APIs ON IBM I: REAL-TIME DATA FOR DISTRIBUTION & LOGISTICS

EDUCATIONAL ROUNDTABLE + END-STATE CODE SNAPSHOTS
(COMPOSE, TRANSMIT, PARSE)

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INTRODUCTIONS

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Why do APIs matter?

- **What do customers expect?**
  - Accuracy, speed, visibility
- **Ecosystems of tools:**
  - Monolithic solutions don’t always cut it
  - We are in a world of vendor ecosystems to extend solution capabilities
- **Data drives everything:**
  - Images, items, barcodes, statuses

LIFE WITH AND WITHOUT APIs

Without APIs

- 👎 Batch jobs
- 👎 Dropping in files
- 👎 Manually refreshing data
- 👎 Images stored locally on IFS only
- 👎 Brittle point-to-point integrations

With APIs

- ✓ On-demand lookups
- ✓ Enriched data
- ✓ Stateless, real-time data
- ✓ Consistent data exchanges (JSON / XML)
- ✓ Smaller, safer, more modular integration architecture

TYPICAL API FLOW (CALL)

Compose…	HTTP(S) request using JSON or XML
Transmit…	Request to external server
Parse…	Response data sent back from external server into database, program, etc

TYPICAL API FLOW (OFFER)

Parse…	Request data from external server
Compose…	Response containing JSON or XML
Transmit…	Response data back to external server

USE CASES

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Who can benefit?

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CONVENIENCE DISTRIBUTOR USE CASES

Product Images

Candy, tobacco products, shippers / displays

Barcode / UPC

Item lookup and validation

Product Metadata

Nutrition facts, ingredients, allergens, label info

Reduce Spoilage

Optimize product distribution based on expiration and timely delivery

Enrich Data

Ensure images are served up with the most recent copies instead of from IFS

IBM I'S ROLE IN A MODERN API WORLD

- With APIs, the IBM i remains your system of record.
- Your RPG programs will own business logic.
- APIs extend your system without forcing rewrites.
- API-first development allows for incremental modernization (connect first, refactor later per API)
- Goal: Keep the IBM i as a central system while participating in modern technical ecosystems

USE CASE #1 – FOOD INFO AND IMAGES

USE CASE #2 - BARCODE LOOKUP

USE CASE #3 - GEOCODING

CONCLUSION AND KEY TAKEAWAYS

APIs are Arguably No Longer Optional

- APIs enable **real-time enrichment** (images, barcodes, metadata, status)
- Your IBM i participates fully, without abandoning RPG or DB2
  - You can connect and build APIs today incrementally
  - Modernize one endpoint, workflow, or consumer at a time
- *How you build, secure, and maintain APIs* matters just as much as the data they expose
- Building APIs that align with your system of record reduces risk, shortens timelines, and keeps ownership internal
- As mentioned, API standards are rapidly evolving, and integrations need to be build flexibly and quickly
  - You want to **evolve with your partners**

Further Exploration

- Try a free, zero-commitment proof of concept with RPG API Express
  - Build APIs using 100% native ILE RPG with RXS
- Discussion: What data would you want to have live tomorrow?
  - What do you have that you want your clients to access?
  - What do your clients have that you want to access?
- Discussion: Where do file-based integrations still hurt?
- If you created just **one** API this year, which would it be?
- Additional APIs to explore:
  - https://webservices.amazon.com/paapi5/documentation/use-cases/search-with-external-identifiers.html
  - https://developers.usps.com/addressesv3
  - https://developers.hubspot.com/docs/api-reference/overview

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