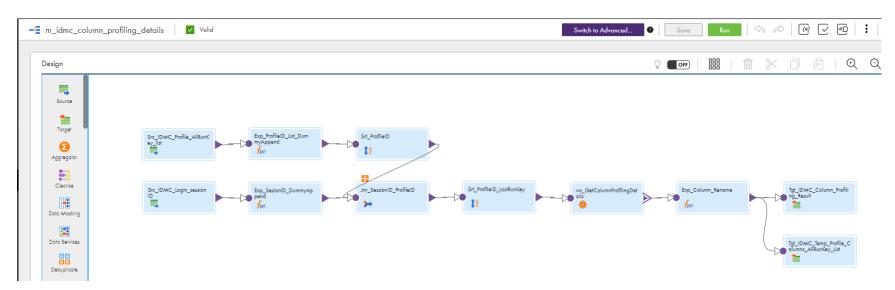
FRS ID





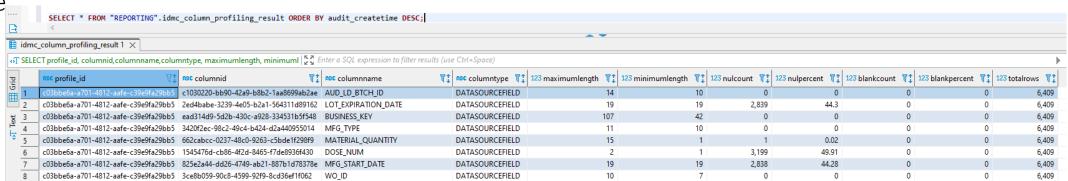
API: Column profiling details

Mapping



Request

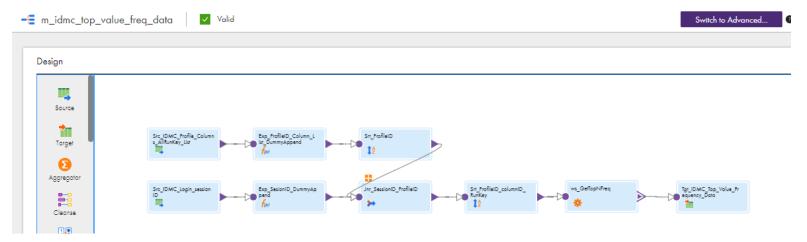
Profile ID runKey





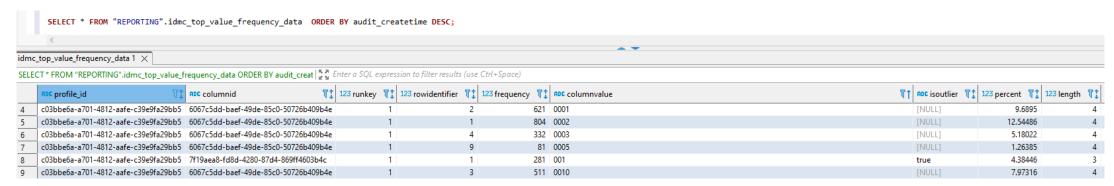
API: Top frequent values

Mapping



Request

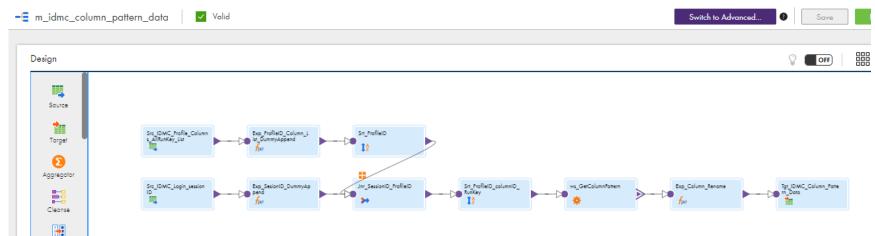
Profile ID Column ID runKey





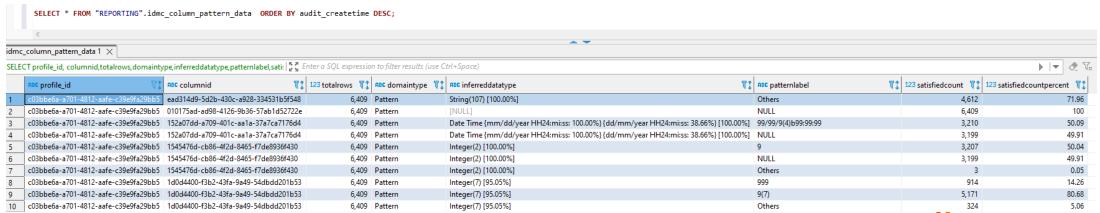
API: Column pattern data

Mapping



Request

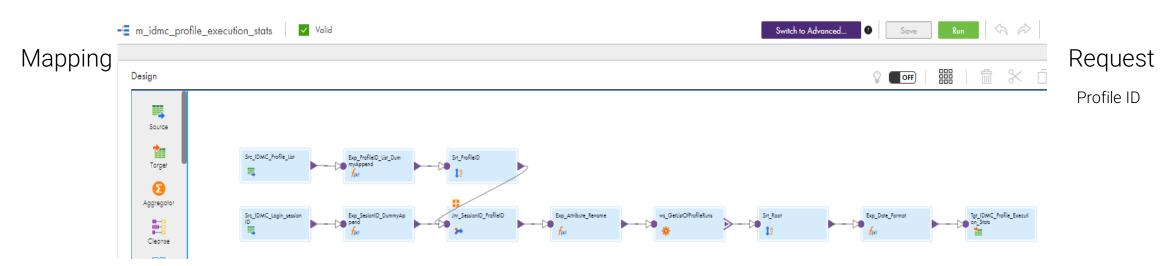
Profile ID Column ID runKey

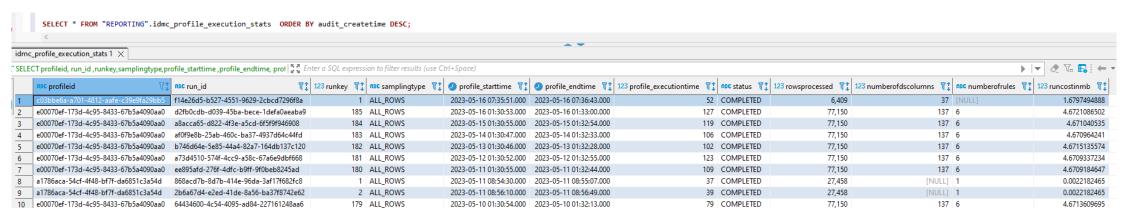






API: All profile runs







Reporting Data Aggregate and Dashboard

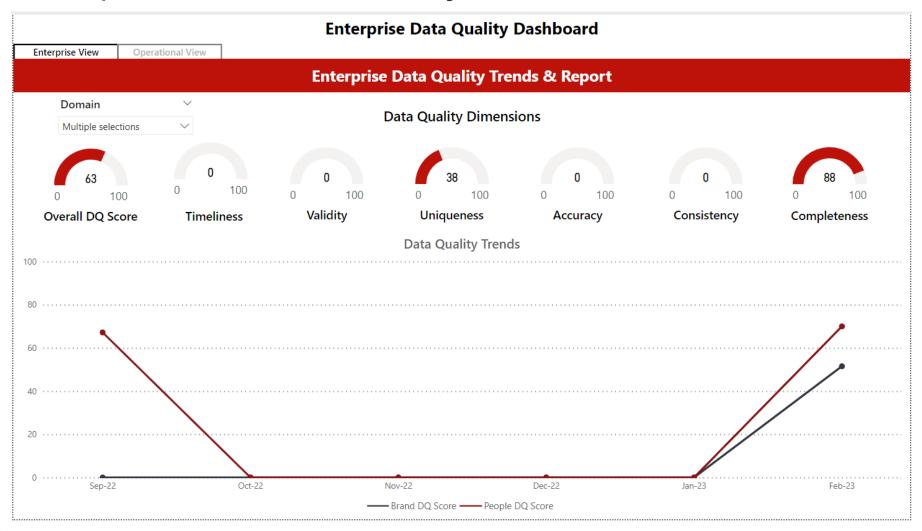


Profile Run Aggregate

select * from "Profile Metrics Agg Table" pmat; Profile_Metrics_Agg_Table 1 × **♦** % **.** ← `SELECT case when "Source"='Veeva' then 'SRC_TYP_1' when "Source"= 🔓 🚜 Enter a SQL expression to filter results (use Ctrl+Space) ANS domain T | ANS table T | 123 Overall_DQ_Score T | 123 dq_completeness T | 123 dq_timeliness T | 123 dq_validity T | 123 dq_uniqueness T | 123 dq_accuracy T | 123 dq_consistency T | 123 dq_consistency T | 123 dq_validity T | 123 dq_uniqueness T | 123 dq_accuracy T | 123 dq_consistency T | 123 d 123 run_key 11 source 🌃 DATA_DOMAIN_1_TBL_1 61.72 84.38 39.06 2022-09-14 06:41:11.000 SRC_TYP_1 DATA_DOMAIN_1 Default 2022-10-07 07:22:24.000 [NULL] [NULL] [NULL] SRC_TYP_1 DATA_DOMAIN_1 Default 2023-01-23 06:45:15.000 SRC TYP 1 DATA DOMAIN 1 TBL 1 67.19 89.58 [NULL] [NULL] 44.79 [NULL] 2022-09-16 07:01:29.000 SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 73.03 3.35 2023-02-21 02:31:59.000 101 SRC_TYP_2 2023-02-20 02:31:59.000 100 DATA_DOMAIN_2 Default 58.79 100 [NULL] 73.03 3.35 [NULL] SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 73.03 3.35 2023-02-19 02:32:13.000 SRC_TYP_2 DATA DOMAIN 2 Default 58.79 100 [NULL] 73.03 3.35 [NULL] 2023-02-17 02:32:28.000 97 SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 73.03 3.35 2023-02-16 02:32:28.000 SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 [NULL] 73.03 3.35 [NULL] 2023-02-15 02:32:27.000 95 11 SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 73.03 3.35 [NULL] 2023-02-14 02:32:22.000 DATA_DOMAIN_2 Default 12 SRC_TYP_2 58.79 100 [NULL] 73.03 3.35 [NULL] 2023-02-13 02:34:38.000 93 13 SRC_TYP_2 DATA_DOMAIN_2 Default 58.79 100 73.03 3.35 [NULL] 2023-02-12 02:32:44.000 92 14 SRC_TYP_2 DATA DOMAIN 2 Default 58.79 100 [NULL] 73.03 3.35 [NULL] [NULL] 2023-02-10 02:32:09.000 90



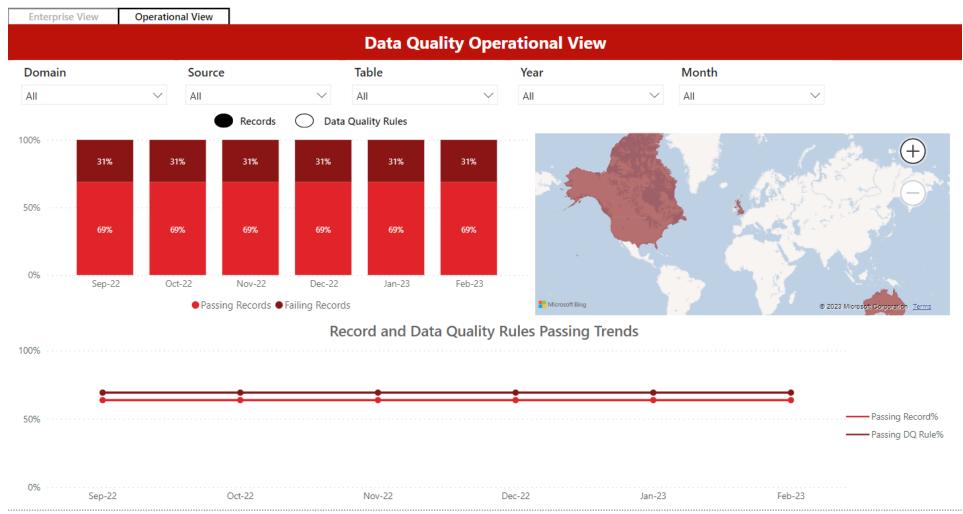
Enterprise Data Quality Dashboard





Enterprise Data Quality Dashboard

Enterprise Data Quality Dashboard





Finally, Thank you for partaking in this Tech Tuesday

If you would like to learn more about creating your own Profile Warehouse, reach out to your Informatica Account Executive to have Professional Services assist you.



Questions

