**Atlassian**

Summary: Customer was making changes to EBS Volume Size (500→501, 751→ 752) for each domain respectively on 3/5 and 3/3. This change would cause a Blue Green. Due to a bug at our end, the BG were stuck. Customer then issued access policy changes (these were change in order of the principals, which should be have no effect). The access policy change failed due to a stuck BG. Operators detected the stuck BG and fixed the deployment issue on 3/13. Between 3/5 and 3/13, there were multiple operator attempts to fix the state of the domain.

AWS AI:

1. Fix the bug which blocked the Blue Green. ETA 3/13. Done. All of Customer domains are upgraded on the new version with the bug fix.
2. Improve the time for detection and resolution for Blue Green failures. ETA TBD - We will come back on this end of next week.

Customer AI:

1. Audit the configuration changes. The EBS volume size change (+1 GB) results in Blue Green event.  The Access Policy change (order of principals) is a no-op change.

This is an analysis of customer initiated update actions on the domain sourced from Cloudtrail events.

**Region: IAD (us-east-1)**

**Account: 234617365107**

**Domain: rps-xp-elasti-crr6k3x5rq7s**

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| --- | --- | --- | --- | --- | --- |
| **Cloudtrail Event** | **Time (UTC)** | **Config Service** | **Config Version Before** | **Config Version After** | **Result** |
| UpdateElasticsearchDomainConfig | 2020-03-05T03:07:26.000Z | No config changes detected | 194 | 194 | N.A |
| UpdateElasticsearchDomainConfig | 2020-03-07T00:12:44.000Z | EBS Option 751 → 752 | 194 | 195 | CDI - succeeded DDI - Failed - supervisord bug |
| UpdateElasticsearchDomainConfig | 2020-03-09T09:31:31.000Z | No changes | 197 | 197 | N.A |
| UpdateElasticsearchDomainConfig | 2020-03-10T00:40:54.000Z | Access Policy changed | 197 | 198 | Failed - Domain remains In Processing due to previous failure |
| UpdateElasticsearchDomainConfig | 2020-03-10T01:34:39.000Z | No changes | 198 | 198 | N.A |
| Operator Action - Recover Domain | 2020-03-10T08:57:56Z | N.A | N.A | N.A | Failed - partial DI - workflow failure, that required follow up action to removed the partial DI. |
| Operator Action - Recover Domain | 2020-03-10T19:21:07Z | N.A | N.A | N.A | fixing the inconsistent state of the domain |
| Operator action - deploy supervisord fix | 2020-03-13T19:22:07Z | N.A | N.A | N.A | Success - domain moves to single DI in Active state with the fix. |
| UpdateElasticsearchDomainConfig | 2020-03-16T10:44:07.000Z | Access Policy changed | 208 | 209 | Success |
|  |  |  |  |  |  |

Between 2020-03-10T00:40:54.000Z and 2020-03-16T10:44:07.000Z, a number of actions were taken by operators - couple of them triggered a BG as the operators tired to safely get the domain to a consistent state matching the desired configuration that was pending application. A third BG was triggered by operators/service to apply the supervisord fix on the domain.

**Region: PDX (us-west-2)**

**Account: 234617365107**

**Domain: rps-xp-elasti-1h6p8ns6524dp**

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| --- | --- | --- | --- | --- | --- |
| **Cloudtrail Event** | **Time (UTC)** | **Config Service** | **Config Version Before** | **Config Version After** | **Success** |
| UpdateElasticsearchDomainConfig | 2020-03-03T20:00:18.000Z | EBS Option → 501 | 293 | 294 | CDI - succeeded DDI - Failed - supervisord bug |
| UpdateElasticsearchDomainConfig | 2020-03-05T04:42:27.000Z | No changes | 296 | 296 | N.A |
| UpdateElasticsearchDomainConfig | 2020-03-09T09:34:31.000Z | No changes | 296 | 296 | N.A |
| UpdateElasticsearchDomainConfig | 2020-03-10T00:40:48.000Z | No changes | 296 | 296 | N.A |
| UpdateElasticsearchDomainConfig | 2020-03-14T00:36:49.000Z | EBS Option → 500 | 297 | 298 | Suceeded |
| UpdateElasticsearchDomainConfig | 2020-03-17T01:52:01.000Z | EBS Option → 501 Access Policy changed | 305 | 306 | Suceeded |

Few hours prior to 2020-03-03T20:00:18.000Z (the first entry in table above), at 2020-03-03T03:24:41Z the domain received a signal to upgrade to the new VFI (AWSSearchServiceSwiftDataPlane-release-7-4-coral-jdk11-B6005007104-Linux-2.6c2.5-x86\_64-1583164509) - the BG for this update succeeded, so domain was in good state at 2020-03-03T20:00:18.000Z when it received the customer update above.

One observation: In both regions, all access policy changes updated only the order of the principals: “arn:aws:iam::234617365107:role/xpsearch-user-indexer” and “arn:aws:iam::234617365107:role/xpsearch-user-searcher” that are granted access to the domains in the access policy.  Effectively the access policy is not really changed with regards to who has access - but a String comparison of the its contents indicates a change. There is no good way for Config Service to determine equality of two different Strings resulting in same access, so it simply signals the workflow to apply the new access policy.