

Laporan Hasil UAT

Data Warehouse Satu Data ITERA

User Acceptance Testing (UAT) untuk sistem Data Warehouse Satu Data ITERA. Pengujian mencakup fungsionalitas dashboard, proses ETL, dan keamanan sistem.

Hasil Pengujian :

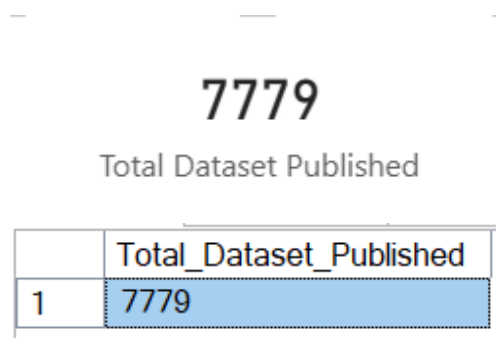
Keterangan	Nilai
Total Test Case	6
Passed	6
Failed	0

A. Detail Hasil per Test Case

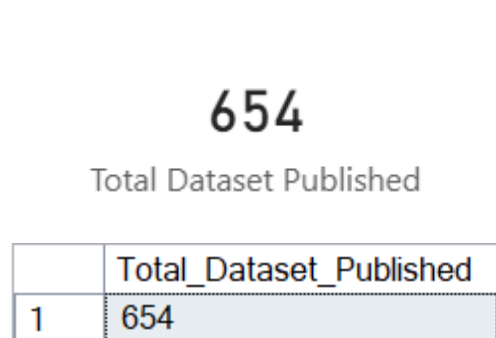
1. Fungsionalitas Dashboard

TC001: Dashboard Executive Governance

Total dataset public :

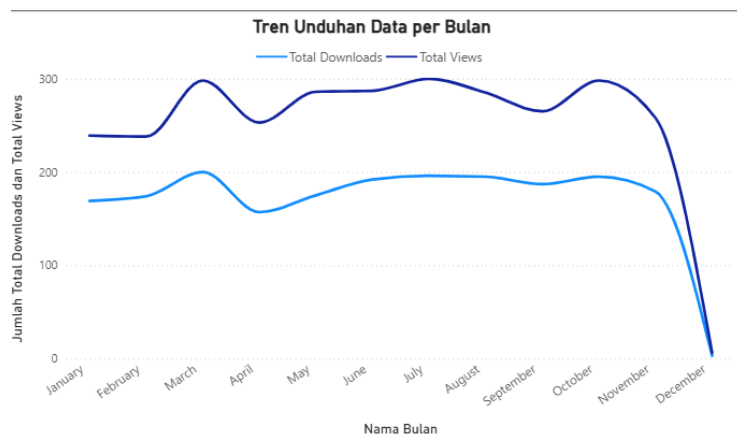


Total dataset dengan filter tahun 2024:



- **Status:** Passed
- **Hasil:** Halaman Executive Governance berhasil menampilkan data dengan benar. Jumlah dataset yang ditampilkan sesuai dengan hasil query ke database. Filter tahun berfungsi normal.

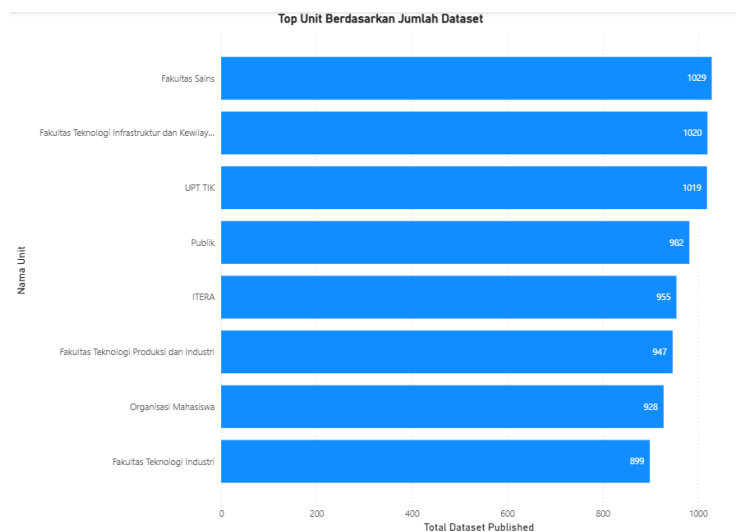
TC002: Tren Unduhan Dataset



	Nama_Bulan	Tahun	Total_Download
1	December	2025	3
2	November	2025	179
3	October	2025	195
4	September	2025	187
5	August	2025	195
6	July	2025	196
7	June	2025	192
8	May	2025	175
9	April	2025	157
10	March	2025	200
11	February	2025	174
12	January	2025	169
13	December	2024	165

- **Status:** Passed
- **Hasil:** Grafik tren unduhan menampilkan data per bulan dengan benar. Tooltip dan fitur drill-down berfungsi sesuai harapan.

TC003: Ranking Unit Kerja

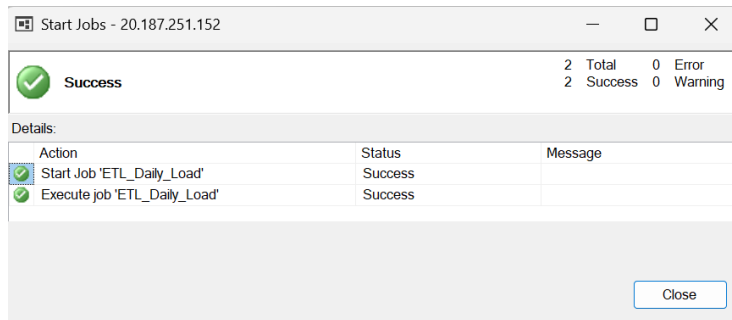


	Nama_Unit	Jumlah_Dataset
1	Fakultas Sains	1029
2	Fakultas Teknologi Infrastruktur dan Kewilayahan	1020
3	UPT TIK	1019
4	Publik	982
5	ITERA	955
6	Fakultas Teknologi Produksi dan Industri	947
7	Organisasi Mahasiswa	928
8	Fakultas Teknologi Industri	899

- **Status:** Passed
- **Hasil:** Peringkat unit kerja ditampilkan berdasarkan jumlah dataset yang dipublikasikan. Fitur drill-down ke level prodi berfungsi dengan baik.

2. Proses ETL

TC004: Eksekusi Job ETL Harian



Query :

```
SELECT TOP 5
    j.name AS Job_Name,
    h.run_date,
    h.run_time,
    h.run_duration,
    CASE h.run_status
        WHEN 1 THEN 'Success'
        WHEN 0 THEN 'Failed'
        ELSE 'Unknown'
    END AS Status
FROM msdb.dbo.sysjobhistory h
JOIN msdb.dbo.sysjobs j ON h.job_id = j.job_id
WHERE j.name LIKE '%ETL%' OR j.name LIKE '%SatuData%'
ORDER BY h.run_date DESC, h.run_time DESC;
```

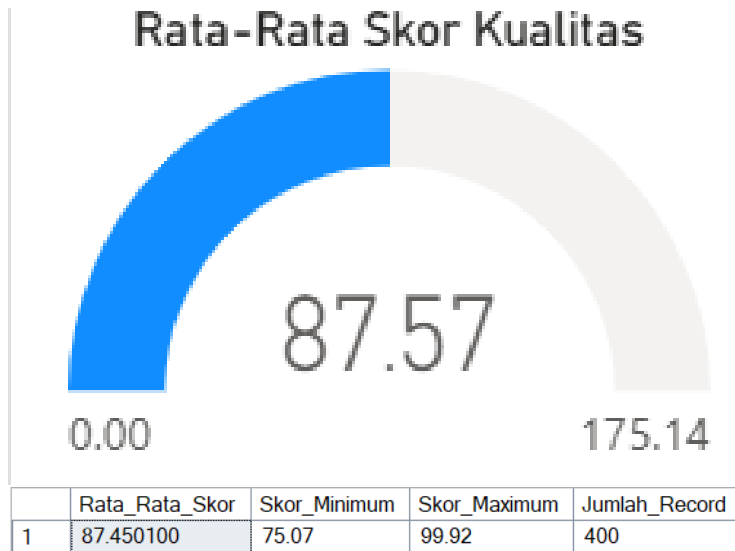
Output :

	Job_Name	run_date	run_time	run_duration	Status
1	ETL_Daily_Load	20251207	164832	2	Success
2	ETL_Daily_Load	20251207	164832	2	Success
3	ETL_Daily_Load	20251201	20000	1	Success
4	ETL_Daily_Load	20251201	20000	1	Success
5	ETL_Daily_Load	20251130	20000	1	Success

- **Status:** Passed
- **Hasil:** Job ETL berhasil dijalankan melalui SSMS. Prosedur `usp_Master_ETL` selesai tanpa error dan data baru berhasil dimuat ke tabel fakta.

TC005: Validasi Kualitas Data

Cek Skor Kualitas :



Cek Record Unknown :

Query :

```
SELECT * FROM Dim_User WHERE User_SK = -1;
SELECT * FROM Dim_Dataset WHERE Dataset_SK = -1;
SELECT * FROM Dim_Organization WHERE Organization_SK = -1;
```

Output :

	Rata_Rata_Skor	Skor_Minimum	Skor_Maximum	Jumlah_Record
1	87.450100	75.07	99.92	400

User_SK	User_ID	Username	Type_User	Unit_Organisasi	Status	Tanggal_Registrasi
-1	0	Unknown	Unknown	Unknown	Active	2025-12-01

Dataset_SK	Dataset_ID	Nama_Dataset	Deskripsi	Format	Kategori_Nama	Tingkat_Akses	Frekuensi_Update	Status_Dataset	Effective_Date	End_Date
-1	0	Unknown	Unknown dataset	Unknown	Unknown	Public	Unknown	Active	2025-12-01	NULL

Organization_SK	Unit_ID	Nama_Unit	Type_Unit	Parent_Unit	Level
-1	0	Unknown	Unknown	NULL	0

Cek Duplikasi :

Query :

```
SELECT Dataset_ID, COUNT(*) AS Jumlah
FROM Dim_Dataset
WHERE Is_Current = 1
GROUP BY Dataset_ID
HAVING COUNT(*) > 1;
```

Output :

Dataset_ID	Jumlah
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- **Status:** Passed
- **Hasil:** Tabel Fact_Dataset_Quality berisi skor kualitas untuk setiap dataset. Record dengan SK = -1 (Unknown) tersedia di Dim.User untuk menangani referensi yang tidak lengkap dan tidak terdapat duplikat di Dim.Dataset

3. Keamanan

TC006: Role-Based Access Control

Login sebagai Viewer:

Connect (Preview)

History Browse

Recent Connections

- MSSQLSERVER - 20.187.251.152, DM_SatuDataITERA_DW (viewer_user)
- MSSQLSERVER - 20.187.251.152, <default> (sa)
- MSSQLSERVER - localhost, <default> (ANUM\raufa)

Connection Properties Connection String

Server Name: 20.187.251.152

Authentication: SQL Server Authentication

User Name: viewer_user

Password: ••••••••

☐ Remember Password

Database Name: DM_SatuDataITERA_DW

Encrypt: Mandatory

☒ Trust Server Certificate

Advanced...

Custom Properties

Name: MSSQLSERVER

Color: <default> Custom...

Connect Cancel Help

Test query SELECT :

Query :

```
SELECT TOP 10 * FROM Dim_User;  
SELECT TOP 10 * FROM Fact_Dataset_Access;
```

Output :

User_SK	Dim_User	Organization	Category	Time_SK	Data_Source_SK	Jumlah_Akses	Jumlah_Download	Jumlah
3	2	2	UXOXD	Mahasiswa	Fakultas Sains	Active	2025-03-23	
4	3	3	UXOXA	Unknown	UPT TIK	Active	2024-08-24	
5	4	4	UXOXB	Mahasiswa	Fakultas Sains	Active	2023-05-22	
6	5	5	UXOXD	Dosen	Fakultas Teknologi Produksi dan Industri	Active	2025-01-10	
7	6	6	UXOXD	Unknown	Publik	Active	2023-05-21	
8	7	7	UXOXF	Unknown	Fakultas Teknologi Industri	Active	2024-11-24	
9	8	8	UXOXA	Mahasiswa	Fakultas Teknologi Produksi dan Industri	Inactive	2023-12-15	
10	9	9	UXOXD	Dosen	Fakultas Sains	Active	2025-01-16	

Access_SK	Dataset_SK	User_SK	Category_SK	Organization_SK	Time_SK	Data_Source_SK	Jumlah_Akses	Jumlah_Download	Jumlah
1	69	62	598	1	5	20241226	1	1	0
2	74	71	840	5	6	20241222	1	0	1
3	75	168	134	3	8	20241212	1	0	0
4	90	85	632	6	4	20241205	1	0	1
5	112	163	634	4	3	20241207	1	0	0

Test query DELETE :

Query :

```
DELETE FROM Dim_User WHERE User_SK = 999999;
```

Output (messages) :

Messages

Msg 229, Level 14, State 5, Line 4
The DELETE permission was denied on the object 'Dim_User', database 'DM_SatuDataITERA_DW', schema 'dbo'.

Login sebagai Analyst :

Connect (Preview)

History Browse

Recent Connections

- MSSQLSERVER - 20.187.251.152, DM_SatuDataITERA_DW (analyst_us...
- MSSQLSERVER - 20.187.251.152, DM_SatuDataITERA_DW (viewer_us...
- MSSQLSERVER - 20.187.251.152, <default> (sa)
- MSSQLSERVER - localhost, <default> (ANUM\raufa)

Connection Properties Connection String

Server Name: 20.187.251.152

Authentication: SQL Server Authentication

User Name: analyst_user

Password: ••••••••

☐ Remember Password

Database Name: DM_SatuDataITERA_DW

Encrypt: Mandatory

☒ Trust Server Certificate

Advanced...

Custom Properties

Name: MSSQLSERVER

Color: <default> Custom...

Connect Cancel Help

Test Akses View Analitik :

Query :

```
SELECT TOP 10 * FROM vw_Executive_Governance;  
SELECT TOP 10 * FROM vw_Dataset_Popularity;  
SELECT TOP 10 * FROM vw_User_Activity;
```

Output (messages) :

(10 rows affected)

(10 rows affected)

(10 rows affected)

- **Status:** Passed
- **Hasil:** Pembatasan akses berdasarkan role berfungsi dengan benar:
 - User dengan role **db_viewer** hanya dapat melakukan SELECT
 - Perintah DELETE oleh viewer ditolak dengan error permission
 - User dengan role **db_analyst** dapat mengakses view analitik

B. Kesimpulan

Berdasarkan hasil pengujian UAT dapat disimpulkan bahwa sistem Data Warehouse Satu Data ITERA dinyatakan siap untuk digunakan di lingkungan produksi, tetapi dengan mo-

nitoring eksekusi job ETL pada SQL server agent, mengatur jadwal backup sebelum sistem digunakan, dan melakukan review secara berkala.

C. Script Acuan

Test Case	File SQL
TC001 - TC003	10_Create_Analytical_Views.sql
TC004 - TC005	07_ETL_Procedures.sql
TC006	11_Security.sql