# **2023-04-28 SellerHub Organic PageViews (Clicks) Incorrectly Low**

| **Environment** | Production |
| --- | --- |
| **Description** | **Brief Issue Description:** Organic PageViews (Clicks) reported on SellerHub were Incorrectly Low.  **What was failing:** Ads Online Ingestion pipeline was assigning SellerID -1 because Native VI code was incorrectly populating "slr" tag in click events with Seller Name, leading to incorrect pTab.  On 5/2 [we discovered other sojourner tags were also missing](https://jirap.corp.ebay.com/browse/VENUS-7231), leading to mTab missing 30% when drilling down to the campaign level.  In addition to this RCA document, [see also this write up](https://docs.google.com/document/d/1o3F6vM_hYSEHCSGKAhpb-PGyejs09aR8HJV9f0MbxOQ/edit) (also referenced below in "Related Items", we've attempted to incorporate all relevant information from that doc here). |
| **Reviewed by** | Sriramulu, Shyamala Makhmutov, Timur Satpute, Vaishali Bakkireddy, Veera Tang, Xinwei Ding, Zhiyuan Liu, Pavel Parkar, Kinnari Candido da Silva, Leonel Wu, Marshall Balaswamy, Preeti Roy, Puja Nattamai Malli, Sankari Sukumar Jeyaseelan, Saral Cheng, Julie Xie, Andy Lakshmikanth, Dilip Rajgor Wang, Freecia Baria, Paul Iyamperumal, Ganesh Lim, Zin |
| **Problem Report** | **Incident Ticket:**  INC1368389 JClassifier SWAT\_ML SWAT\_MONITOR cs\_site\_bug\_reporting nwa  ALERT14635 (community.ebay.com)  **ATB: 0 impact.** Explanation: reports were available, just incorrect (definitely not Magical). Exactly because online data may have issues, we do have a disclaimer on all reports that sellers should allow 72 hours for data to settle. Initially we thought there was no issue with our offline ingestion, because offline pulls seller id from the items table, so seller id data was correct within 72 hours. With the other sojourner tags missing however, we were not so lucky. Until we are able to backfill, reports at the campaign level will have incorrect numbers of organic clicks.  **Timeline (MST assuming ecommercebytes.com, community.ebay.com, and JIRA times are CET on Jasper's laptop):**  As part of VI Native cut over, a new server side tracking impression event was published from viexpio which replaced the server side tracking event from viexpsvc.  03-14-2023 Analytics teams (including VI partner analytics team) signed off on tracking data for 1% AB ramp.  04-20-2023 Native iOS and Android launched version 6.106.0 with a slow ramp  04-20-2023 iOS was turned off  04-21-2023 iOS relaunched to version 6.106.0 with a slow ramp  04-26-2023 3:32 AM [ADP-1926 bug filed](https://jirap.corp.ebay.com/browse/ADP-1926) by Thankachan, Jitheesha (AWF for Tech Ops Dublin)  04-27-2023 12:07 AM [published as technical issue on community.ebay.com](https://community.ebay.com/t5/Share-eBay-Technical-Issues/Ongoing-technical-issues-updated-as-of-04-27-23/m-p/33489819#M107610)  04-27-2023 1:52 PM [discussion on ecommercebytes.com](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ecommercebytes.com%2FC%2Fblog%2Fblog.pl%3F%2Fcomments%2F2023%2F4%2F1682646749.html&data=05%7C01%7Cjkamperman%40ebay.com%7Cd8191c75bea84aa888e208db48eb173a%7C46326bff992841a0baca17c16c94ea99%7C0%7C0%7C638183946781778824%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=ZbXrNsvcjLkp1ylkKyX6g8Fuai%2BaTokdGWQzcoP%2F%2FS0%3D&reserved=0)  04-28-2023 7:33 AM ADP-1926 bug assigned to Selling  04-28-2023 4:00 PM ADP-1926 assigned to Ads and Ads Eng Teams is engaged (Ads Tracking, Reporting, Control Center, ADP) and start debugging.  04-28-2023 5:06 PM SEC zoom bridge for Organic impressions issue, PagerDuty #934856 (This really is Page View Issue, bug is mis-categorized as impression which also causes us some confusion during debug session)  04-28-2023 5:48 PM Root cause found (seller name assigned to "slr" tag by new page ID)  04-29-2023 3:00 AM Code fix released to production  04-29-2023 4:34 AM Rollout complete for fix on native pool  05-02-2023 11:00 AM Discovered that [other ads-related sojourner tags are also missing](https://jirap.corp.ebay.com/browse/VENUS-7231)  05-04-2023 midnight PST - VI release code that populates other tags as well. Rollout completed .  1. Ads Data Pipeline: No alert  2. Traffic ramp timeline: 03-15-2023 VI traffic ramp to 1%, 04-21-2023 full ramp  3. Analytics: N/A |
| **FCI** | GCX received handful of calls, mostly from Japan Sellers (see JIRA for seller IDs)  Impact is 30% drop in Page Views for all sellers |
| **Revenue Impact** | None |
| **Domain Impacted** | Selling, Buying (View Item), Ads, and Ops |
| **Triage** | GCX received a handful of calls, mostly from Japan sellers  SEC zoom bridge for impressions issue |
| **Examine** | Ran query to find <eventTime, SellerID, overall\_clicks, promoted\_listing\_clicks, version> where overall\_clicks < promoted\_listing\_clicks  ADS Dashboard to monitor the trend based on the seller id value: [Link](https://adsshepherd.muse.vip.ebay.com/monitoring/clickcube/explore?start=1682319600&end=1682751599&chart=line&options=%7B%22source%22:%22organic%22,%22timezone%22:%22America/Phoenix%22,%22granularity%22:%22hour%22,%22dimensions%22:%5b%22pageId%22,%22sellerId%22%5d,%22measures%22:%5b%22clicksOnEbay%22,%22clicksOffEbay%22%5d,%22filters%22:%5b%7B%22title%22:%22eventType%22,%22operator%22:%22notEqual%22,%22values%22:%5b%22OI%22%5d%7D,%7B%22title%22:%22pageId%22,%22operator%22:%22in%22,%22values%22:%5b%224429486%22%5d%7D,%7B%22title%22:%22sellerId%22,%22operator%22:%22equal%22,%22values%22:%5b%22-1%22%5d%7D%5d,%22dataSource%22:%22mixed%22%7D)  Found page ids 2349624 and 2047675, View Item Pages  Marshall Wu investigates ads organic impression pipeline and finds only 0.5% discrepancy in impressions, turns out the issue is Page Views with -1 Seller ID (clicks from Ads Perspective).  Rekha Mathew notes "for events emitted from new view item page 4429486 "slr" tag has seller name instead of seller oracle id. and offline job seems to be populating seller oracle id correctly. so wondering how offline job is getting oracle id from seller name.  Jiawei Xu solves mystery of why offline ingestion is not affected, by confirming "we didn’t see any issue with seller id on dss side, we get seller id by join dw\_lstg\_item table on itemId"  5/2 discovery that other tags are also missing in [VENUS-7231](https://jirap.corp.ebay.com/browse/VENUS-7231) |
| **Root Cause** | **Impressions:** only 0.5% issue, under investigation in JIRA [ADP-1927](https://jirap.corp.ebay.com/browse/ADP-1927)  **Page Views:** VI code was populating tracking event with Seller Name instead of Seller ID  **Question:** Can we trace back to earlier root cause  **Answer:** This was a new page id, new tracking, all should be same as old page id, did compare side by side, had looped in eBay analytics, including Ads Analytics (got DLs from Josh, Adam. Had a manual signoff). Page ID was most focus. Tag is not clear who looked at it. Consensus is the root cause is **We have no automated tracking validation for Native (we do for dWeb and mWeb).** We do have this automated tracking validation for dWeb and mWeb, which are the next projects to release. |
| **Cure** | DONE VI released code that populates tracking event with Seller ID (JIRA [VENUS-7220](https://jirap.corp.ebay.com/browse/VENUS-7220))  DONE Ads verified with dashboard that clicks with seller name went down to 0  DONE VI released code that populates other tags as well, rollout completed midnight PST 5/3 (JIRA [VENUS-7231](https://jirap.corp.ebay.com/browse/VENUS-7231))  [DSAM-23148](https://jirap.corp.ebay.com/browse/DSAM-23148) By EOD 5/5 PST: DSS prepare backfill data with other tags all the way back to 03-14-2023 when first traffic started flowing  [ADP-1945](https://jirap.corp.ebay.com/browse/ADP-1945) In the next few weeks: Ads Data and Privacy team (AMS) work with NuColumnar to backfill 49 days of data (starting with most recent) |
| **Opportunities** | **What can be improved**   * **Monitoring and Alerting**   [ADP-1936 EPIC monitoring of online ingestion](https://jirap.corp.ebay.com/browse/ADP-1936), with at least these stories (more may be added as we go):  [ADP-1937](https://jirap.corp.ebay.com/browse/ADP-1937) Online ingestion: monitor incidence of assigning "-1" to sellerID.  [ADP-1938](https://jirap.corp.ebay.com/browse/ADP-1938) Online ingestion: monitor incidence of assigning "-1" to campaignId.  [ADP-1939](https://jirap.corp.ebay.com/browse/ADP-1939) Online ingestion: alert if too many "-1" assigned to sellerID (including SOP/playbook, notify upstream).  [ADP-1940](https://jirap.corp.ebay.com/browse/ADP-1940) Online ingestion: alert if too many "-1" assigned to campaignId (including SOP/playbook, notify upstream).  For later consideration (infeasible now):  Monitor Staging so that we find these issues even earlier. This may be too noisy because lots of issues happen on staging.  Upstream Monitoring.  Kamperman, Jasper Are there opportunities to monitor logging of invalid values for other fields/tags?  Yes, added another story [ADP-1954](https://jirap.corp.ebay.com/browse/ADP-1954) to the EPIC to discover other fields that would be valuable to monitor   * **Code**   For later consideration (infeasible now): perhaps backup to populating Seller ID from item table (like offline ingestion does).   * **Automation**   For mWeb we already have the automation, for Native Ganesh will still work with Native team to improve testing for tracking.  For later consideration (infeasible now): prepare a schema for the expected data (long term solution since it requires coordination of all producers and consumers).   * **Process**   Saral and Ganesh: Make sure in our mWeb (first EP to start 5/15) and dWeb migration we validate not only page id but also tags.  Shyamala and Ganesh work to make sure we have sufficient validation on two column. Also View Item team to add tracking related validation. |
| **YFlow** | The data flows as follows: VI Native (iOS and Android) → viexpio → Sojourner → Online Ingestion (Ads) → NuColumnar (ClickHouse) → PLReports (Ads) → SellerHub (Selling) → Seller |
| **Rollback** | N/A, fixes were rolled forward |
| **Related items** | [Other document with root cause and other information](https://docs.google.com/document/d/1o3F6vM_hYSEHCSGKAhpb-PGyejs09aR8HJV9f0MbxOQ/edit) |
| **Status** | The incident has been resolved, organic page views are reported correctly to sellers now at the aggregate level, at the campaign level they will be reported correctly after the backfill is done ([ADP-1945](https://jirap.corp.ebay.com/browse/ADP-1945)).  This RCA doc was reviewed and finalised during review on 5/4 via zoom call, followed by some cleanup and JIRA links later that evening. |