ChatGPT and OIC Gen3: Where Al Dreams Come True

Presented By: Bryan Viera Gomez
Technical Consultant at SMX

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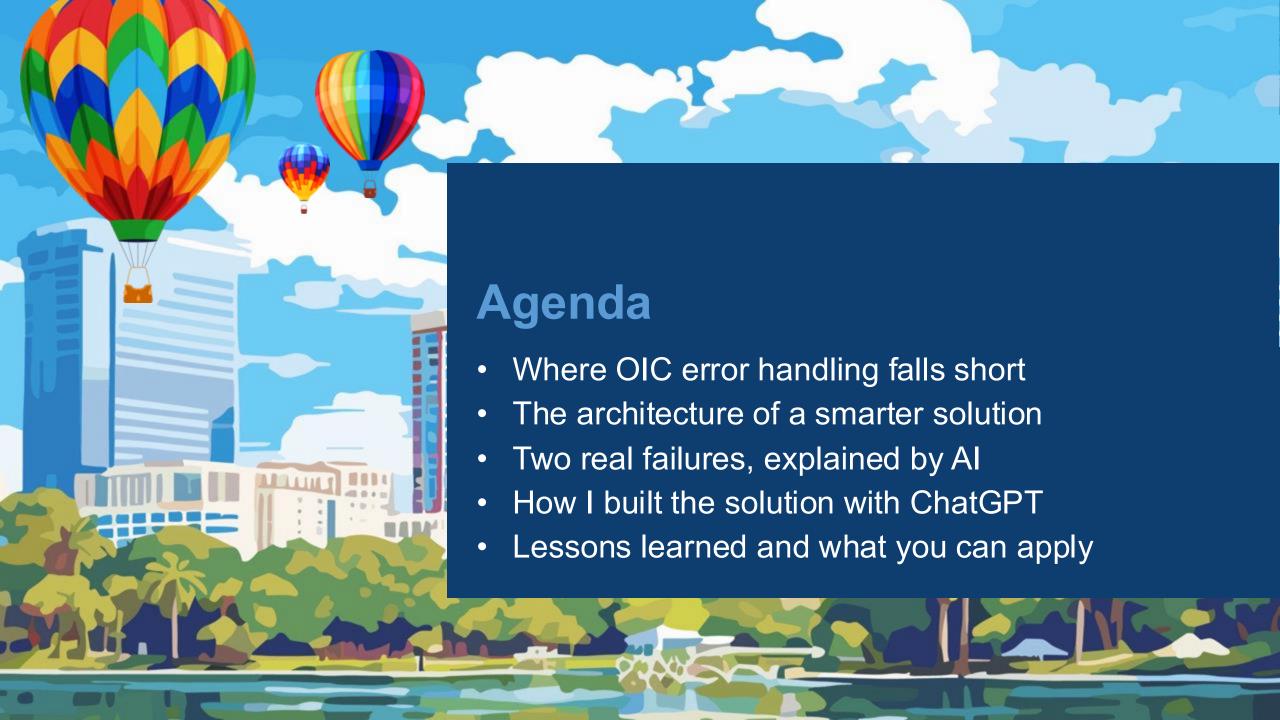
https://www.linkedin.com/in/bryan-viera-gomez/













Where Oracle Error Handling Falls Short



```
v </reason><details><err:serviceInvocationError
xmlns:err="http://xmlns.oracle.com/cloud/generic/service/fault"><err:type>DBWriteInteractionSpec
Execute Failed Exception</err:type><err:title>update failed. Descriptor name:
[UpdateProductPriceATP.Products].</err:title><err:detail>Caused by
java.sql.SQLIntegrityConstraintViolationException: ORA-02290: check constraint
(ADMIN.CHK_STATUS_VALID) violated
v.</err:detail><err:errorCode>serviceInvocationError</err:errorCode><err:remedialAction>Please see
the logs for the full DBAdapter logging output prior to this exception.</err:remedialAction>
</err:serviceInvocationError></details></fault>
```

- **X** Cryptic
- X No direct pointer to the fix
- X Disruptive to troubleshoot in real time







Why Traditional Error Handling Wastes Time



Developer must:

- Parse fault XML manually
- Cross-reference integration flow steps
- Search logs and instance traces
- Decode Oracle error messages
- Rely on tribal knowledge or trial/error











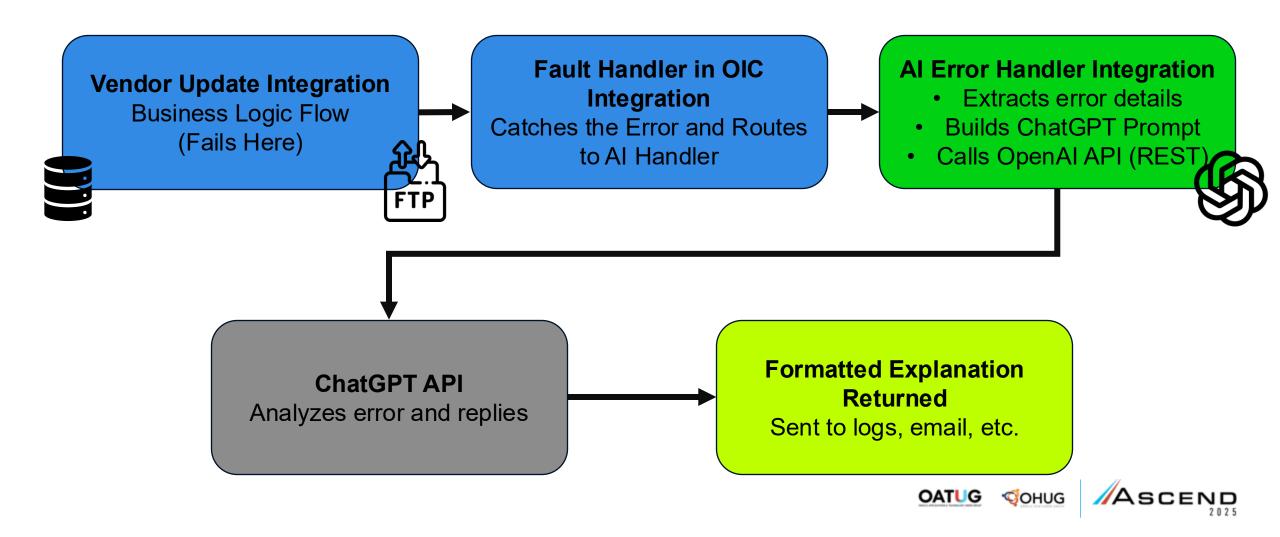




Architecture Overview



AI-Powered Error Handler in Action



Two Failures. One Smart Fix.





CASE 1: Fault handler catches invalid credential error



CASE 2: DB Adapter throws constraint violation

FTP Error 530 — Not Logged On

- Integration fails to connect to FTP server
- Fault handler catches invalid credential error
- Al handler suggests checking login/auth config

ORA-02290 — DB Constraint Violation

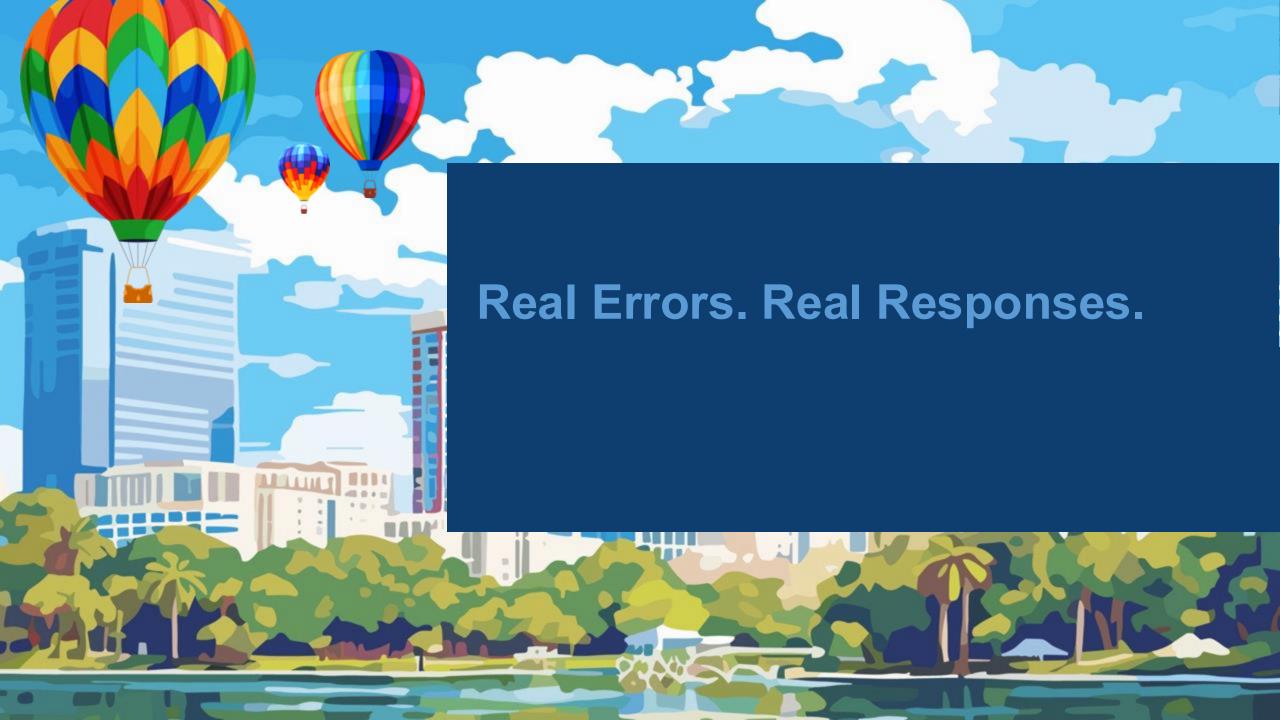
- Business integration attempts to insert invalid data
- DB Adapter throws constraint violation
- Al handler explains root cause and suggests next step

In both cases, the Al Error Handler turns cryptic Oracle faults into clear, actionable insights.







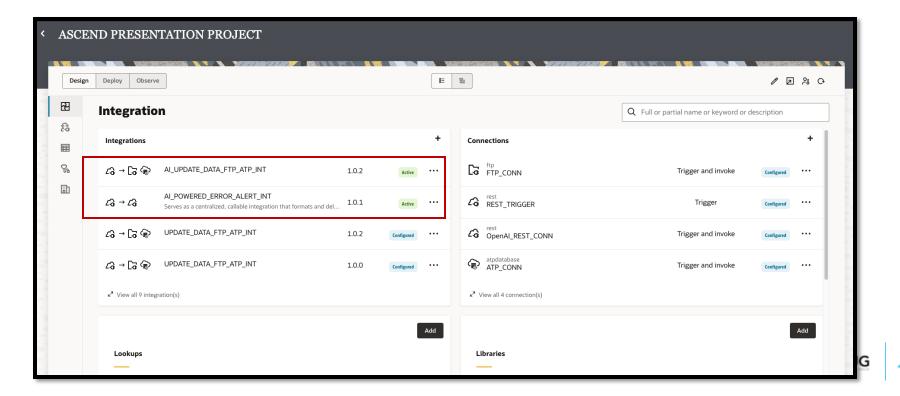


CASE 1: Fault Handler Catches Invalid Credential Error



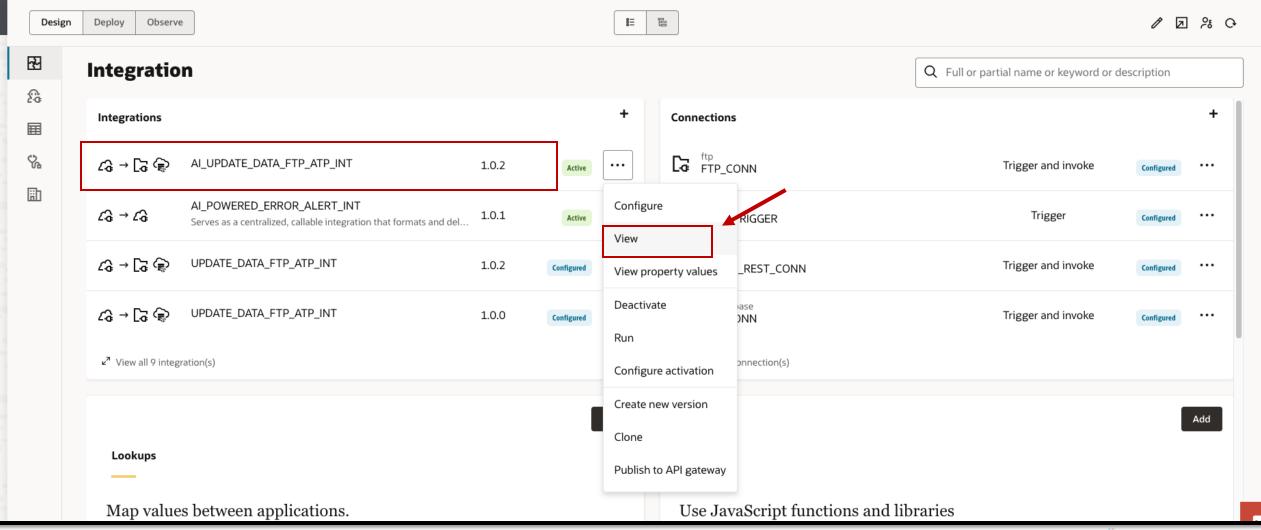
FTP Login Error

- Integration fails to log in to FTP
- Error: 530 Not Logged On
- Al handler analyzes and responds

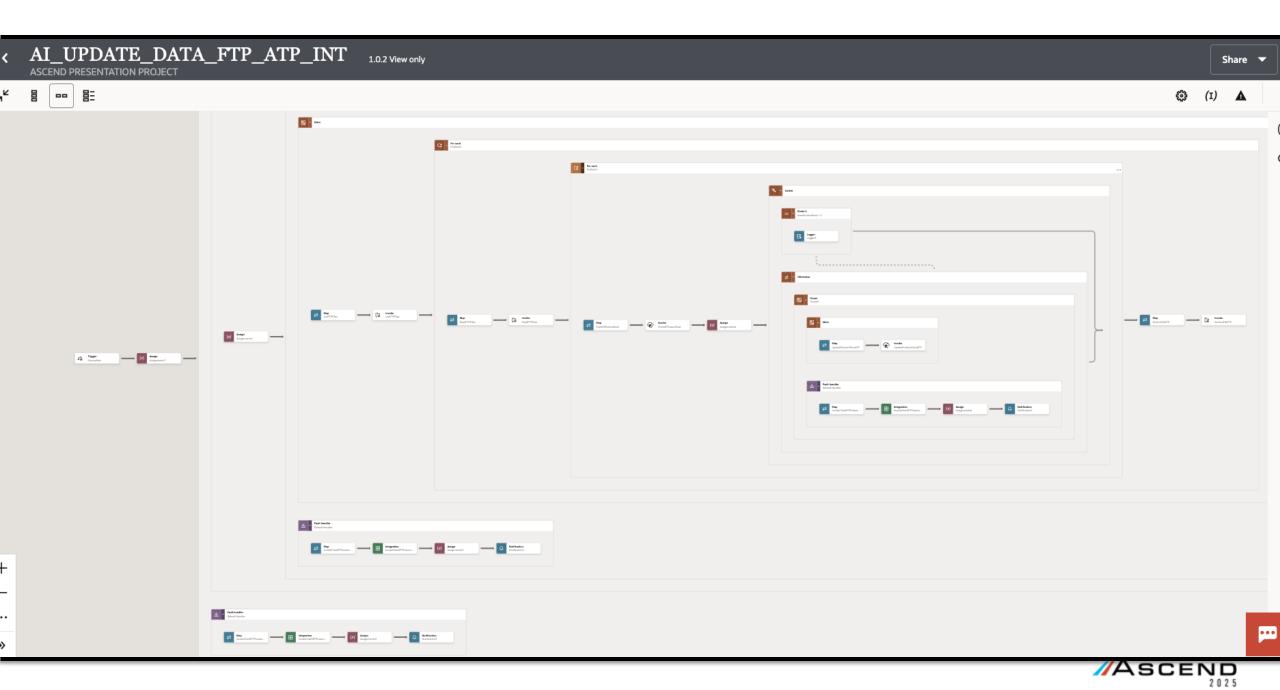


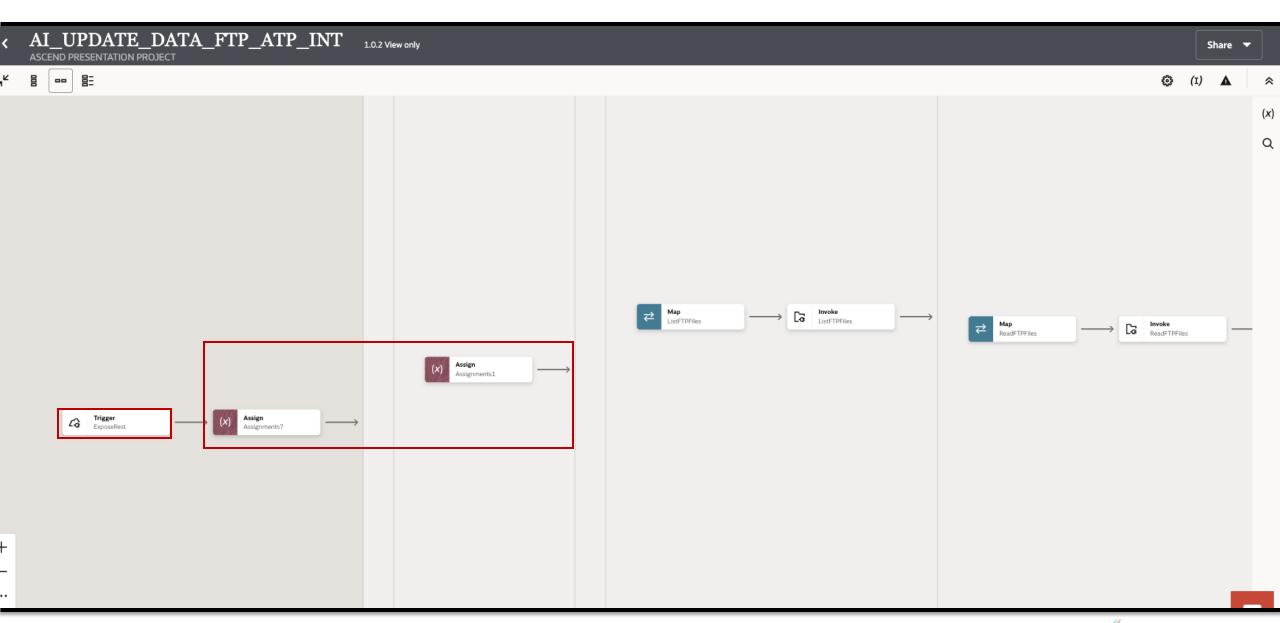


ASCEND PRESENTATION PROJECT

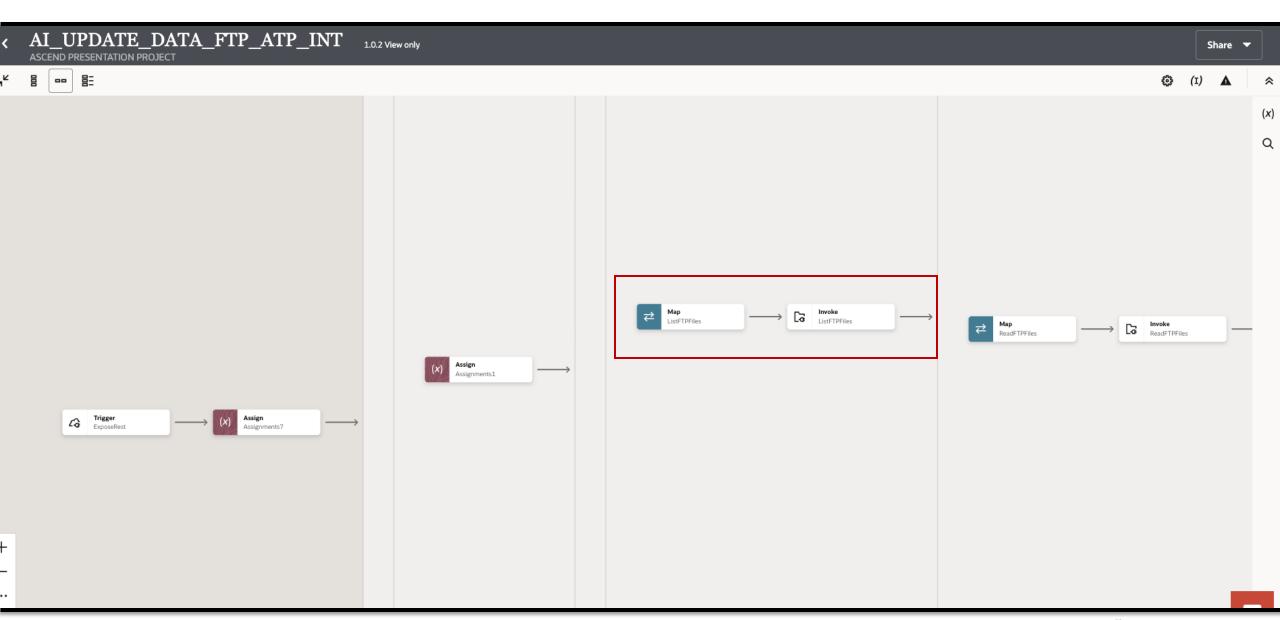




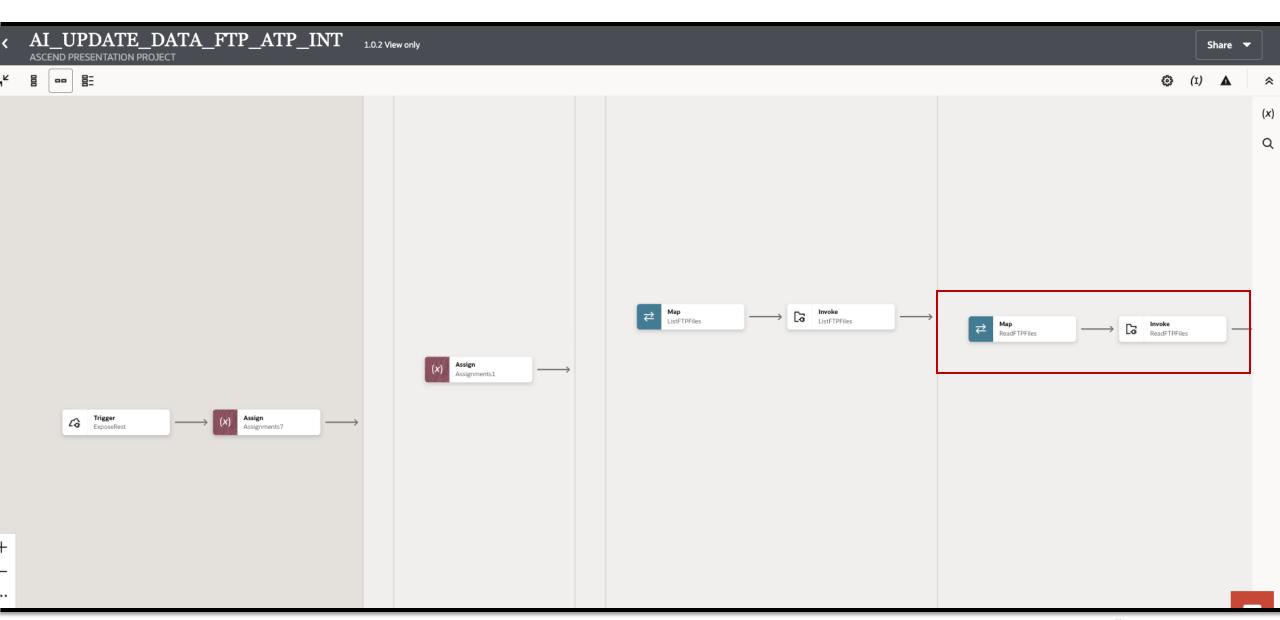




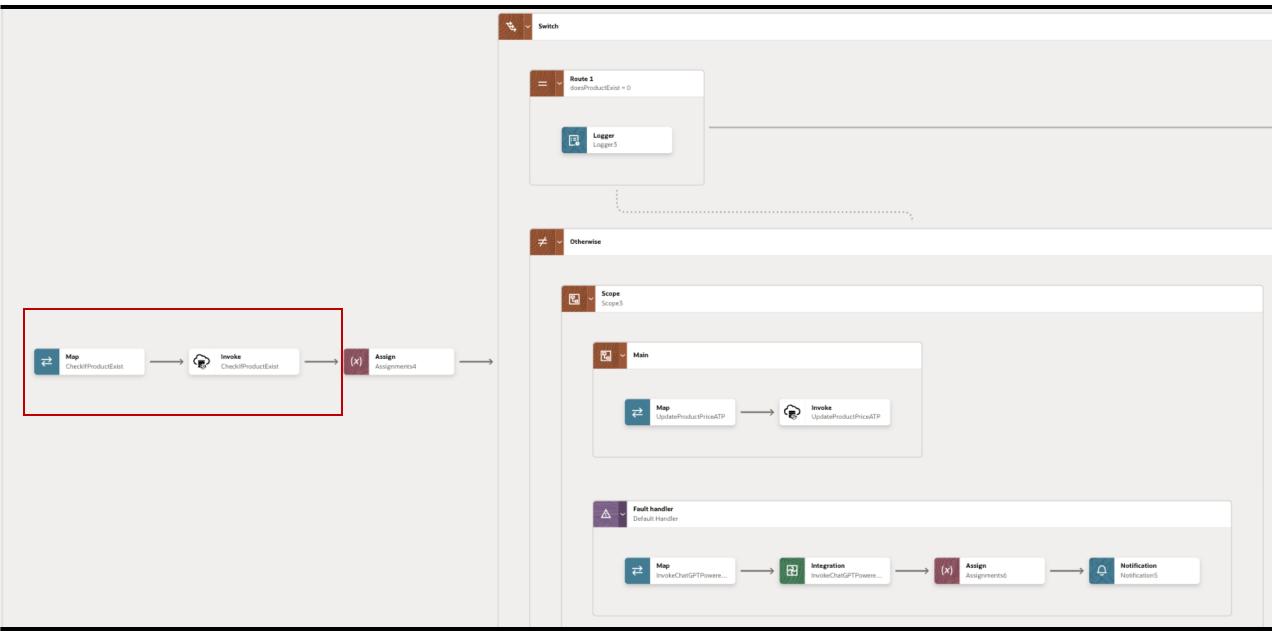


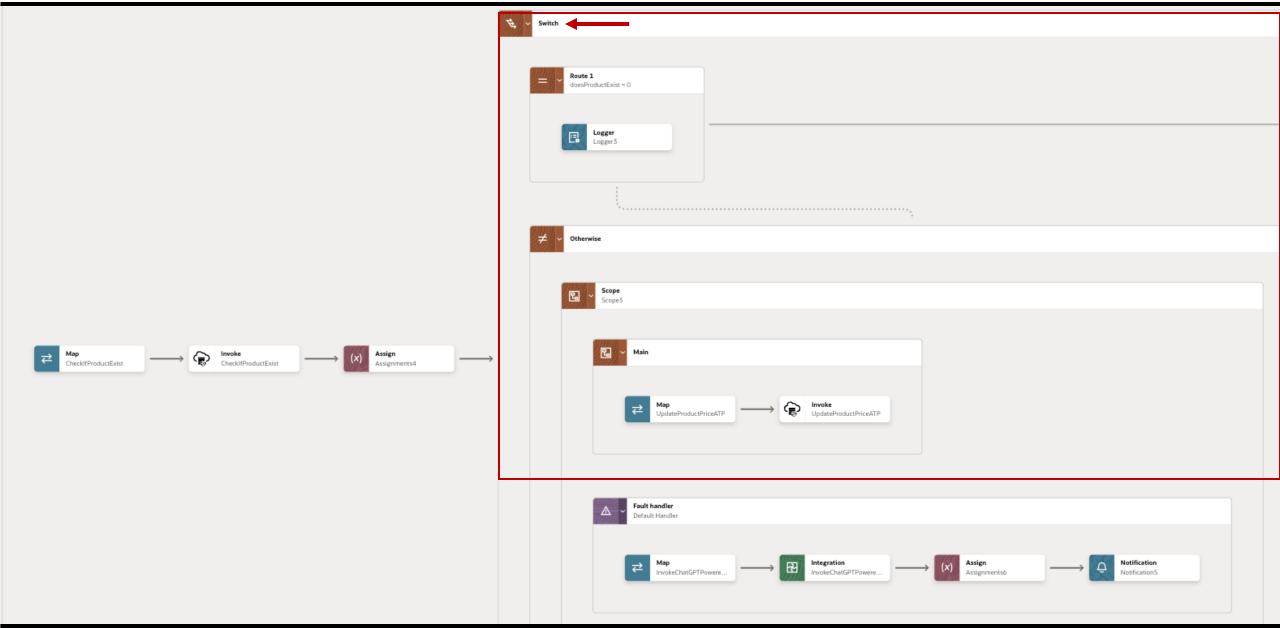


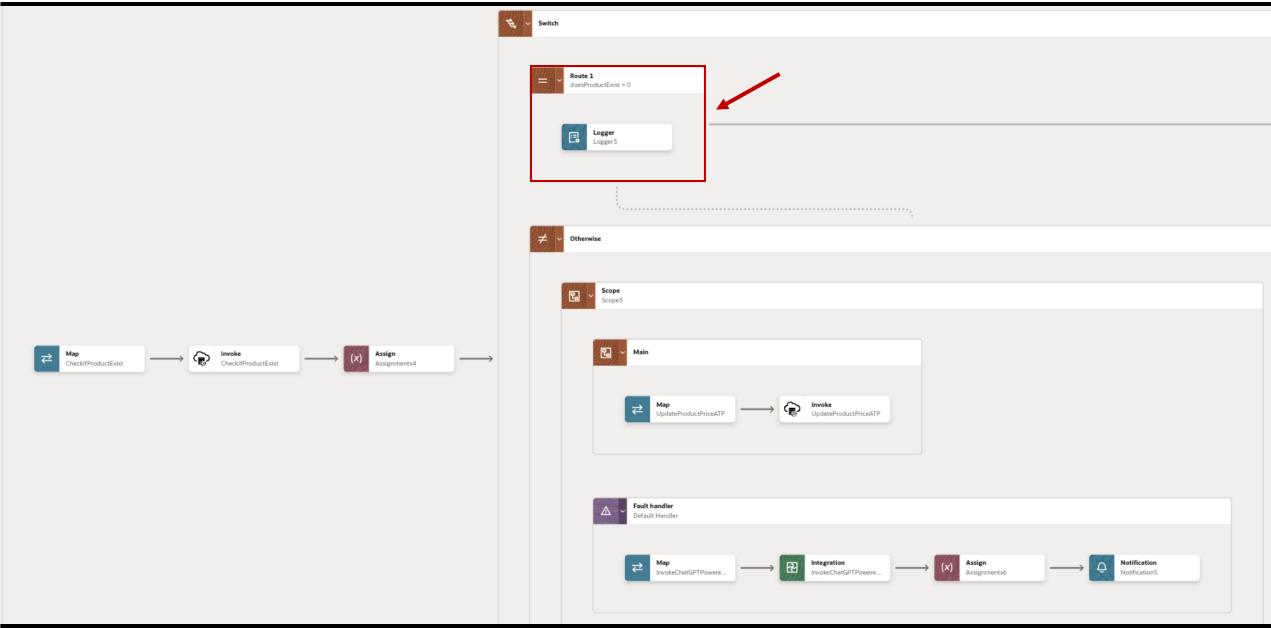


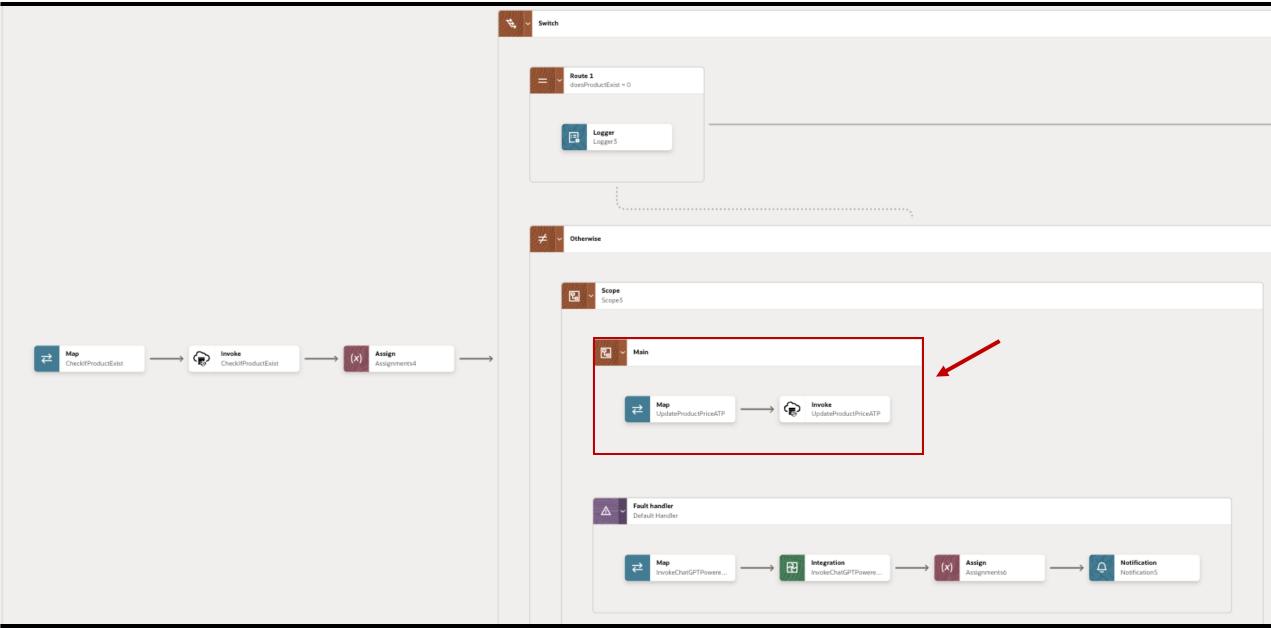


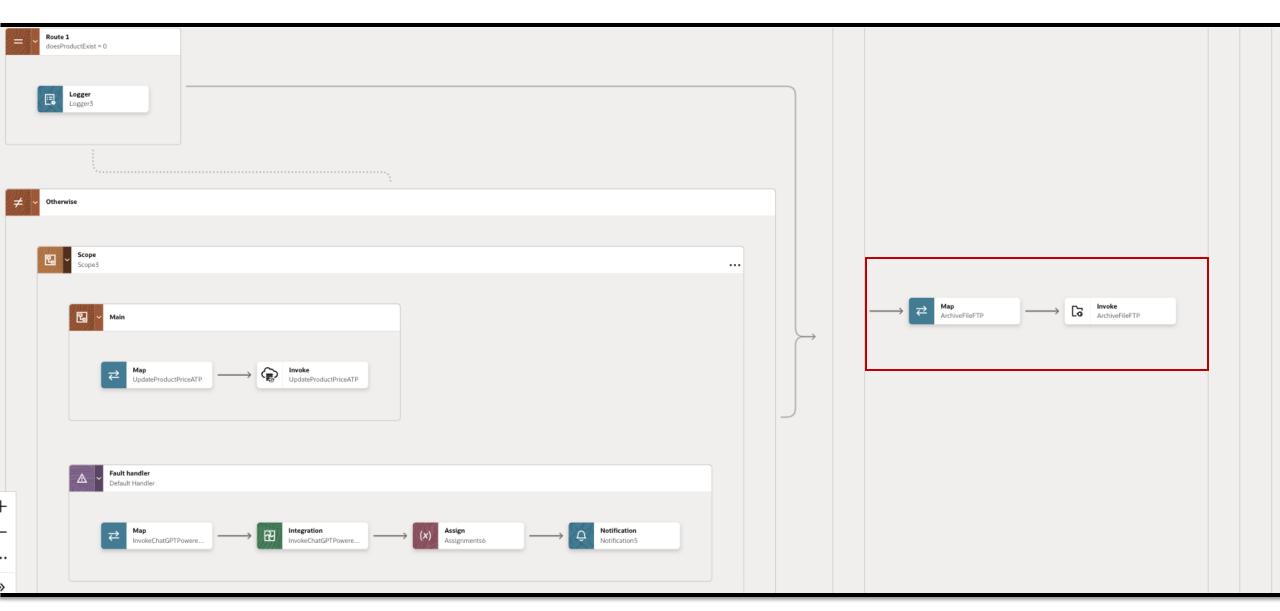




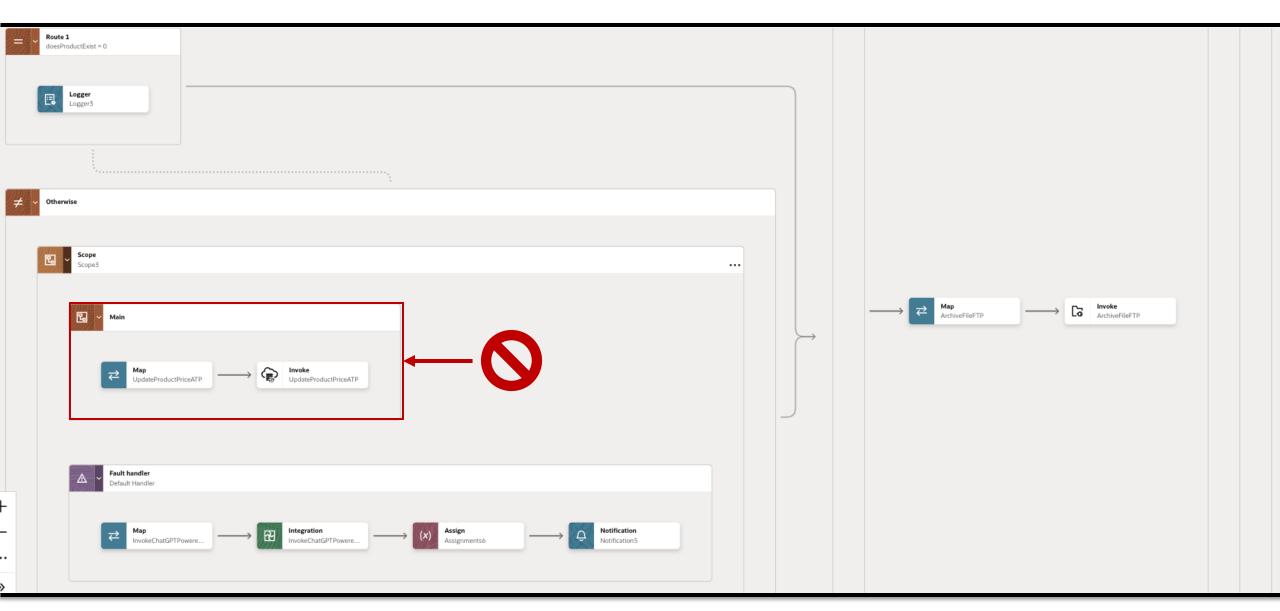










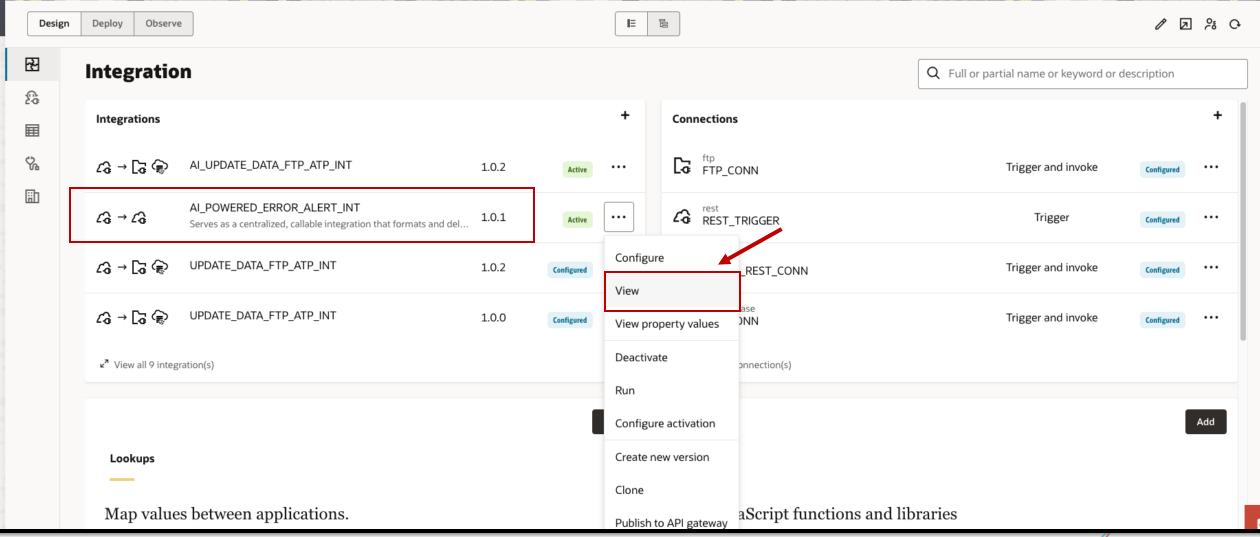




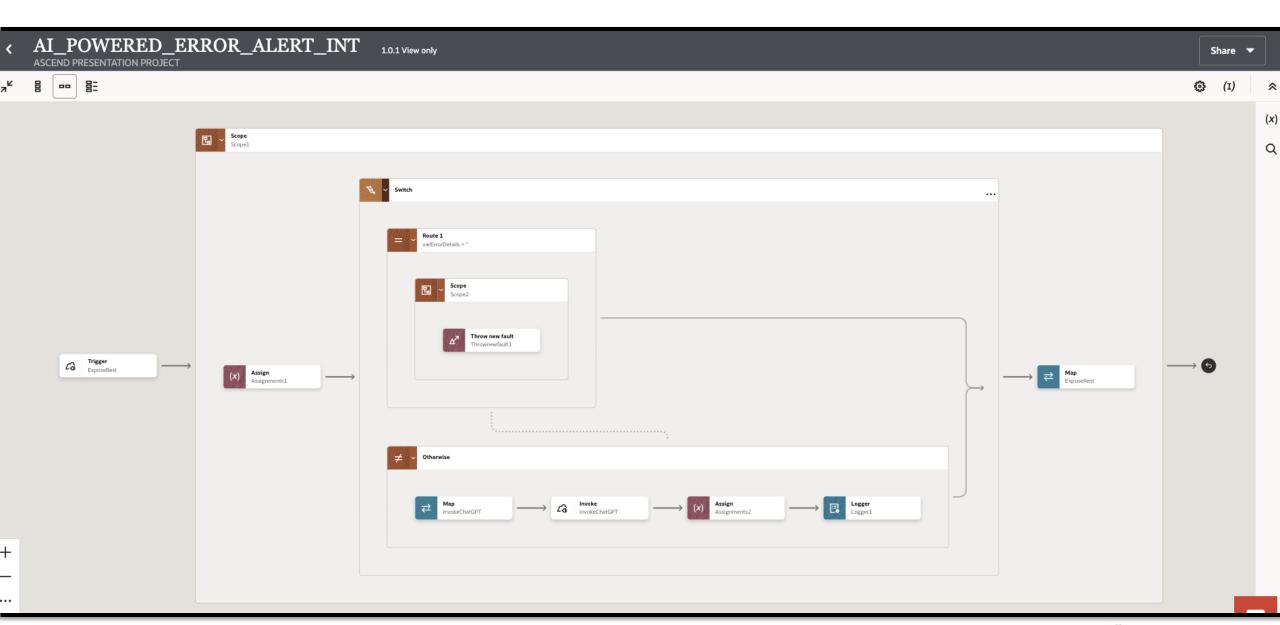


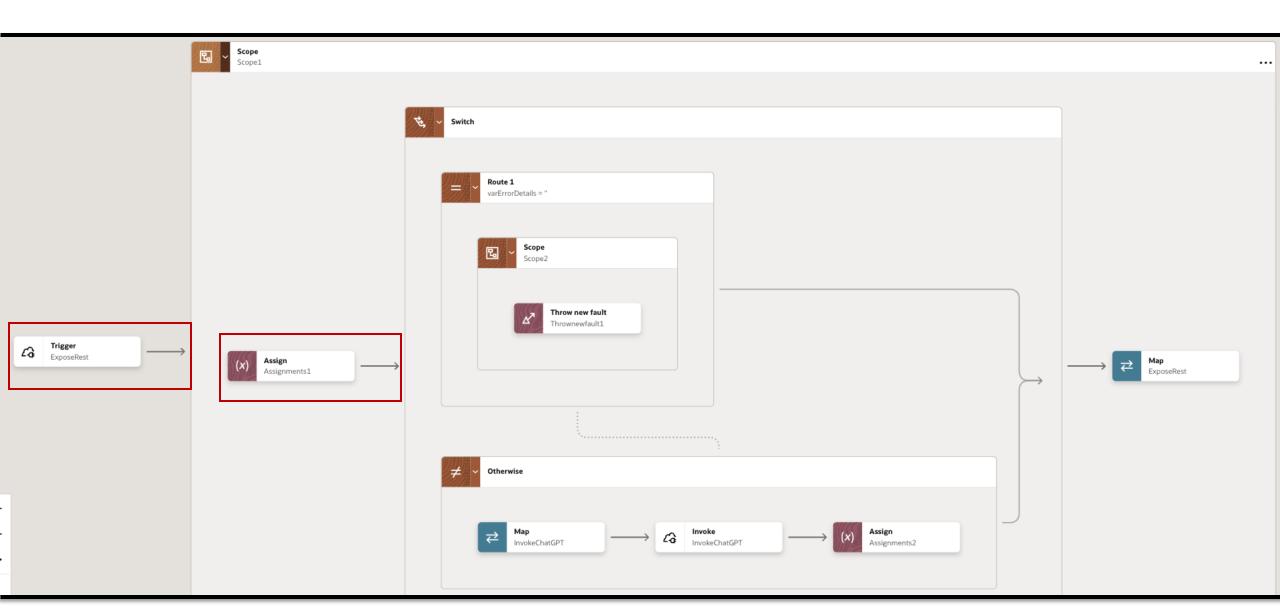


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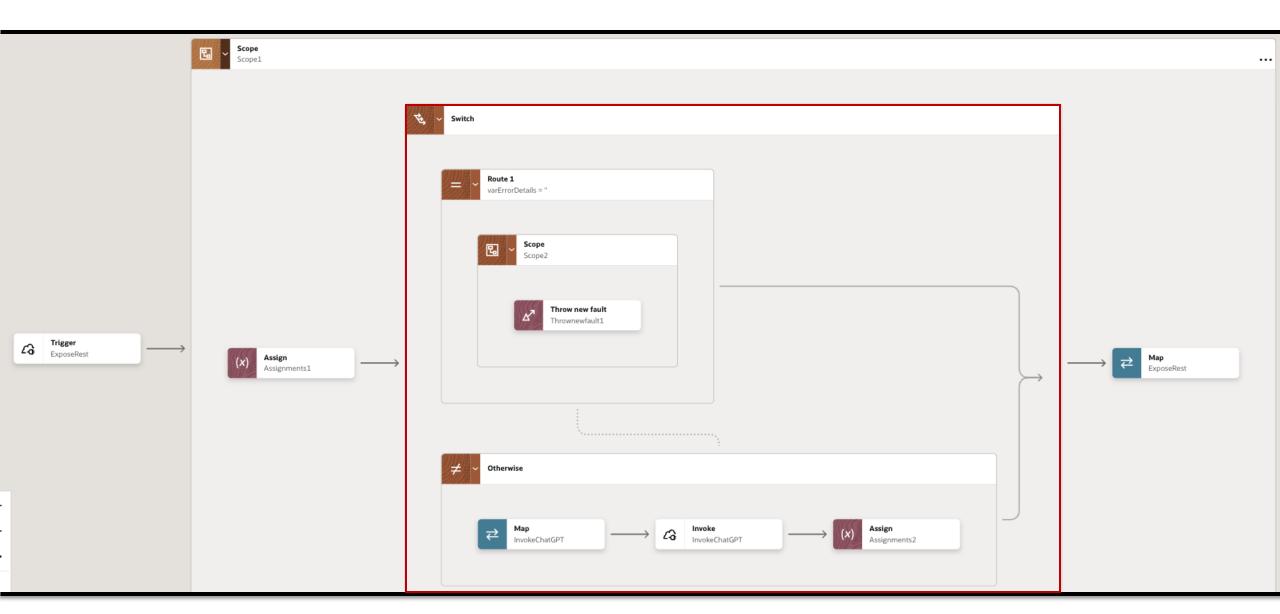




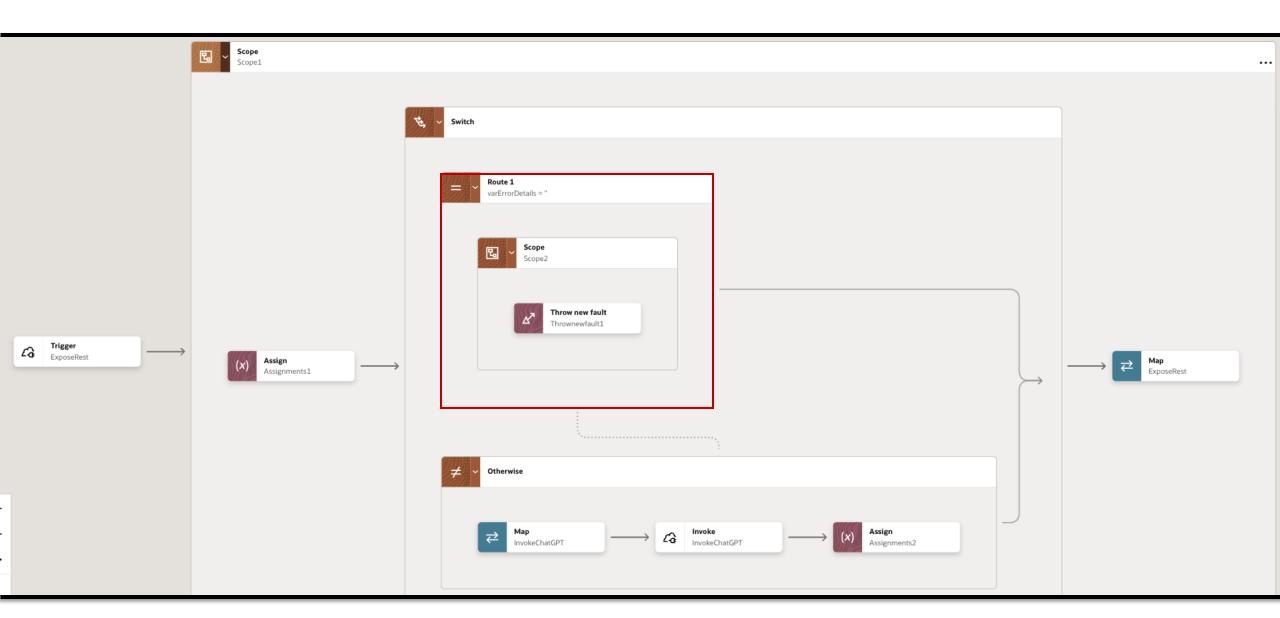




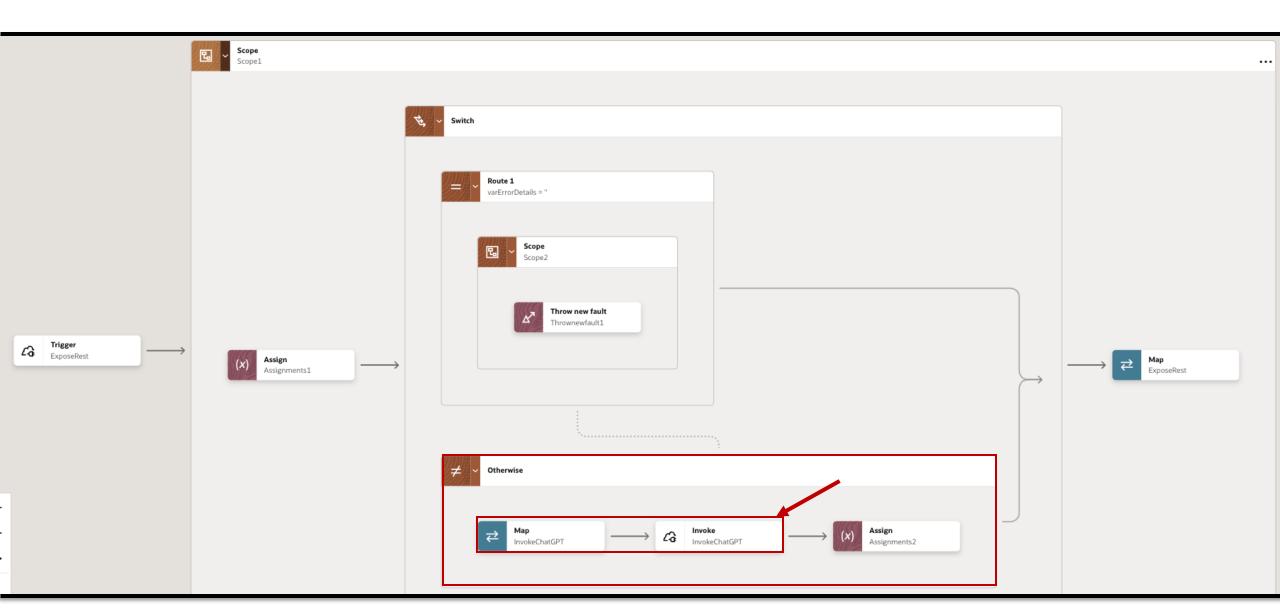




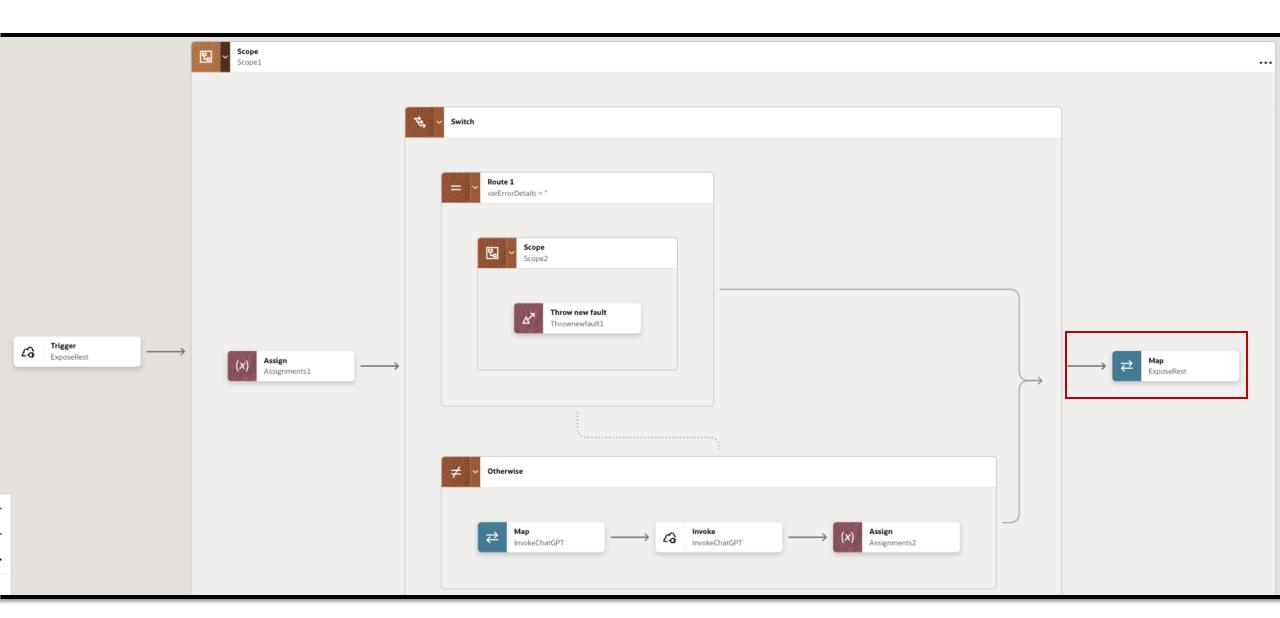






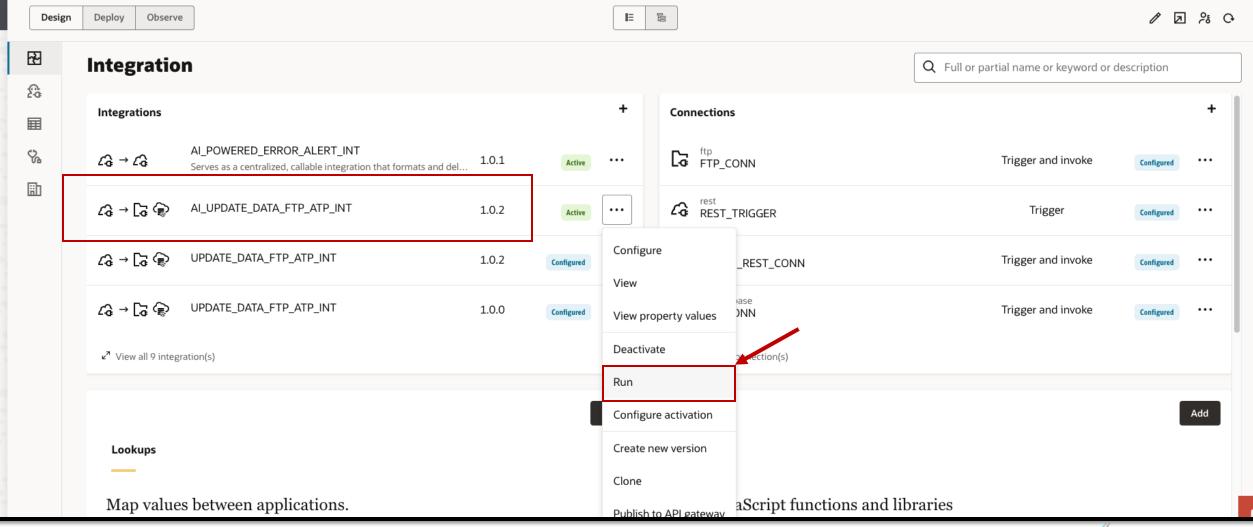








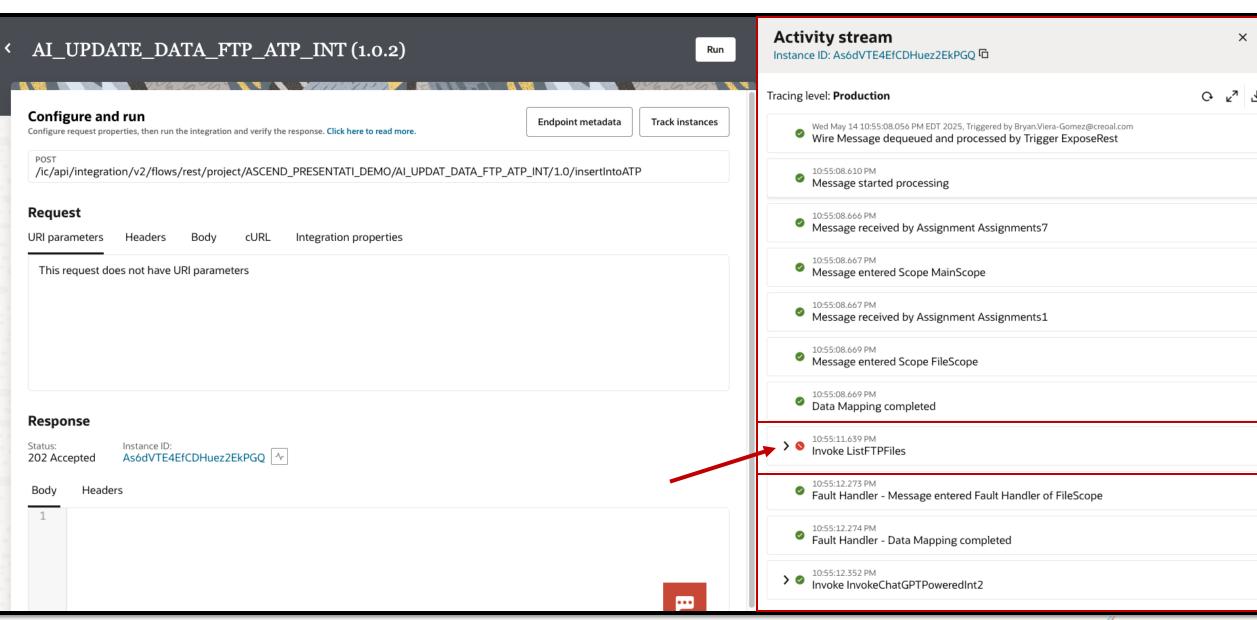
ASCEND PRESENTATION PROJECT



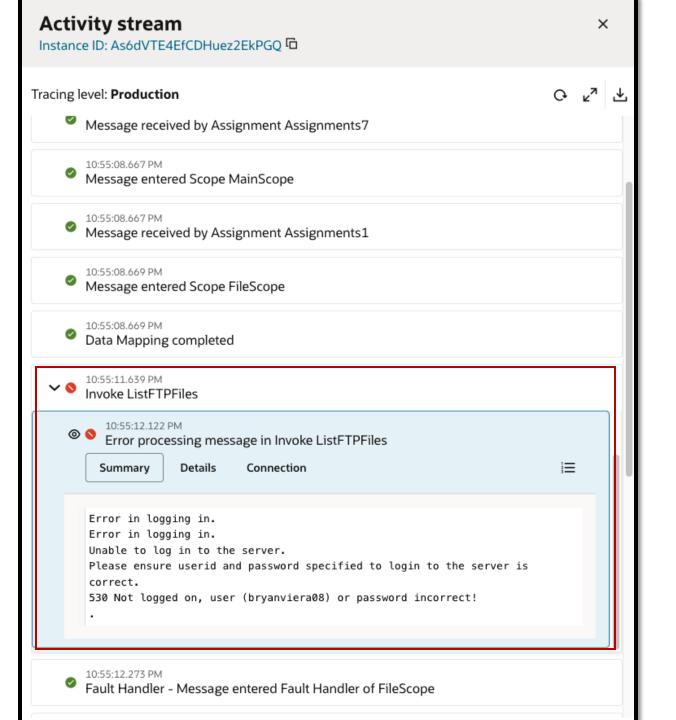


< AI_UPDATE_DATA_FTP_ATP_INT (1.0.2)</pre> Configure and run **Endpoint metadata** Tryck instances Configure request properties, then run the integration and verify the response. Click here to read more. /ic/api/integration/v2/flows/rest/project/ASCEND_PRESENTATI_DEMO/AI_UPDAT_DATA_FTP_ATP_INT/1.0/insertIntoATP Request **URI** parameters Headers cURL Integration properties Body This request does not have URI parameters Response Status: Instance ID: Body Headers

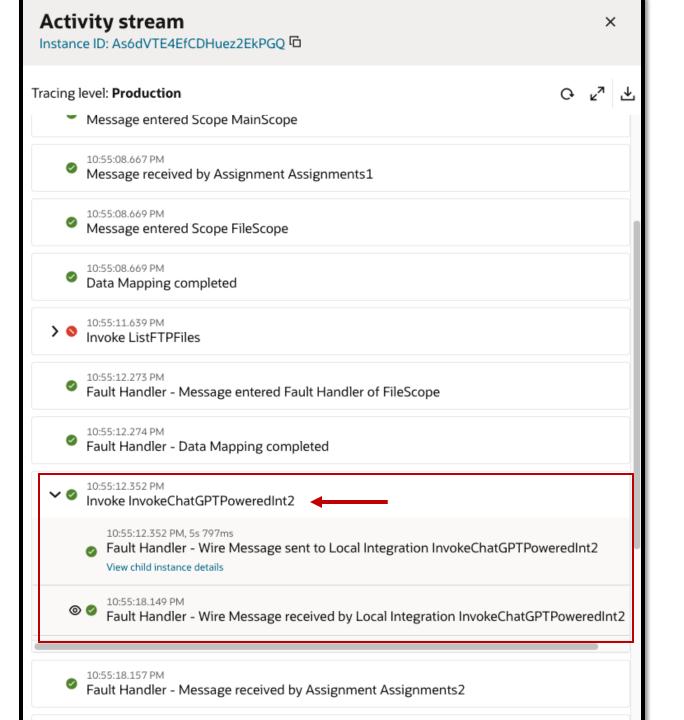




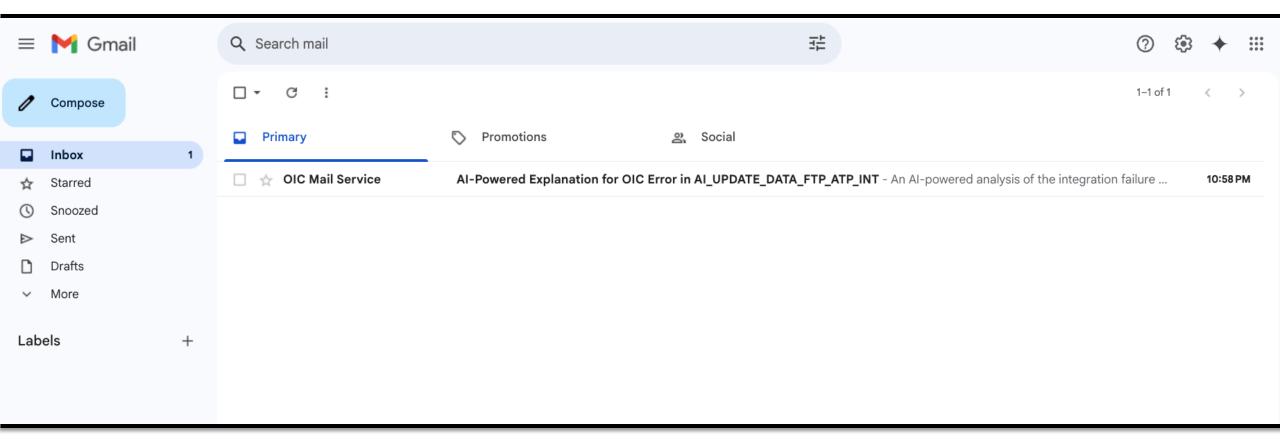






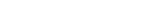








Al-Powered Explanation for OIC Error in Al_UPDATE_DATA_FTP_ATP_INT Inbox ×







OIC Mail Service <no-reply@mail.integration.us-ashburn-1.ocp.oraclecloud.com>

10:58 PM (1 minute ago)







to me ▼

An Al-powered analysis of the integration failure has been generated:

Integration Name: AI_UPDATE_DATA_FTP_ATP_INT

Version: 01.00.0002

Environment: DEV1

Probable Cause:

The error indicates a failure to authenticate with the FTP server due to incorrect login credentials for the user "bryanviera08". This is likely caused by an incorrect username or password being configured in the integration settings.

Troubleshooting Steps:

- 1. **Verify Credentials:** Double-check the username and password configured in the connection settings of the integration. Ensure they match the credentials required by the FTP server.
- 2. **Update Credentials:** If the credentials have changed, update them in the OIC connection configuration for the FTP adapter.
- 3. **Test Connection:** Use the "Test" feature in the OIC connection settings to verify successful authentication with the FTP server.
- 4. **Check for Account Lockout:** Ensure that the user account "bryanviera08" is not locked or disabled on the FTP server.
- 5. **Review FTP Server Logs:** Check the FTP server logs for any additional information or repeated failed login attempts that might indicate a broader issue.
- 6. **Network Configuration:** Ensure there are no network issues or firewall rules blocking access to the FTP server from the OIC environment.

This explanation was generated automatically by ChatGPT. Please review it and take appropriate action.

Thanks,

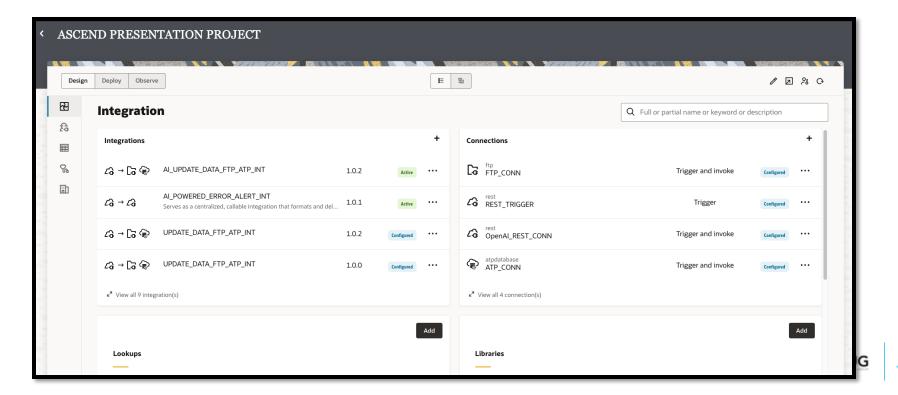
OIC Team

CASE 2: DB Adapter throws constraint violation



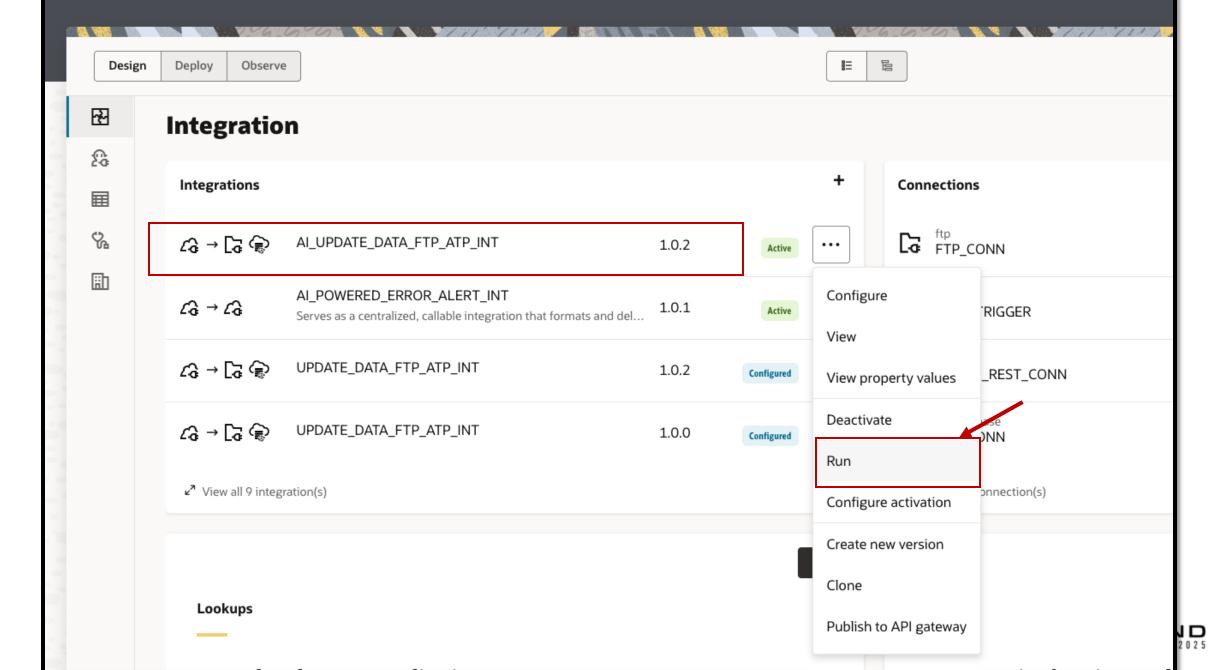
DB Constraint Violated

- Integration fails during DB update
- Error: ORA-02290 CHK_STATUS_VALID violated
- Al handler explains the constraint and solution





ASCEND PRESENTATION PROJECT



< AI_UPDATE_DATA_FTP_ATP_INT (1.0.2)</pre>

Run

Configure and run Configure request properties, then run the integration and verify the response. Click here to read more.	Endpoint metadata	Tack instances
POST /ic/api/integration/v2/flows/rest/project/ASCEND_PRESENTATI_DEMO/AI_UPDAT_DATA_FTP_ATP_INT/1.0/insertIntoATP		
Request URI parameters Headers Body cURL Integration properties		
This request does not have URI parameters		

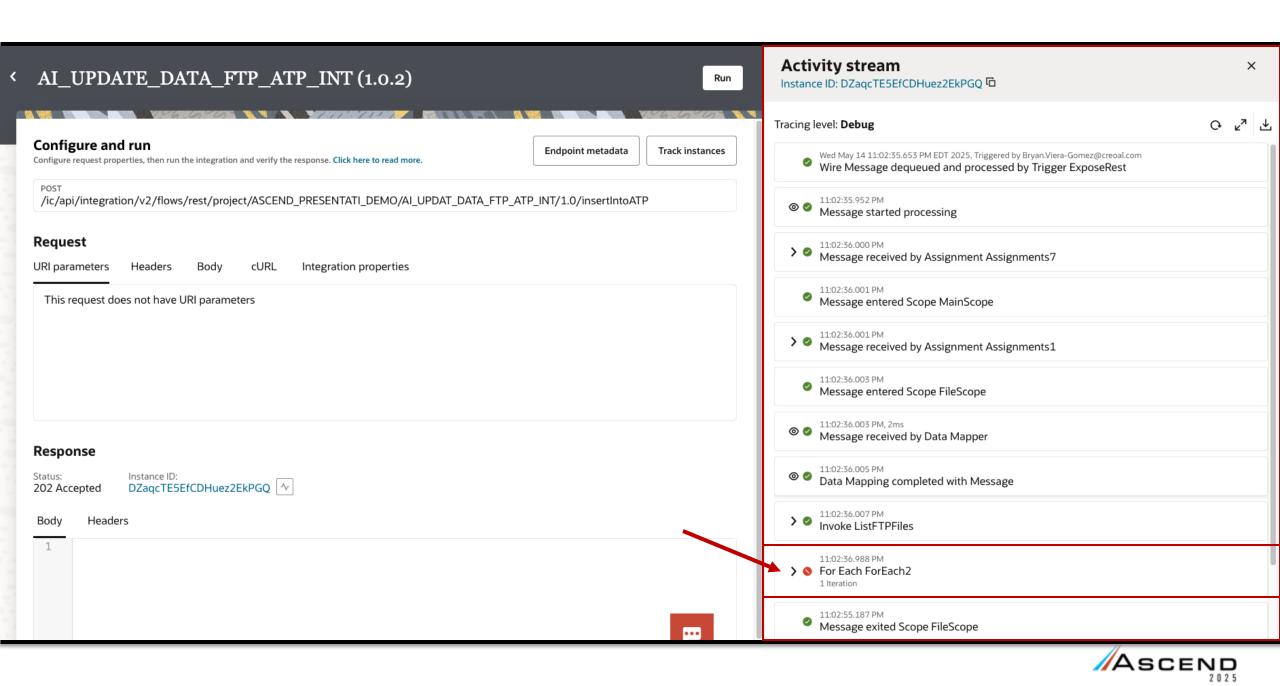
Response

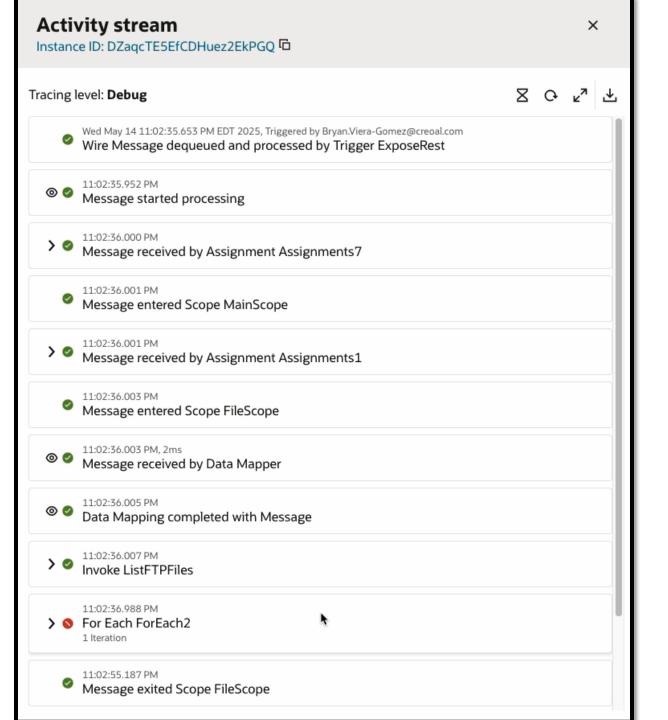
Status: Instance ID:

Body Headers

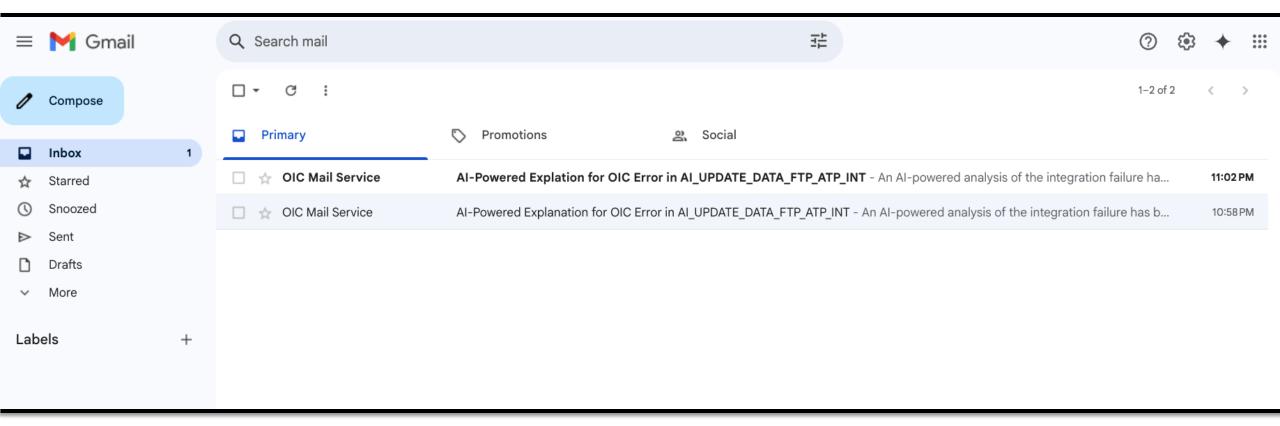
1

















to me 🔻









AI-Powered Explation for OIC Error in AI_UPDATE_DATA_FTP_ATP_INT Inbox ×





OIC Mail Service <no-reply@mail.integration.us-ashburn-1.ocp.oraclecloud.com>

Unsubscribe

11:02 PM (8 minutes ago)





An Al-powered analysis of the integration failure has been generated:

Integration Name: AI UPDATE DATA FTP ATP INT

Version: 01.00.0002

Environment: DEV1

Probable Cause:

The error indicates a failure during a database update operation due to a violation of a check constraint named `CHK STATUS VALID`. This constraint is likely enforcing a rule on the `Products` table, ensuring that only valid values are allowed in a specific column.

Troubleshooting Steps:

- 1. **Review Constraint Definition:** Check the definition of the `CHK_STATUS_VALID` constraint in the database to understand the allowed values or conditions.
- 2. **Examine Input Data:** Verify the data being passed to the update operation. Ensure that all values comply with the constraint conditions.
- 3. **Log Analysis:** Consult the full DBAdapter logs for additional context on the data being processed at the time of the error.
- 4. **Data Validation:** Implement or enhance data validation logic in the integration flow to prevent invalid data from reaching the database.
- 5. **Test with Valid Data:** Once corrections are made, test the integration with data that satisfies the constraint to confirm resolution.

This explanation was generated automatically by ChatGPT. Please review it and take appropriate action.

Thanks,

OIC Team

FTP 530 Error – Before and After



Integration Error Response

Error in logging in.

Error in logging in.

Unable to log in to the server.

Please ensure userid and password specified to login to the server is correct.

530 Not logged on, user (bryanviera08) or password incorrect!

Probable Cause:

The error indicates a failure to authenticate with the FTP server using the credentials provided for the user "bryanviera08". This is likely due to incorrect username or password details.

Troubleshooting Steps:

- 1. **Verify Credentials:** Double-check the username and password configured in the integration. Ensure they are correct and match what is expected by the FTP server.
- 2. **Update Credentials:** If the credentials have changed, update them in the OIC connection configuration for the FTP server.
- 3. **Test Connection:** Use the "Test Connection" feature in OIC to verify that the updated credentials allow successful login to the FTP server.
- 4. **Check Account Status:** Ensure that the user account "bryanviera08" is active and not locked or disabled on the FTP server.
- 5. **Review Logs:** Check the FTP server logs for any additional information or patterns that might indicate why the login is failing.
- 6. **Network Issues:** Ensure there are no network issues preventing access to the FTP server from the OIC environment.

By following these steps, you should be able to resolve the login issue and restore the integration functionality.

ChatGPT Error Analysis Response







ORA-02290 – Before and After



Integration Error Response

Probable Cause:

The error indicates a failure during a database update operation due to a violation of a check constraint named `CHK_STATUS_VALID`. This constraint is likely ensuring that only valid values are entered into a specific column, possibly related to product status.

Troubleshooting Steps:

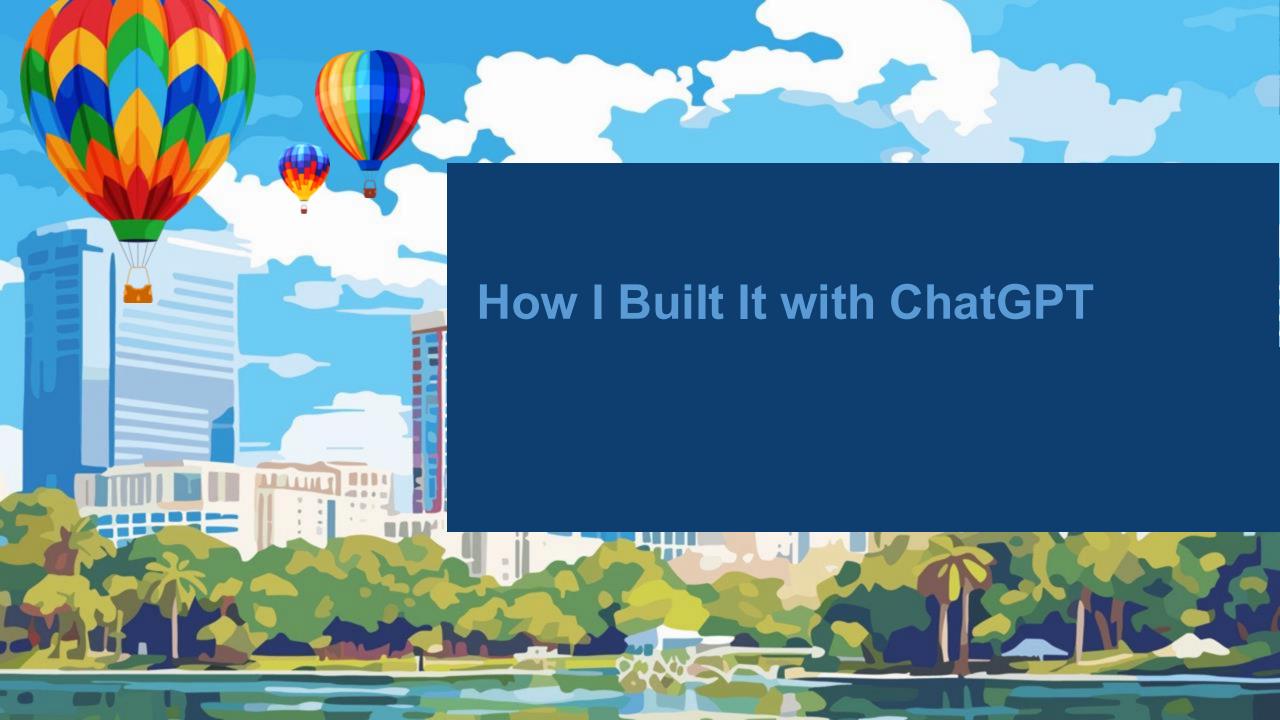
- 1. **Review Constraint Definition: ** Check the database schema to understand the `CHK_STATUS_VALID` constraint's conditions. This will clarify which values are permissible.
- 2. **Inspect Input Data:** Examine the data being updated in the `UpdateProductPriceATP.Products` table to identify any values that might breach the constraint. Ensure the data aligns with the constraint's requirements.
- 3. **Modify Data or Logic:** If the input data is incorrect, adjust it to comply with the constraint. Alternatively, if the business logic needs adjustment, ensure it aligns with the database rules.
- 4. **Consult Logs:** Look at the detailed logs for the DBAdapter to gather more context about the failing transaction.
- 5. **Test Changes:** After making adjustments, test the integration to confirm the issue is resolved and no further constraint violations occur.

ChatGPT Error Analysis Response









How ChatGPT Helped Me Build the Al Error Handler



Design & Fault Parsing

- Helped outline the integration architecture
- Identified which parts of the error payload like errorDetails, adapterType, and environment were most useful for generating meaningful Al responses

Prompt Creation & Refinement

- Collaborated on the tone, structure, and clarity of the prompt
- Focused on reducing redundancy and making responses concise and actionable

REST API Integration

- Guided the setup of the OpenAl POST call
- Helped configure headers, authentication, and map the response back into OIC







Prompt Breakdown – What I Send to ChatGPT



Key fields passed:

- Integration Name
- Version
- Environment
- Error Details
- Error Timestamp
- [Instructions for ChatGPT]

Prompt

fn:concat(

"An error occurred in the Oracle OIC integration named ", sourceIntegration, ".\n",

- "- Version: ", sourceIntegrationVersion, "\n",
- "- Environment: ", environment, "\n",
- "- Error Details: ", errorDetails, "\n",
- "- Time Stamp: ", timestamp, "\n\n",

"Please analyze the following error from Oracle Integration Cloud (OIC). Begin your response by referencing the affected integration name, version, and environment. Then describe the most probable cause and suggest concise, non-redundant troubleshooting steps a developer or support analyst can take. Avoid repeating the exact language already present in the error message. Respond in under 200 words, using a structured format.")







Prompt Evolution & Refinement



Version	What I Sent to ChatGPT	What I Got Back
V1	Only errorDetails	Inconsistent output. Sometimes helpful, often vague or repetitive
V2	Added integration name, version, environment, and time-stamp	More context, improved relevance
V3	Added clear instruction block: explain, suggest steps, avoid repetition	Structured, consistent, actionable responses







What Makes a Good Al Prompt in OIC?



Do This	Avoid This
Include integration name, version, and environment	Leaving out context (ChatGPT won't guess correctly)
Pass only relevant fault details (like errorDetails)	Dumping the entire fault payload
Be specific about what you want (e.g. cause + fix)	Asking vague questions like "what went wrong?"
Add structure: bullets, steps, or summary format	Letting GPT decide the structure every time
Set limits (e.g. "under 200 words") for consistency	Letting responses run long or off-topic







Calling the OpenAl API (REST Setup + XSLT Mapping)



REST Endpoint:

https://api.openai.com/v1/chat/completions

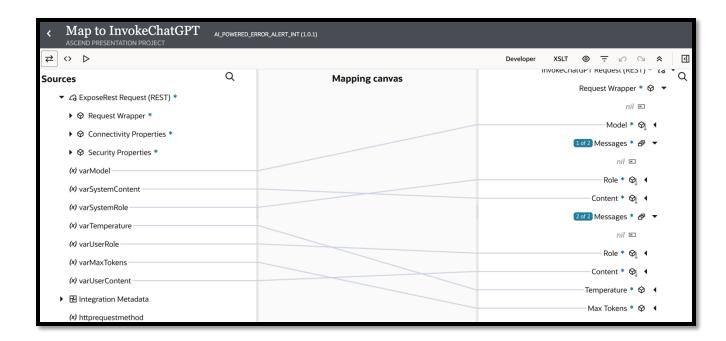
Method: POST

Content-Type: application/json

Auth: Bearer Token

Uses a wrapper structure with:

- Model
- messages[] (user roles + content)
- Temperature
- max_tokens









Limitations & Considerations



- Quality depends on the error input If errorDetails lacks useful information, the AI response may also fall short.
- Adapter errors vary in clarity Some adapters produce verbose faults; others are vague and need enhancement.
- Prompt tuning still matters While the current prompt works broadly, certain edge cases may benefit from specialized handling.
- AI ≠ a fix-it button The handler suggests — not enforces — action. Human validation still matters.







Key Takeaways & What You Can Reuse



Key Takeaways

- Al can improve the quality of integrations in OIC, not just accelerate development
- Structured prompts help turn complex error payloads into clear, useful insights
- The value is repeatable—it works across different failures, not just once
- Human input and testing remain essential. Al is here to support, not replace
- This is a scalable solution, not a one-time fix

What You Can Reuse

- The AI Error Handler integration pattern
- The dynamic prompt structure (system/user roles)
- The REST connection setup to OpenAI
- The strategy: isolate → interpret → respond → reuse







Where This Could Go Next



- Al-driven auto-retry logic Dynamically retry integrations based on AI-suggested resolution steps.
- Smart notifications Send error explanations via email, Slack, or Teams — formatted and actionable.
- Pattern recognition for recurring errors Identify repeat failures across integrations and surface root causes.
- Reusable fault templates Package the AI handler into a library of plug-and-play fault responses.
- Private AI deployments in OCI Use Generative AI in your own tenancy to meet security and compliance needs.







Enhancing OIC with OCI's Generative AI Services



- Demo Simplicity: Utilized ChatGPT's public API for rapid prototyping and demonstration purposes.
- Production Readiness: For handling sensitive data and ensuring compliance, deploy Generative AI models within your OCI tenancy.
- Integration Approach: Leverage OIC's REST adapter to communicate with OCI's Generative AI endpoints, enabling advanced error analysis and response generation.
- Benefits: Achieve improved error clarity, faster resolution times, and maintain strict data governance.





Thank You For Attending!

Please complete the session survey in the conference app.









Q&A

bvieragomez@smxtech.com

Connect with me on LinkedIn https://www.linkedin.com/in/bryan-viera-gomez/









