NDC Shopping Performance

Where we can intervene to address performance and scalability challenges

NDC/OO Messages

Software/Hardware
NDC Shopping Performance
>> today

17.2-19.1

- Query precision
  - Flight queries: O&D, dates/times (avoid +/- days)
  - RFIC/RFISC codes for ancillaries
  - “Exclude/Include” feature of Preferences
- Leverage ALC OfferItems instead of repeating them within Offers
- Shop outbound -> shop inbound -> add both to basket to reprice as round trip
- Limit number of Offers returned
- Airline Profile – filtering queries before they reach you
- Affinity shopping... technically feasible?
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>> tomorrow

19.2

- Managing Offer Details (CR158)
  - Ability for Seller to request to include or exclude certain portions of information (e.g. tax breakdowns, fare details)
  - Ability for Airline to specify if any details have been omitted, indicating they are available in subsequent API calls (e.g. through shopping basket)

20.1

- Pagination (return # number of queries per page)
- Limiting (truncating resultset at #)
- Asynchronous messaging for Notifs (i.e. MQ)
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>> future considerations

- Schedule-led flight shopping
- Split shopping per bound
- Mutual exclusivity / combinability with Offers
What some airlines already do

• Minimize orchestrations in Offer flow
• Limit the number of travel options in AirShopping flow
• Deploy some components on same platform / environment
• REST API calls instead of SOAP WS
• Caching prices and payment options
• Removing certain capabilities like flight shopping +/- 3 days
• Remove duplication in Offers (e.g. ancillaries from AirShopping if they can be fetched with ServiceList; or seat prices from ServiceList if also returned through SeatAvailability)
• SeatAvailability returning only available seats, while absent seats are implied as not available.
Managing Scalability (beyond NDC messages)

**Infrastructure level**
- Load Balancing
- Elastic Server Expansion
- Network Topology, Decentralization

**Platform level**
- Caching
- **API Governance**
  - Bandwidth Mngt / Throttling
  - API Call Allowance / Peaks of Activity
  - Security
  - Queuing

**Protocol level**
- Data Compression
- Serializing to other protocols
Thank you

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