**QEUBOX – Test Coverage**

# A) Data Exchange & ETL

**TC-A1: Batch — day start ingest (FTP drop → ETL)**

* Preconditions: Valid CSV/JSON in per-aggregator drop zone; FTP reachable.
* Steps: Push file at 08:50; wait for ETL trigger.
* Expected: File detected; ETL sorts by QeuBox location/menu/restaurant; server persists as **Pending inward confirmation**; reflects to remote DB.

**TC-A2: Batch — hourly replenishment append (no overwrite)**

* Preconditions: Day start file already processed.
* Steps: Push an additional replenishment file at 13:00.
* Expected: Poller/trigger picks up; data appended (no impact to existing rows); inventory updated for current date.

**TC-A3: Batch — missing file alert**

* Steps: Do **not** push any file till 09:30.
* Expected: System raises alert; no stale data processed.

**TC-A4: Batch — ACK after parse**

* Steps: Push valid file; complete ETL.
* Expected: Acknowledgement generated (file received & parsed successfully).

**TC-A5: Instant — order create → API fan-out**

* Steps: Create order via API; send SKU with order/QR; pick location A in dummy app.
* Expected: Aggregator DB blocks SKU; server & remote DB updated; QeuBox Instant API notified.

**TC-A6: Instant — delivery completion status sync**

* Steps: Mark order delivered at remote.
* Expected: Status reflected to Server and Aggregator immediately.

**TC-A7: Instant — QeuBox reload (inventory push)**

* Steps: Load new menu into a compartment; publish.
* Expected: Remote and server DB updated; API publishes; aggregator app reflects.

**TC-A8: EOD reports published per aggregator**

* Steps: Run EOD.
* Expected: Sales, purchase, stock-in-hand, returns (by party) generated; saved with date suffix in shared folder; only the relevant aggregator’s data posted.

# B) Security & Access

**TC-B1: Aggregator login & scope restriction**

* Steps: Login with aggregator user.
* Expected: Access limited to their own operations/data.

**TC-B2: Super Admin login & global visibility**

* Steps: Login as QeuBox Admin.
* Expected: Can view all aggregators’ data across state/city locations.

**TC-B3: Malware quarantine on inbound file**

* Steps: Drop an EICAR/malware-simulated file.
* Expected: File quarantined; system alerted; aggregator notified via captured contact/DL.

**TC-B4: Admin delete infected file + notification**

* Steps: As Admin, delete malware file; send notice.
* Expected: File removed; aggregator notified.

# C) Inward & Remote Location Processing

**TC-C1: Inward status transition (pending → received)**

* Steps: After ETL, perform inward confirmation at remote.
* Expected: Pending status transitions; reflected to remote and server.

**TC-C2: Scan & categorize packs (received/damaged/to return)**

* Steps: Scan mixed set of packs; assign categories.
* Expected: Packs correctly bucketed into 3 outcomes; counts stored.

**TC-C3: Damaged packs excluded from stock**

* Steps: Mark subset as “Damaged”.
* Expected: Not counted in stock; separate day table; reflected in both DBs.

**TC-C4: “To return” packs excluded from stock**

* Steps: Mark subset as “To return”.
* Expected: Not counted in stock; separate day table; reflects in server/remote.

**TC-C5: Additional/Non-ordered exceptions persisted**

* Steps: Receive items not invoiced/at wrong location.
* Expected: Persist discrepancy detail; share instant report.

**TC-C6: Override — consider “To return” as inward**

* Steps: Send file/API to convert “To return” to inward.
* Expected: Inward flagged as “Additional order inward”; timestamp captured; all systems updated.

# D) Compartment Loading & Inventory

**TC-D1: Compartment auto-open on scan**

* Steps: Scan a pack for loading.
* Expected: System allocates an available compartment and opens that door.

**TC-D2: Front/back door logic**

* Steps: Load into a QeuBox with front+back configuration.
* Expected: Opposite door logic applied per config; status updated.

**TC-D3: Unfilled packs appear as hotbox/stock**

* Steps: Leave some menu packs unfilled.
* Expected: They show as inventory for location/HotBox.

# E) Delivery Partner Flows

**TC-E1: Single order — happy path**

* Steps: DP scans order/QR at remote.
* Expected: Validate against remote DB; open target compartment; complete.

**TC-E2: Single order — item missing**

* Steps: Scan order with missing menu in compartment.
* Expected: QeuBox alert raised.

**TC-E3: Multiple order — partial then refill**

* Steps: Deliver subset; mark partial; perform refill from inventory with comment.
* Expected: Tabs update to “Partially delivered” then “Delivered in full”; inventory adjusts; aggregator synced.

# F) Role Dashboards & UX (Aggregator / Admin / Remote Supervisor)

**TC-F1: City selection tiles show correct color codes**

* Steps: Open dashboard; select State/City.
* Expected: Tiles color-coded — Green (matched & menus available), Red (damaged), Amber (extra/partial), Grey (not started/no inward).

**TC-F2: Tile click → location detail & menu list**

* Steps: Click a tile.
* Expected: Location details with menu items available for business.

**TC-F3: Inward orders list with date filter & PDF export**

* Steps: Pick date; export.
* Expected: Correct list for day and prior dates; PDF generated.

**TC-F4: Damaged orders drilldown**

* Steps: Click “Inward Orders Damaged”.
* Expected: Show order#, reason, menu, restaurant, location.

**TC-F5: “Order To return” → Account for inward**

* Steps: Change status to “Account for inward”.
* Expected: Status updates reflect to server & the specific remote location.

**TC-F6: Overall Menu@Location dashboards (counts grid)**

* Steps: Open “Overall menu @ location”.
* Expected: Inward/Stock/Sold/In-progress metrics appear by hotel/menu; occupancy chart visible.

**TC-F7: Inventory Box dashboard & Total Availability**

* Steps: Open inventory dashboard.
* Expected: Multi-hotel availability grid and computed “Total Availability” per item.

**TC-F8: Sales — Most sold (Today vs Prev Day)**

* Steps: View Sales dashboard.
* Expected: Today/Prev day counts shown per menu/hotel.

**TC-F9: Compartment Occupancy — average time**

* Steps: Navigate to occupancy table.
* Expected: Average times per menu/hotel populated.

**TC-F10: Inward order received (timestamped)**

* Steps: View “Inward order received” panel.
* Expected: Hotel/Menu/QTY/Timestamp rows correct.

**TC-F11: Unsold items after session cutoff**

* Steps: After 15:00 (lunch), check Unsold dashboard.
* Expected: Today vs Prev day unsold counts.

**TC-F12: Damaged packs dashboard with pack QR**

* Steps: View Damaged packs.
* Expected: Hotel/Menu/QTY/Pack code populated.

**TC-F13: Supervisor read-only infra dashboard**

* Steps: Login as Remote Supervisor; open Infrastructure.
* Expected: All infrastructure & staff/attendance sections **read-only**; counts and details visible; free-form notes not editable.

# G) Reconciliation & Global Consistency

**TC-G1: Daily reconciliation “available for business”**

* Steps: End of day reconciliation job.
* Expected: Orders reconciled; “available for business” stable across systems.

**TC-G2: Cross-system consistency (server ↔ remote ↔ aggregator)**

* Steps: Perform a sequence: inward→damage→return→override→deliver→reload.
* Expected: Every state change consistently visible in all three systems (including aggregator dashboards).

# H) Negative & Edge Cases

**TC-H1: Malformed file schema**

* Steps: Push CSV with unexpected extra columns.
* Expected: Flexible parser accepts/adds fields or logs non-fatal; DB load succeeds.

**TC-H2: Wrong aggregator drops file into another aggregator folder**

* Expected: Should **not** reflect in wrong tenant’s DB; alert/ignore per policy. (Per-aggregator drop zone)

**TC-H3: API latency spike — eventual consistency**

* Steps: Delay Instant API callback by 60s.
* Expected: UI shows pending; final state converges with correct stock/order status.

**TC-H4: Duplicate file resend**

* Steps: Re-drop the same batch file.
* Expected: Idempotent handling (no double counting); ACK indicates duplicate.

**TC-H5: Compartment unavailable**

* Steps: Attempt load when all compartments occupied.
* Expected: Allocation fails gracefully; instruction for inventory box routing shown.

**TC-H6: Wrong location delivery scan**

* Steps: DP scans valid order at wrong location.
* Expected: Validation fails; alarm/alert raised.