DELTA API Technical Documentation

Objective:

* To reduce the number of calls for search API:
* Call the Search API only when new data is needed

Requirements:

* Taxpayer Fetch Logic Change, Fetch New data only When GSTIN is changed
* GSTIN Hash list for all the GSTIN in the Taxpayer
* Whenever a new Taxpayer, Entry is made SIGNAL is triggered to automatically create GSTIN hash value
* Lambda to call delta API and set update time for GSTIN present in Delta API

Lambda Function

* Create GSTIN Hash table for all the GSTINs in the peridot taxpayer DB
* Use the following schema for GSTIN Hash Table

class GstinHashTable(models.Model):

Gstin = models.CharField(max\_length=15, null=False, blank=False)

GstinHashValue = models.TextField(blank=False, null=False)

LastFetchTime = models.DateTimeField()

LastUpdateTime = models.DateTimeField()

* Get GSTIN and last Fetch Time from Taxpayer DB
* Find the MD5 Hash Value for the GSTIN and save them
* Set the default value of Update Time as Null
* Run the API to get day wise Changed list of GSTIN
* Get The Data State wise , if no of pages is greater than 1 , call the API again
* Create a lambda which runs every night to call the above API
* Compare the GSTIN List in API Response with our hash table
* If value is found change the latest update time in hash table

Fetch Logic:

* Check Latest Update Time and Fetch time in Hash Table when you call search API
* If the Update Time is Null, always fetch from GSTIN
* If the last fetch time before cut-off date always fetch from GSTIN
* If the last fetch time is after cut-off date check the update time
* If there is no update after last fetch time, do not call the search API
* If the API is updated after last fetch time, we call the search API

Scenario 1: Update Time is not "None" & Update Time is before fetch time - No New Fetch Is Done

Scenario 2: Update Time is not "None" and Update Time is after fetch time - New Fetch Is Done

Scenario 3: Update Time is None and Fetch Time Is before Cut-off date - No New Fetch is Done

Scenario 4: Update Time is None and Fetch Time is After Cut Off Date - New Fetch is Done



Django Signals:

* Use Django Signals for new GSTIN entry
* Create a function to make GSTIN Hash Table Entry
* Call the function whenever sign is activated

Day Wise Test Flow

Testing the signals:

* Add new gstin to the taxpayer table
* Check new gstin hash value is made in the GstinHashTable

Testing the lambda

* Run the lambda
* Check in hash value table update time is changes to current date in the GstinHashTable

Test Cases

Case 1: Update Time is not "None" & Update Time is before fetch time - No New Fetch Is Done

Check Fetch Time Taxpayer Search API Response

Case 2: Update Time is not "None" and Update Time is after fetch time - New Fetch Is Done

Check Fetch Time Taxpayer Search API Response

Case 3: Update Time is None and Fetch Time Is before Cut-off date - No New Fetch is Done

Check Fetch Time Taxpayer Search API Response

Case 4: Update Time is None and Fetch Time is After Cut Off Date - New Fetch is Done

Check Fetch Time Taxpayer Search API Response