

# **Delta Collection & Validation Jobs in Hotelbeds Cache API Integration**

## **What is a Delta Collection Job?**

A Delta Collection Job is designed to capture only the changes (the 'delta') since the last update, instead of reprocessing all data every time. This makes the cache refresh process more efficient and reduces API load.

## **What Does It Collect?**

The delta job typically gathers:

- Newly added hotels
- Updated rates or availability
- Changes in promotions, campaigns, or booking policies
- Stop-sale flags or allotment adjustments

## **Why Use Delta Jobs?**

By focusing only on modifications, delta collection jobs minimize data transfer and processing. They help maintain an up-to-date cache without the overhead of a full refresh.

## **What is a Validation Job?**

A Validation Job ensures the accuracy and reliability of cached data by comparing it against live API responses. It runs either periodically or on a sampling basis to detect discrepancies.

## **How Does Validation Work?**

1. Select sample hotels, dates, and occupancies.
2. Fetch live data from the Hotelbeds Booking API.
3. Compare with cached data.
4. If deviations exceed an acceptable threshold (e.g., 2–3%), mark the cache entry invalid and refresh it.

## **Why Use Validation Jobs?**

Validation jobs prevent stale or incorrect prices from being displayed to users. They ensure the cache hit-rate remains high while keeping deviation within business-acceptable limits.

## **How They Work Together**

Delta jobs keep the cache continuously updated with the latest changes. Validation jobs add a quality control layer by checking cached values against the live API. Together, they deliver both performance (fast results from cache) and accuracy (trustworthy prices and availability).

## **Benefits**

Implementing both delta collection and validation jobs provides:

- Efficient cache refresh cycles
- Reduced API costs and load
- Higher cache hit-rates (>70%)
- Reliable, accurate end-user prices