Airlines Addressing Performance Challenges Today

- 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.
NDC Shopping Performance

Where we can intervene to address performance and scalability challenges

NDC/IO Messages

Software/Hardware
NDC Shopping Performance
>> today

17.2-19.1

• Query precision
  – Flight queries: O&D, dates/times (avoid +- days)
  – “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
• Anything else?
NDC Shopping Performance

>> tomorrow

In The Pipeline…

• Managing Offer Details
  – 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)
• Pagination (return # number of queries per page)
• Limiting (truncating resultset at #)
• Asynchronous messaging for Notifs (i.e. MQ)
• Full vs Partial Shopping
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

Vanni Sanvincenti
sanvincenv@iata.org
www.iata.org