**OptiTrack Piwik IDs running out - SRS**

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## Introduction

## In the current implementation the sequential IDs we are using for the OptiTrack are stored in an "int". The max value for an int is 2,147,483,647 (2^31 – 1). We have reached 1,461,844,329 (68%) with 10 customers.

## In the immediate future, we are expecting 4 new customers (to overall have 14 customers) and with the current pace of new IDs each month (14,614,883) it means that in around 3.35 months we will "run out" of IDs.

## Task Definition

Addressing the "IDs running out" issue in order to allow a growth in IDs which will leave us space for many years forward considering both growth in number of customers using OptiTrack and number of new IDs per month per customer.

## Suggested Approach

The tasks that are required for this feature:

1. Infrastructure **(Edi K)**
   1. Clone today’s OptiTrack AWS infrastructure to a new env
   2. Upgrade Piwik to the latest-n-greatest
2. Database - go over Piwik’s schemas and forum recommendations and change Int to BigInt **(Eddie/Alex)**
3. Make required changes to **OptiTrack Import Task and Stored-Procedures** – now to assume BigInt instead of Int **(Eddie with the help from Nadav)**
4. Develop a simple Console application that will simulate events from customers (or use SoapUI instead) – **(Eddie)**
   1. Needs to be multiple tenants
   2. We can either start with today’s Piwik DB or clean one – the question is can we migrate existing MySQL to the BigInt…
   3. Need to run it to push over then MaxInt events and monitor behavior - both on server-side and client-side. **Does it work?#$?!@??!**
5. Testing: configure staging service to pull data from new env. Test data imported by OptiTrack Importer in staging site **(QA)**
6. Empty the DB in the new env after the tests were successful **(Eddie)**
7. Redirect O4O to the new env **(Amit Levkovitz + Eddie)** – there’s still an open question on exactly how we want to do this – need to discuss with Alex…
8. Slowly redirect other sites into the new env **(Amit Levkovitz) -** – there’s still an open question on exactly we want to do this – need to discuss with Alex…

## Alex's notes:

1. Clone existing env. in US:

   a. Test ALTER TABLE with bigint - not many people did that, requires extensive research and testing.

   b. Test piwik version update - there's a "one-click-update", but give the data size it will take a LOT of time.

   c. Reduce data purge period & run manual purge, to prevent MySQL DB from overflowing (see further info below).

2. New env. in Europe - without Alias service, with Beanstalk, put EU customers there.

3. Make sure CSMs have sent the deprecation email to customers or make them send it ASAP - to get rid of aliasing service.

4. Decide about DNS names:

   a. Migrate all Optimove to AWS Route 53 - max features, pay a few extra $ (not much), marry AWS.

   b. Leave as it is now - TierraNet, subdomain per tenant (***[tenantName]****track.optimove.net*) - NO features at all, pay minimum.

   c. Register new domain in AWS Route 53 (like we did with RealTime) and slowly migrate all OptiTrack to it.

5. Plan the maintenance, schedule downtime, notify clients.

6. Late-night date for EdiK and me - sushi on the house..?

* We need 1 to estimate the required downtime and verify that our solution is viable.
* We need 2 to make sure we will not get stuck with big maintenance (like now) again in the near future, also improving latency for EU customers and offloading the main env.
* We need 3 to reduce complexity of deployment, so we can create a "clean" environments from now on.

1.c. - the current free space is 51Gb, which is already less than the event table size. This might disable us from doing data purge without enlarging DB storage size. DB storage size is **very** expensive.