

Incident Report

Aug 30, 2023: Delayed order processing in stores with pickup points

Status Page URL	https://status.vtex.com/incidents/qfq64tm8g1k8
Impacted accounts	Stores with pickup points linked to their shipping policies
Duration	Period 1: 24 minutes (15:11 to 15:35 UTC) Period 2: 3 hours (15:35 to 18:35 UTC)
Availability	Stores were available, but pickup points behavior was inconsistent (Period 1) and order processing was delayed (Period 2)

Summary

On August 30, 2023, between 15:11 and 15:35 UTC, stores with pickup points linked to their shipping policies presented an inconsistent behavior – pickup points that were displayed to shoppers were not sorted by distance, due to an invalid number presented in an internal data flow. This was caused by a change in the infrastructure that stores pickup point data, which was quickly reverted back to its original state.

Additionally, some orders placed in affected stores in that initial period presented an inconsistent state between 15:35 and 18:35 UTC, which led to order processing delays and repeated order confirmation emails being sent to some shoppers.

This incident did not impact the sales flow, shoppers were able to place orders at all times. However, there was relevant operational impact in stores with pickup points, with delays of up to 3 hours for some orders to be fully processed.

Symptoms

1. Inconsistent pickup point behavior

Pickup points were not sorted by distance to the shopper's address, when they were navigating in affected stores. Depending on the number of pickup points configured to be displayed at checkout, pickup points closest to the shopper's address may not have been listed. This symptom could be observed between 15:11 and 15:35 UTC.

2. Delayed order processing caused by inconsistent order state

Orders placed in affected stores, with pickup points included in the fulfillment alternatives presented by our logistics module (`shippingData.logisticsInfo.slas`), were not processed fully due to an inconsistent state (`pickupDistance` set to an invalid number in an internal data flow) that caused data deserialization errors.

Orders that were not processed fully could manifest this symptom in different ways:

- Order placed pages presented inconsistent information to shoppers
- Order confirmation emails were delayed by up to 3 hours
- Orders appeared to missing from the My Orders page in storefronts
- Orders appeared to missing from order listing page in the admin
- Clicking on the link in the payment transaction details to see order details in the admin led to a page with the error "Sorry, something went wrong on our side"
- Requests to the [Get order](#) endpoint of the Orders API to fetch order details led to a 500 status code in the response with the error "OMS 001 - An error has occurred".

This symptom could be observed between 15:11 and 18:35 UTC.

3. Repeated order confirmation emails sent to shoppers

Some of the shoppers that placed orders in the affected stores during the incident received up to 100 repeated order confirmation emails after we reprocessed orders that presented deserialization errors. This symptom could be observed between 17:45 and 18:20 UTC.

Timeline

Period 1

[2023-09-30 15:10 UTC]	We performed a change in our infrastructure related to the system that stores pickup points.
[2023-09-30 15:15 UTC]	Our monitoring systems identified what then appeared to be a partial degradation in the sales flow. Posterior analysis confirmed that this was caused by order processing delays.
[2023-09-30 15:29 UTC]	The infrastructure was reverted to its previous state.
[2023-09-30 15:35 UTC]	Our monitoring system metrics were back to normal.

Period 2

[2023-09-30 15:35 UTC]	Our incident response team started investigating whether there was in fact a partial degradation in the sales flow and if there were any other side-effects to be mitigated.
[2023-09-30 15:48 UTC]	We identified that there was in fact no sales flow impact, but some orders presented an inconsistent state.
[2023-09-30 15:51 UTC]	We started analyzing the changes that were reverted to understand how they led to an inconsistent order state.
[2023-09-30 16:10 UTC]	We observed strong evidence that the inconsistent order state was connected to invalid pickup point data.
[2023-09-30 16:24 UTC]	We identified the root cause of the issue and started working on a fix for the orders placed during the incident.
[2023-09-30 17:45 UTC]	We started deploying the fix. Some orders with inconsistent state started being reprocessed.
[2023-09-30 18:07 UTC]	We started deploying the fix. Some orders were still in the queue, pending processing.

[2023-09-30 18:20 UTC]	We finished reprocessing all orders with inconsistent state.
[2023-09-30 18:35 UTC]	The incident was fully mitigated.

Mitigation strategy

Each period in our incident timeline has a specific mitigation action:

- Period 1: We reverted the change we made in the infrastructure that stores pickup points. After that, our monitoring system metrics were back to normal.
- Period 2: We deployed a new version of the system responsible for order processing to fix the deserialization errors. After that, order processing delays ceased.

Follow-up actions: preventing future failures

Moving forward, we will include additional test cases that will early detection of inconsistent order state, invalid pickup data and pickup point data deserialization errors in orders.