# 2022-12-16 PLS clicks droped to 0 in placement in 101026, 101027, 100667

| **Environment** | Production |
| --- | --- |
| **Description** | Brief Issue Description:  The impressions of placements 101026, 101027, 100667 does not drop but clicks dropped due to Click tracking details missing on MFE calls, which is caused by a deployment on searchsvc |
| **Reviewed by** |  |
| **Problem Report** | Incident Ticket  [INC1224782](https://ebayinc.service-now.com/nav_to.do?uri=%2Fincident.do%3Fsys_id%3D3a2e0c1a1bbf951cab52326ecc4bcba6%26sysparm_stack%3D%26sysparm_view%3Dstandard%26sysparm_view_forced%3Dtrue)  [INC1224853](https://ebayinc.service-now.com/nav_to.do?uri=%2Fincident.do%3Fsys_id%3D8f2c7cde1b3f591cac59ea4cbc4bcb52%26sysparm_stack%3D%26sysparm_view%3Dstandard%26sysparm_view_forced%3Dtrue)  [INC1224986](https://ebayinc.service-now.com/nav_to.do?uri=%2Fincident.do%3Fsys_id%3D28994e561bf35d1cac59ea4cbc4bcb68%26sysparm_stack%3D%26sysparm_view%3Dstandard%26sysparm_view_forced%3Dtrue)  ATB: No ATB impact  Timeline (MST):   |  |  | | --- | --- | | **time** | **item** | | 12/16 16:19 | [[FIRING:1 for Pl\_Clicks\_Drop\_plmt\_101026\_SRP\_DESK\_DETERMINISTIC]](https://cloud.ebay.com/rule-groups/rg/Pl_Clicks_Drop_plmt_101026_SRP_DESK_DETERMINISTIC?env=production) starts to alert via slack [#clickhouse-pagerduty](https://ebay-eng.slack.com/archives/C01C9KLNCP8/p1671236346441869) and [pager](https://ebay-cpt.pagerduty.com/incidents/Q0165DMZGTFL4J). | | 12/17 17:25 | ADS Infra oncall notices the resolved alerts keep being triggered.  try to contact the oncall of 2466 - Ads Amsterdam - Ads NuColumnar via [slack](https://ebay-eng.slack.com/archives/C01C9KLNCP8/p1671326733792239) and phone call for the cause but failed  [metric link](https://console.sherlock.io/explore?left=%7B%22datasource%22:%22000000007%22,%22queries%22:%5B%7B%22expr%22:%22sum%28rate%28TotalPLRecord_total%7B_namespace_%3D%5C%22promotedlisting%5C%22,eventType%3D%5C%22PLC%5C%22,placement%3D%5C%22101026%5C%22,pool%3D%5C%22r1organicrealtimeingest0%5C%22%7D%5B15m%5D%29%29%20%2A%2010%20%22,%22refId%22:%22A%22,%22exemplar%22:false,%22interval%22:%221h%22%7D%5D,%22range%22:%7B%22from%22:%22now-7d%22,%22to%22:%22now%22%7D%7D&forceLogin=true%20View%20RuleGroup%20In%20Cloud%20Console:%20https:%2F%2Fcloud.ebay.com%2Frule-groups%2Frg%2FPl_Clicks_Drop_plmt_101026_SRP_DESK_DETERMINISTIC%3Fenv%3Dproduction%20num_firing1%20num_resolved0%20resolved%20CLIENT%20View%20in%20AlertManager%20View%20Message&orgId=1) | | 12/17 18:30 | ADS infra oncall raise the issue [in #ops-ebay](https://ebay-eng.slack.com/archives/C0G4ZU28J/p1671342742795829). | |
| **FCI** | 1. Missed Clicks for placements  * 101026 - PL - Desktop SRP Slot Bottom-3 * 101027 - PL - Desktop SRP Slot Bottom-4 * 100667 - SRP - Left Rail - RVI   2. Revenue Impact  Rough Estimate revised to ~ $8,000 ( ~ $5,000 (101026) + 1,500 (101027) + $1,400 (100667) ) per day based on pre-holiday comparison  <https://adsshepherd.muse.vip.ebay.com/monitoring/metrics?ads_program=PL&compare_with=42d&data_source=realtime&end=1671606000&flat_currency=1&metrics=revenue&placement_id=101026&start=1670396400&step=1d>  <https://adsshepherd.muse.vip.ebay.com/monitoring/metrics?ads_program=PL&compare_with=42d&data_source=realtime&end=1671606000&flat_currency=1&metrics=revenue&placement_id=101027&start=1670396400&step=1d>  <https://adsshepherd.muse.vip.ebay.com/monitoring/metrics?ads_program=PL&compare_with=42d&data_source=realtime&end=1671606000&flat_currency=1&metrics=revenue&placement_id=100667&start=1670396400&step=1d> |
| **Domain Impacted** |  |
| **Triage** | |  |  |  | | --- | --- | --- | | **time** | **who** | **finding** | | 12/17 20:20 | Kinnari Parkar | on our end we do not make any changes on placementId | | 12/17 21:33 | huatang | The impression does not drop but clicks dropped. It is more likely something happened in ads tracking flow.  [link](https://adsshepherd.muse.vip.ebay.com/monitoring/clickcube/explore?start=1670736534&end=167%5B…%5Doperator%22:%22equal%22,%22values%22:%5B%22101026%22%5D%7d%5D%7d) | | 12/17 21:52 | yixin wang, huatang | this (Impressions behavior normal, Click drop to 0) issue not only occurred in 101026 but also 101027, 100667,  Ganesh involved | | 12/17 23:11 | Ganesh Iyamperumal | confirm no customer impact. trying confirm if MFE call pass the Click tracking details | | 12/18 01:42 | Clyde Jones | Clyde Jones joins and confirm no changes on these placement ids | | 12/18 04:11 | Jack Click | **find a deployment on searchsvc at around 12/16 13:00** searchsvc-3.0.100\_RELEASE\_20221215072027762, which matches timeline | | 12/18 05:50 | Aioria Guo from CCOE on a team slack channel, not the on-call person | Our on-call might be not online until morning time.  I just did a quick check on our release, we did have a release  (searchsvc-3.0.100\_RELEASE\_20221215072027762) around 12/16 13:00.   I went through the code commits in this manifest, the only possible changes related might be model “ProductThemesTracking”/“ClickTrackingData” migration. | | 12/18 07:15 | Ayush Kumar Singh (responding to an email sent at 6:51, no pagerduty alert received overnight) | Acknowledged the email | | 12/18 8:31 AM | Vijay Kakadiya | Initiated rollback on search services pools for the latest manifest that was baking over the weekend (next manifest after the previous one that caused the issue) | | 12/18 8:37 AM | Rakesh Setty debugged and identified the issue in search services | The VI url in SaaS response for PL slots 101026 and 101027 doesn’t have amdata parameter used for tracking. But it looks like the issue started yesterday when we did not have any rollout. I am not sure it is related to our rollout earlier this week. Was there any change that went out yesterday in any of the related pools? | | 12/18 9:39 AM | Rakesh Setty | I am not sure if it is because of our rollout since the timing doesn’t seem to match. Can we please get the exact time when the issue started? The graphs below (in the original email thread) seem to be contradictory about the timing and to some degree the impact. | | 12/18 9:48 | Laura Confal | Responded with the correct graph that coincides with the search services rollout | | 12/18 09:58 | Ayush Kumar Singh/Vijay Kakadiya | After the previous rollback completed, initiated the rollback of the previous manifest that was causing the issue | | 12/18 12:00 |  | rollback finished and data recovered. | |
| **Examine** | Steps taken to investigate issue |
| **Root Cause** | [SRCH-40883: RCA](https://docs.google.com/document/d/13lUtJghudzRlwxFEng_9WH5aRKlzvbciWCOPOEKmKpo/edit) [SRCH-40883](https://jirap.corp.ebay.com/browse/SRCH-40883) - PL clicks drop to zero in placement 101026, 101027, 100667 Closed  Overview:  There was a refactoring in search services that failed to initiate a variable properly that was determining a flag to indicate whether PL tracking was required or not. Hence the flag was not getting set properly and PL tracking for these placements was not happening.  Details:  [PR 8782](https://github.corp.ebay.com/SearchService/search_service/pull/8782) removed [this line](https://github.corp.ebay.com/SearchService/search_service/pull/8782/files#diff-2c20d21d8efd4c5f28bf0c9f6433f5cb3942f65bf59f19cfb9c55b531229b184L380):  requestConfig = request.getRequestConfig();  That was the only write site of UniversalSearchServiceApplicationBuilder.requestConfig. See that first screenshot. It's the last revision before PR 8782. It says that there's only one write site of requestConfig , which is the line above.  After this line is removed, all the read sites of requestConfig  will get nothing but null. That includes  boolean isPLTrackingEnabled = requestConfig != null && requestConfig.getPlTrackingInVI() != null                  && requestConfig.getPlTrackingInVI();  ([line to this line](https://github.corp.ebay.com/zhpeng/search_service/blob/502533b556d2b93ea65a185489caf7b43b50d269/UniversalSearchServiceApp/src/main/java/com/ebay/raptor/searchsvc/universal/app/resources/UniversalSearchServiceApplicationBuilder.java#L762)) Notice the requestConfig != null there. It will evaluate to false, so isPLTrackingEnabled will be false.This isPLTrackingEnabled  will be passed down to ItemServiceInvokerTask as plTrackingInVIRequestConfig, where the ClickTrackingData will only be built when this evaluates to true:  if (configValues.enablePLClickTrackingOnVI && BooleanUtils.isTrue(                                      plTrackingInVIRequestConfig)) {  so it's not a config error. It's a refactoring error.  On the main branch, you can see that requestConfig is read in 2 places, but not written even once:  [PR 8844](https://github.corp.ebay.com/SearchService/search_service/pull/8844) was merged to fix this error. |
| **Cure** | 12/18 12 pm  recovered after [searchsvc rollback](https://cmpaas.cloud.ebay.com/dashboard/job.jsp?method=jobs&jobid=2022-12-18%7CDeployJob.2662cc911850a68b87560023fffffd18%7CLSDSMraptor&appserviceid=/ENVadtnz6gzxgz4/searchsvc-app__ENVadtnz6gzxgz4&platform=raptor)  [metric link](https://console.sherlock.io/explore?left=%7B%22datasource%22:%22000000007%22,%22queries%22:%5B%7B%22expr%22:%22sum%28rate%28TotalPLRecord_total%7B_namespace_%3D%5C%22promotedlisting%5C%22,eventType%3D%5C%22PLC%5C%22,placement%3D%5C%22101026%5C%22,pool%3D%5C%22r1organicrealtimeingest0%5C%22%7D%5B15m%5D%29%29%20%2A%2010%20%22,%22refId%22:%22A%22,%22exemplar%22:false,%22interval%22:%221h%22%7D%5D,%22range%22:%7B%22from%22:%22now-7d%22,%22to%22:%22now%22%7D%7D&forceLogin=true%20View%20RuleGroup%20In%20Cloud%20Console:%20https:%2F%2Fcloud.ebay.com%2Frule-groups%2Frg%2FPl_Clicks_Drop_plmt_101026_SRP_DESK_DETERMINISTIC%3Fenv%3Dproduction%20num_firing1%20num_resolved0%20resolved%20CLIENT%20View%20in%20AlertManager%20View%20Message&orgId=1) |
| **Opportunities** | What can be improved   * Monitoring - looks like the alerts were ignored for more than a day [SHEPHERD-2157](https://jirap.corp.ebay.com/browse/SHEPHERD-2157) - Postmortem: PLS clicks dropped to 0 in placement in 101026, 101027, 100667 Closed → [SHEPHERD-2134](https://jirap.corp.ebay.com/browse/SHEPHERD-2134) - enhance TTD for clicks drop too much even without high revenue - "with" for sure then Closed * Incident handling process - should use pagerduty alert to reach out to teams during non-work hours, Search Services team did not receive any pager duty alerts, got slack messages overnight which went largely unnoticed, however the team responded to email promptly when it was sent early morning on Sunday * Code - better unit testing and code review [SRCH-41094](https://jirap.corp.ebay.com/browse/SRCH-41094) - Write unit tests that covers PLS clicks drop to zero in placement 101026, 101027, 100667 Closed * Automation - Add integration test for this usecase [SRCH-40991](https://jirap.corp.ebay.com/browse/SRCH-40991) - write automation that covers PLS clicks drop to zero in placement 101026, 101027, 100667. The drop only exists in Clicks but not in Impression Closed * Process |
| **Flow** | Data/Pool Dependencies  pulsar proxy -> adstrackingcollection -> pathfinder ->sojflow |
| **Rollback** |  |
| **Related items** |  |
| **Status** | Incident Status, RCA edit status |