

# Handling JSON → Medallion (Bronze → Silver → Gold) in Fabric Warehouse

## Raw Data:

- Validating the Raw Data

Object Explorer: My workspace (SQL Server 12.0.2000.8 - rakshar@microsoft.com) | Warehouses and SQL Analytics Endpoints | AzFabricSQL | AzureEmissionInsightDWH | DataflowsStagingLakehouse | DataflowsStagingWarehouse | DemoWarehouseLearn | healthcare1\_msf\_admin | healthcare1\_msf\_bronze | healthcare1\_msf\_silver | IoTEventHubBronze | OpenMirroredDatabase | OyoDWH | rsdemo | Schemas | INFORMATION\_SCHEMA | dbo | Tables (filtered) | JsonNestedArrayStage | JsonParquetStage | Json\_Bronze | Json\_Silver

SQLQuery3.s....com (178)\*

```
1 SELECT
2 *
3 FROM dbo.Json_Bronze;
```

100 % | No issues found | Ln: 1, Ch: 7

RowId	SourceSystem	SourceFile	IngestedAt	RecordDetails
1	CRM	crm_2026_02_16_nested.json	2026-02-16 14:01:58.437367	{"custId":123,"name":"Rakesh","address":{"city":"Bengaluru","zip":"560001"},"geo":{"lat":19.0760,"lon":77.5946},"tags":{"new":"promo"},"orders":[{"orderId":9004,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
2	CRM	crm_bad.json	2026-02-16 14:01:58.437367	{bad-json: true}
3	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":124,"name":"Ananya","address":{"city":"Mumbai","zip":"400001"},"geo":{"lat":19.0760,"lon":72.8777},"tags":{"new":"promo"},"orders":[{"orderId":9008,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
4	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":125,"name":"Vikram","address":{"city":"Delhi","zip":"110001"},"tags":{"vip"},"orders":[{"orderId":9004,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
5	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":126,"name":"Neha","address":{"city":"Pune","zip":"411001"},"tags":{"newsletter"},"orders":[{"orderId":9005,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
6	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":127,"name":"Suresh","address":{"city":"Chennai","zip":"600001"},"orders":[{"orderId":9005,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
7	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":128,"name":"Meera","address":{"city":"Hyderabad","tags":{"loyalty"},"vip"},"orders":[{"orderId":9006,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
8	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":129,"name":"Arjun","address":{"city":"Kolkata","zip":"700001"},"tags":{"new"},"orders":[{"orderId":9008,"amount":5400.0,"shipping":0.0}]} (bad-json: true)
9	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":130,"name":"Priya","address":{"city":"Ahmedabad","zip":"380001"},"tags":{"newsletter"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)
10	CRM	crm_bad_trailing_comma.json	2026-02-16 14:01:58.437367	{"custId":131,"name":"Kiran","address":{"city":"Jaipur","zip":"302001"},"tags":{"vip"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)
11	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":132,"name":"Nitin","address":{"city":"Lucknow","zip":"226001"},"geo":{"lat":26.8467,"lon":80.9462},"tags":{"newsletter"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)
12	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":133,"name":"Diya","address":{"city":"Bengaluru","zip":"560103"},"geo":{"lat":12.9352,"lon":77.6245},"tags":{"vip"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)

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12	CRM	crm_2026_02_16.json	2026-02-16 14:01:58.437367	{"custId":133,"name":"Diya","address":{"city":"Bengaluru","zip":"560103"},"geo":{"lat":12.9352,"lon":77.6245},"tags":{"vip"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)

- Bad JSON

1 SELECT TOP 50
2 RowId, SourceFile, RecordDetails
3 FROM dbo.Json\_Bronze
4 WHERE ISJSON(RecordDetails) <> 1 OR RecordDetails IS NULL;

100 % | No issues found

RowId	SourceFile	RecordDetails
2	crm_bad.json	{bad-json: true}
10	crm_bad_trailing_comma.json	{"custId":131,"name":"Kiran","address":{"city":"Jaipur","zip":"302001"},"tags":{"vip"},"orders":[{"orderId":9011,"amount":600.0,"shipping":0.0}]} (bad-json: true)

## • JSON Validation

Object Explorer

Connect v [Icons]

My workspace (SQL Server 12.0.2000.8 - rakshar@microsoft.com)

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  - OyoDWH
  - rsdemo
    - Schemas
      - INFORMATION\_SCHEMA
      - dbo
        - Tables (filtered)
          - JsonNestedArrayStage
          - JsonParquetStage
          - Json\_Bronze
          - Json\_Quarantine
          - Json\_Silver

SQLQuery3.s....com (178))\*

```
1 SELECT
2     RowId,
3     JSON_PATH_EXISTS(RecordDetails, '$.custId') AS HasCustId,
4     JSON_PATH_EXISTS(RecordDetails, '$.name') AS HasName,
5     JSON_PATH_EXISTS(RecordDetails, '$.address.city') AS HasCity,
6     JSON_PATH_EXISTS(RecordDetails, '$.orders') AS HasOrders
7 FROM dbo.Json_Bronze
8 WHERE ISJSON(RecordDetails) = 1;
9 GO
```

100 % No issues found

Results Messages

	RowId	HasCustId	HasName	HasCity	HasOrders
1	1	1	1	1	1
2	3	1	1	1	1
3	4	1	1	1	1
4	5	1	1	1	1
5	6	1	1	1	1
6	7	1	1	1	1
7	8	1	1	1	1
8	9	1	1	1	1
9	11	1	1	1	1
10	12	1	1	1	1

Object Explorer

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      - dbo
        - Tables (filtered)
          - JsonNestedArrayStage
          - JsonParquetStage
          - Json\_Bronze
          - Json\_Quarantine
          - Json\_Silver

SQLQuery3.s....com (178))\*

```
1 SELECT * FROM dbo.Json_Quarantine;
```

100 % 1 0 0

Results Messages

	RowId	SourceFile	IngestedAt	RecordDetails	ValidationNote
1	2	crm_bad_json	2026-02-16 14:01:58.437367	{bad-json: true	Invalid JSON
2	10	crm_bad_trailing_comma.json	2026-02-16 14:01:58.437367	{"custid":131,"name":"Kiran","address":{"city":"...	Invalid JSON

## • Loading and Validation in Silver Layer

```
239 -- 30) Insert INVALID JSON rows (NO JSON_VALUE calls here)
240 -- * SELECT * FROM Json_Silver
241
242 INSERT INTO dbo.Json_Silver
243 (
244     RowId, SourceSystem, SourceFile, IngestedAt,
245     custId, custName, city, zip, geo_lat, geo_lon,
246     RecordDetails, IsValidJson, ValidationNote
247 )
248 SELECT
249     b.RowId, b.SourceSystem, b.SourceFile, b.IngestedAt,
250     b.custId, b.custName, b.city, b.zip, b.geo_lat, b.geo_lon,
251     b.RecordDetails, b.IsValidJson, b.ValidationNote
```

Messages Results Save as table Open in Excel Explore this data (preview) Copy Search

	RowId	SourceSystem	SourceFile	IngestedAt	custId	custName	city	zip	geo_lat	geo_lon	RecordDetails	IsValidJson	ValidationNote
1	2	CRM	crm_bad_json	2026-02-16 14:01:58.437367	NULL	NULL	NULL	NULL	NULL	NULL	{bad-json: true	0	Invalid JSON
2	10	CRM	crm_bad_trailing_comma.json	2026-02-16 14:01:58.437367	NULL	NULL	NULL	NULL	NULL	NULL	{"custid":131,"name":"Kiran","address":{"city":"...	0	Invalid JSON
3	1	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	123	Rakesh	Bengaluru	560001	12.9716	77.5946	{"custid":123,"name":"Rakesh","address":{"city":"Bengaluru","zip":560001,"geo_lat":12.9716,"geo_lon":77.5946}}	1	OK
4	3	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	124	Ananya	Mumbai	400001	19.076	72.8777	{"custid":124,"name":"Ananya","address":{"city":"Mumbai","zip":400001,"geo_lat":19.076,"geo_lon":72.8777}}	1	OK
5	4	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	125	Vikram	Delhi	110001	NULL	NULL	{"custid":125,"name":"Vikram","address":{"city":"Delhi","zip":110001}}	1	OK
6	5	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	126	Neha	Pune	411001	NULL	NULL	{"custid":126,"name":"Neha","address":{"city":"Pune","zip":411001}}	1	OK
7	6	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	127	Suresh	Chennai	600001	NULL	NULL	{"custid":127,"name":"Suresh","address":{"city":"Chennai","zip":600001}}	1	OK
8	7	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	128	Meera	Hyderabad	NULL	NULL	NULL	{"custid":128,"name":"Meera","address":{"city":"Hyderabad","zip":600001}}	1	OK
9	8	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	129	Arjun	Kolkata	700001	NULL	NULL	{"custid":129,"name":"Arjun","address":{"city":"Kolkata","zip":700001}}	1	OK
10	9	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	130	Priya	Ahmedabad	380001	NULL	NULL	{"custid":130,"name":"Priya","address":{"city":"Ahmedabad","zip":380001}}	1	OK
11	11	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	132	Nitin	Lucknow	226001	26.8467	80.9462	{"custid":132,"name":"Nitin","address":{"city":"Lucknow","zip":226001,"geo_lat":26.8467,"geo_lon":80.9462}}	1	OK
12	12	CRM	crm_2026_02_16js...	2026-02-16 14:01:58.437367	133	Divya	Bengaluru	560103	12.9352	77.6245	{"custid":133,"name":"Divya","address":{"city":"Bengaluru","zip":560103,"geo_lat":12.9352,"geo_lon":77.6245}}	1	OK

- Gold Layer with Flattened Data

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the Object Explorer displays the database structure, including the 'Tables' folder under the 'dbo' schema. A red box highlights the following tables: CustomerAddress\_Gold, Customer\_Gold, OrderCoupon\_Gold, OrderItemAttr\_Gold, OrderItem\_Gold, OrderMeta\_Gold, OrderShipping\_Gold, and Order\_Gold. The main window displays the query plan for the query 'SELECT \* FROM Customer\_Gold, Order\_Gold, OrderItem\_Gold'. The query is highlighted with a red box. The results pane shows the following data:








custid	custName	city
1	128	Meera
2	125	Vikram
3	132	Nitin
4	124	Ananya
5	126	Neha
6	123	Rakesh
7	127	Suresh
8	129	Arjun
9	130	Priya
10	133	Divya

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the Object Explorer displays the database structure, including the 'Tables' folder under the 'dbo' schema. A red box highlights the following tables: CustomerAddress\_Gold, Customer\_Gold, OrderCoupon\_Gold, OrderItemAttr\_Gold, OrderItem\_Gold, OrderMeta\_Gold, OrderShipping\_Gold, and Order\_Gold. The main window displays the query plan for the query 'SELECT \* FROM Customer\_Gold, Order\_Gold, OrderItem\_Gold'. The query is highlighted with a red box. The results pane shows the following data:

custid	orderid	amount
1	123	9001
2	123	9002
3	124	9003
4	125	9004
5	127	9005
6	128	9006
7	128	9007
8	129	9008
9	130	9009
10	130	9010
11	132	9012
12	133	9013

- Views for Reporting

Object Explorer

Connect       





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    - Schemas
      - INFORMATION\_SCHEMA
      - dbo
        - Tables
        - Views
          - vw\_Gold\_Customer360
          - vw\_Gold\_OrderItem\_Fact
          - vw\_Gold\_SalesByCity
        - Functions
        - Stored Procedures
      - queryinsights
      - sys
    - Security
  - rsdemolh
    - Schemas
      - INFORMATION\_SCHEMA
      - dbo
        - Tables
        - Views
        - Functions
        - Stored Procedures
        - queryinsights
        - svs

SQLQuery3.sql...t.com (178)\*

```

1  SELECT * FROM dbo.vw_Gold_OrderItem_Fact
2  SELECT * FROM vw_Gold_Customer360
3  SELECT * FROM dbo.vw_Gold_SalesByCity
  
```

100 %  1  0  

Results Messages

	custId	custName	city	orderId	orderAmount	sku	qty
1	128	Meera	Hyderabad	9007	199.5	M3	1
2	125	Vikram	Delhi	9004	5400	X3	3
3	132	Nitin	Lucknow	9012	999.99	N1	1
4	124	Ananya	Mumbai	9003	120.75	D4	1
5	123	Rakesh	Bengaluru	9002	999	C3	5
6	127	Suresh	Chennai	9005	0	FREE1	1
7	130	Priya	Ahmedabad	9010	250	P3	2
8	133	Divya	Bengaluru	9013	3250.25	DV2	2
9	128	Meera	Hyderabad	9007	199.5	M2	1
10	128	Meera	Hyderabad	9006	799.99	M1	2
11	125	Vikram	Delhi	9004	5400	X2	2
12	125	Vikram	Delhi	9004	5400	X1	1

	custId	custName	city	orderCount	totalSpend	avgOrderValue
1	128	Meera	Hyderabad	2	999.49	499.745
2	125	Vikram	Delhi	1	5400	5400
3	132	Nitin	Lucknow	1	999.99	999.99
4	124	Ananya	Mumbai	1	120.75	120.75
5	126	Neha	Pune	0	NULL	NULL
6	123	Rakesh	Bengaluru	2	3499.5	1749.75
7	127	Suresh	Chennai	1	0	0
8	129	Arjun	Kolkata	1	350	350
9	130	Priya	Ahmedabad	2	1749	874.5
10	133	Divya	Bengaluru	1	3250.25	3250.25

	city	customerCount	orderCount	totalRevenue	avgOrderValue
1	Chennai	1	1	0	0
2	Hyderabad	1	2	999.49	499.745
3	Ahmedabad	1	2	1749	874.5
4	Pune	1	0	NULL	NULL
5	Bengaluru	2	3	6749.75	2249.91666666667
6	Mumbai	1	1	120.75	120.75
7	Kolkata	1	1	350	350
8	Delhi	1	1	5400	5400
9	Lucknow	1	1	999.99	999.99