Partner Intelligence LabApp - Setup Doc

Please refer to the new medium blog (discard the following going forward)

Last updated: ⏰6/30/2021

Note: This document is being updated to reflect a change in architecture to leverage new Parquet format (in AWS stack). It will be updated by July 6th 2021. Till then feel free to install Salesforce labapp in your PBO org.

Table of content:

Introduction, Architecture & features:

AppExchange App Analytics provides usage data about how subscribers interact with your AppExchange solutions. You can use these details to identify attrition risks, inform feature development decisions, and improve user experience. This Salesforce Labs app automates the log retrieval using AppAnalytics API, and creating the summary data so ISV Partners can monitor adoption of their AppExchange solutions.

Disclaimer:

- This package should be treated as a starter pack to build out your own App Analytics solution
- While this starter pack is offered on AppExchange as a managed package, please note that this project will also be open-sourced on Github via the @SalesforceLabs repository, so you can extend the solution with your own custom code.
- This package does *not* include any actual AWS infrastructure. You'll need to set up your own AWS instance to retrieve and store App Analytics data. The package simply provides the framework to make this easy.

- Please keep in mind that this solution is not an official Salesforce product, and we're not able to offer support for it. While occasional updates will be released on AppExchange as new features are developed, you will otherwise be responsible for owning & managing the solution. If you need a turn-key solution, then we'd encourage you to check out other excellent App Analytics solutions on AppExchange.

Architecture

Two AWS Fargate docker containers run at scheduled times.

- 1. Log Sync function - Pulls the daily log files for the previous day
- 2. Summary function - Generates aggregated datasets

Setup:

Pre-requisite

- PBO/LMA org - Make sure your org is enabled for the daily logs. To verify you can use this labapp and make sure you can retrieve a file for data type: Package Usage Log. If it is not enabled please open a support case as per this doc.

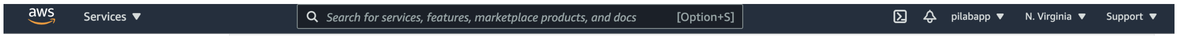
AWS - Setup

(**Estimated time** - 10 **to 15 minutes** depending on your familiarity with AWS)

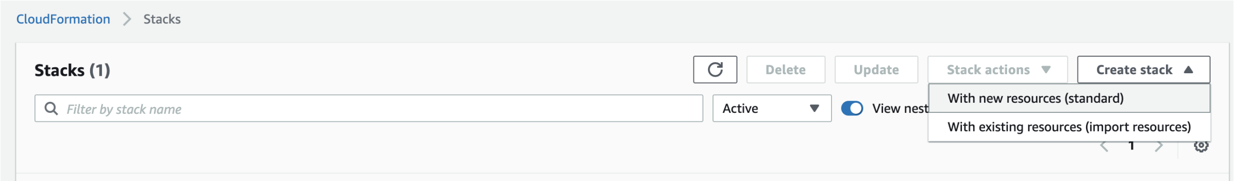
Create an AWS account (if you don't have one)

> *Note: Wait few minutes if you just created a new account*

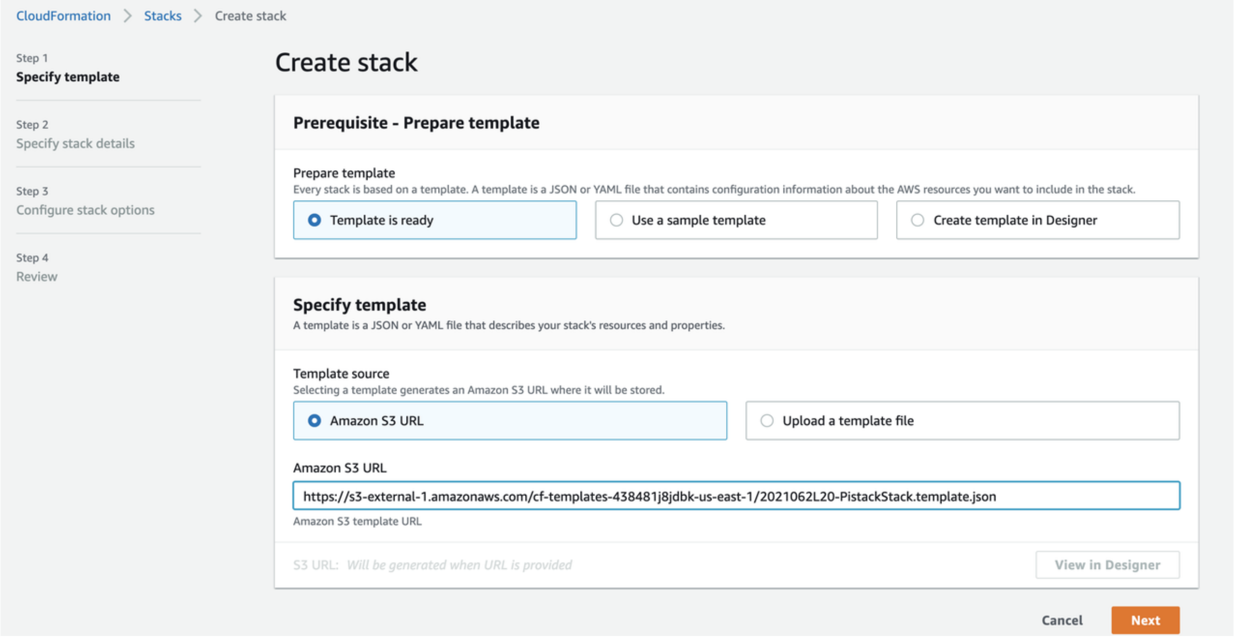
Step - 1 Create CloudFormation stack

- In AWS console, change region to us-east-1 (In top second right menu)
- 
aws
Services ▼
Search for services, features, marketplace products, and docs
[Option+S]
pilabapp ▼
N. Virginia ▼
Support ▼
- Go to AWS Services → CloudFormation → Stacks.
- Click "Create stack" with the option "With new resources (standard)", select all defaults there after and

  use this for S3 URL: https://pi-public-template-bucket.s3.amazonaws.com/PiappjscdkStack.template.json



Paste this S3 URL



Step 1
Specify template

Step 2
Specify stack details

Step 3
Configure stack options

Step 4
Review

Create stack

Prerequisite - Prepare template

Prepare template
Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

● Template is ready ○ Use a sample template ○ Create template in Designer

Specify template
A template is a JSON or YAML file that describes your stack's resources and properties.

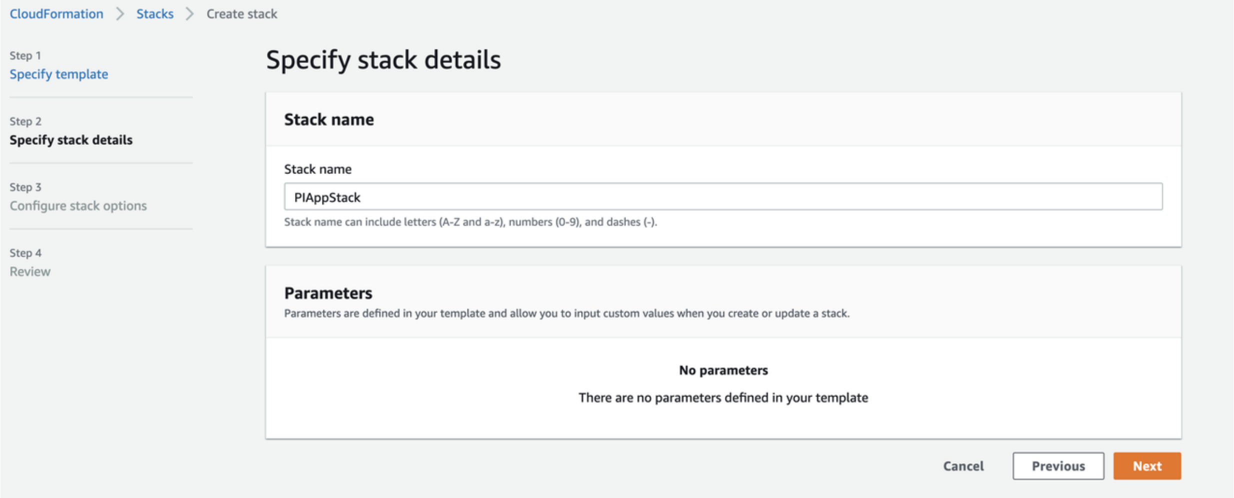
Template source
Selecting a template generates an Amazon S3 URL where it will be stored.

● Amazon S3 URL ○ Upload a template file

Amazon S3 URL
https://s3-external-1.amazonaws.com/cf-templates-438481j8jdbk-us-east-1/2021062L20-PistackStack.template.json
Amazon S3 template URL

S3 URL: *Will be generated when URL is provided*

Put any stack name (e.g. PIAppStack), accept all other defaults, check acknowledge box on last screen and create the stack.



Step 1
Specify template

Step 2
Specify stack details

Step 3
Configure stack options

Step 4
Review

Specify stack details

Stack name

Stack name
PIAppStack
Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

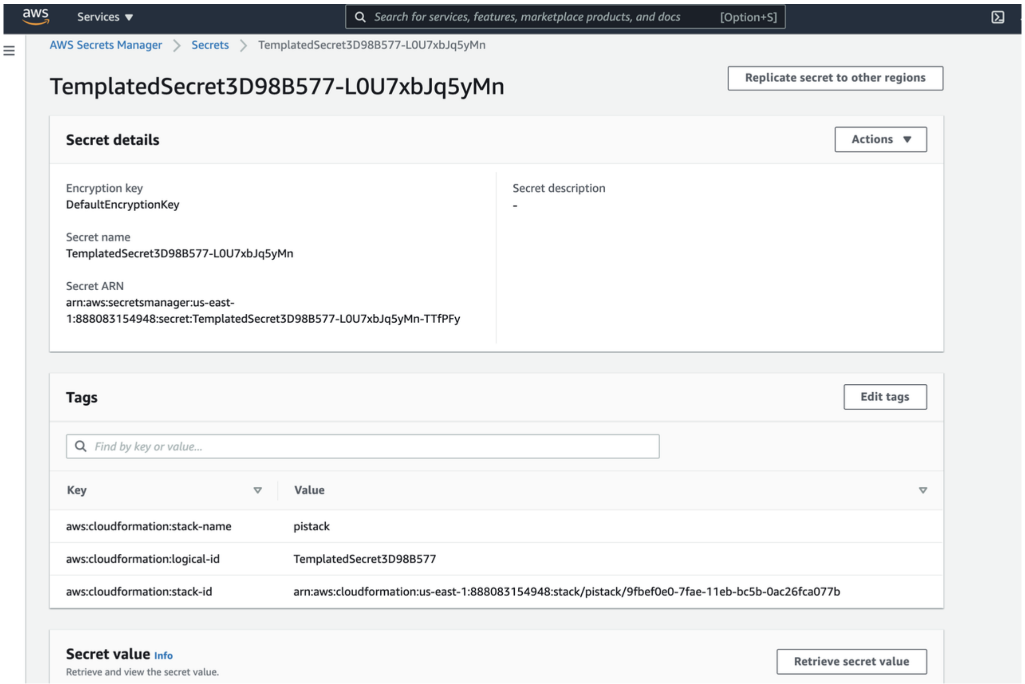
Parameters
Parameters are defined in your template and allow you to input custom values when you create or update a stack.

No parameters
There are no parameters defined in your template

> *Note: Wait few minutes for stack creation*

Step - 2 Update secret keys with PBO login credentials

Go to AWS Services → Secret Manager
Find the secret starting with TemplatedSecret***


aws
Services ▼
Search for services, features, marketplace products, and docs
[Option+S]
AWS Secrets Manager > Secrets > TemplatedSecret3D98B577-L0U7xbJq5yMn
Replicate secret to other regions
Actions ▼
Edit tags
Find by key or value...
Info
Retrieve secret value

TemplatedSecret3D98B577-L0U7xbJq5yMn

Secret details

Encryption key
DefaultEncryptionKey

Secret name
TemplatedSecret3D98B577-L0U7xbJq5yMn

Secret ARN
arn:aws:secretsmanager:us-east-1:888083154948:secret:TemplatedSecret3D98B577-L0U7xbJq5yMn-TTfPFy

Secret description
-

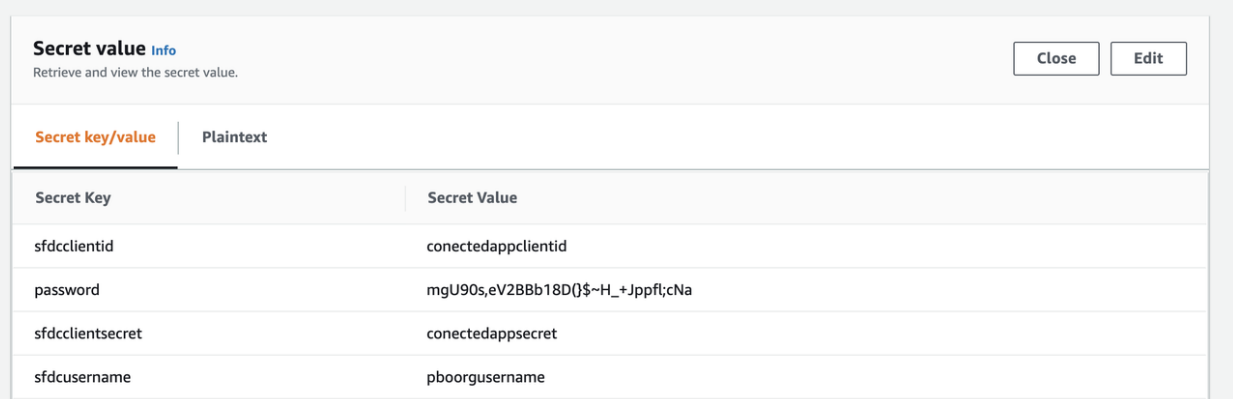
Tags

Key	Value
aws:cloudformation:stack-name	pistack
aws:cloudformation:logical-id	TemplatedSecret3D98B577
aws:cloudformation:stack-id	arn:aws:cloudformation:us-east-1:888083154948:stack/pistack/9fbef0e0-7fae-11eb-bc5b-0ac26fca077b

Secret value
Retrieve and view the secret value.

Click “Retrieve secret value“ button and update ”sfdcusername“ and ”password“ fields with your PBO credentials and save. Make sure to append security token to your password.

> *Note: sfdcclientid and sfdcclientsecret are optional for this phase.*



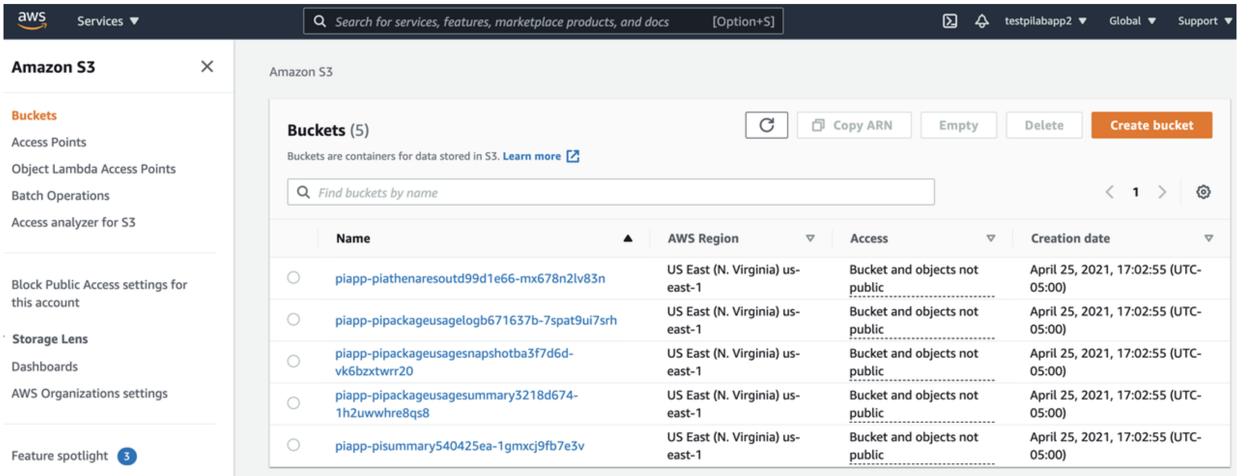
Secret value
Retrieve and view the secret value.

Secret Key	Secret Value
sfdcclientid	conectedappclientid
password	mgU90s,eV2BBb18D(}$~H_+Jppfl;cNa
sfdcclientsecret	conectedappsecret
sfdcusername	pboorgusername

AWS - Stack Review & quick test

Review S3 buckets
Go to AWS Services →S3

Note - In following screenshot, the name that start with piappjscdkstack-piapppidailylogbucket*** is where daily job will store the AppAnalytics csv files in a compressed format.



Buckets (5)

Buckets are containers for data stored in S3. Learn more

Name	AWS Region	Access	Creation date
○ piapp-piathenaresoutd99d1e66-mx678n2lv83n	US East (N. Virginia) us-east-1	Bucket and objects not public	April 25, 2021, 17:02:55 (UTC-05:00)
○ piapp-pipackageusagelogb671637b-7spat9ui7srh	US East (N. Virginia) us-east-1	Bucket and objects not public	April 25, 2021, 17:02:55 (UTC-05:00)
○ piapp-pipackageusagesnapshotba3f7d6d-vk6bzxtwrr20	US East (N. Virginia) us-east-1	Bucket and objects not public	April 25, 2021, 17:02:55 (UTC-05:00)
○ piapp-pipackageusagesummary3218d674-1h2uwwhre8qs8	US East (N. Virginia) us-east-1	Bucket and objects not public	April 25, 2021, 17:02:55 (UTC-05:00)
○ piapp-pisummary540425ea-1gmxcj9fb7e3v	US East (N. Virginia) us-east-1	Bucket and objects not public	April 25, 2021, 17:02:55 (UTC-05:00)

Salesforce PBO org - Setup

(**Estimated time** - 10 to 15 **minutes**)

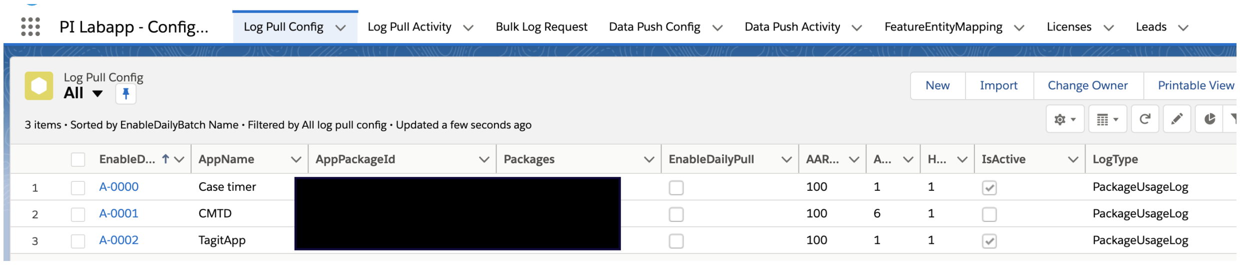
Step 1 - Install the package

Step 2- Configure the Log pull records

Go to the application “PI Labapp”. In “Log Pull Config” tab, create a new record as shown below.
AppName - ISV appname (something that).
AppPackageId - Main PackageID of your app (something that is associated with your AppExchange listing)
Packages - Comma delimited packages e.g. 0331U000000EHq2, 0331U000000ABCD,...
You could have multiple packages associated with the main package.
If only one package is associated with the appexchange listing use same value as **AppPackageId**)

> *Default values*

LogType -Only **PackageUsageLog (daily logs)** is supported. It will support other types in near future.
EnableDailyPull - Keep this disabled during initial testing. That means scheduled “Log pull” job will only work for log Manual requests (covered as next steps). If you enable this scheduled “Log pull” job will automatically pull logs for previous day
IsActive - Keep this enabled, unless you want to disable scheduled “Log pull” job completely



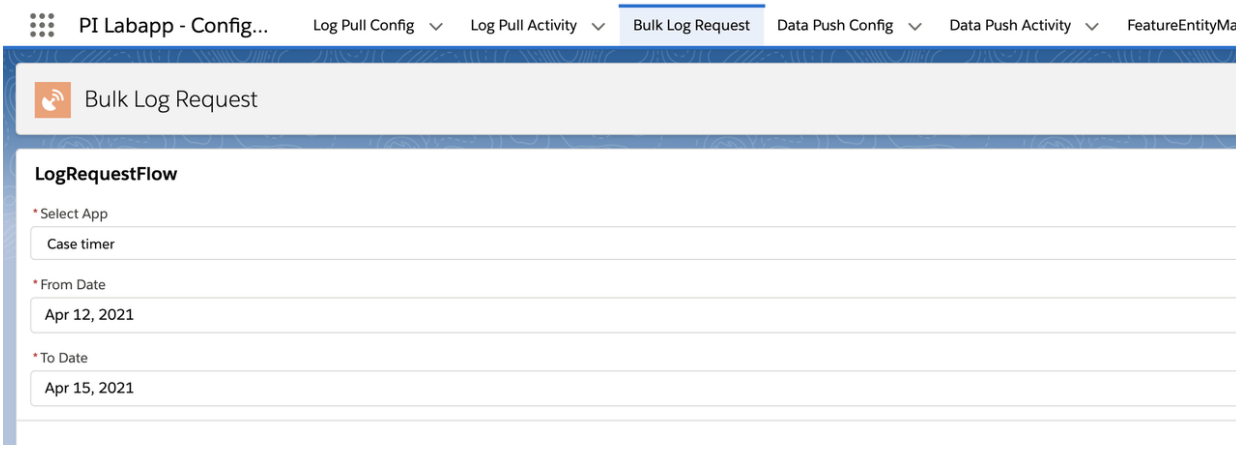
3 items • Sorted by EnableDailyBatch Name • Filtered by All log pull config • Updated a few seconds ago

		EnableD... ↑	AppName	AppPackageId	Packages	EnableDailyPull	AAR...	A...	H...	IsActive	LogType
1	□	A-0000	Case timer	[redacted]	[redacted]	□	100	1	1	☑	PackageUsageLog
2	□	A-0001	CMTD	[redacted]	[redacted]	□	100	6	1	□	PackageUsageLog
3	□	A-0002	TagitApp	[redacted]	[redacted]	□	100	1	1	☑	PackageUsageLog

Step 3- Go to the app “Analytics Studio“ and create a new app named “piapp” if it does not exist already.

Test

Step 1- In Salesforce, Create a Manual request to pull logs for couple of days in past for an App as shown



Bulk Log Request

LogRequestFlow

*Select App: Case timer

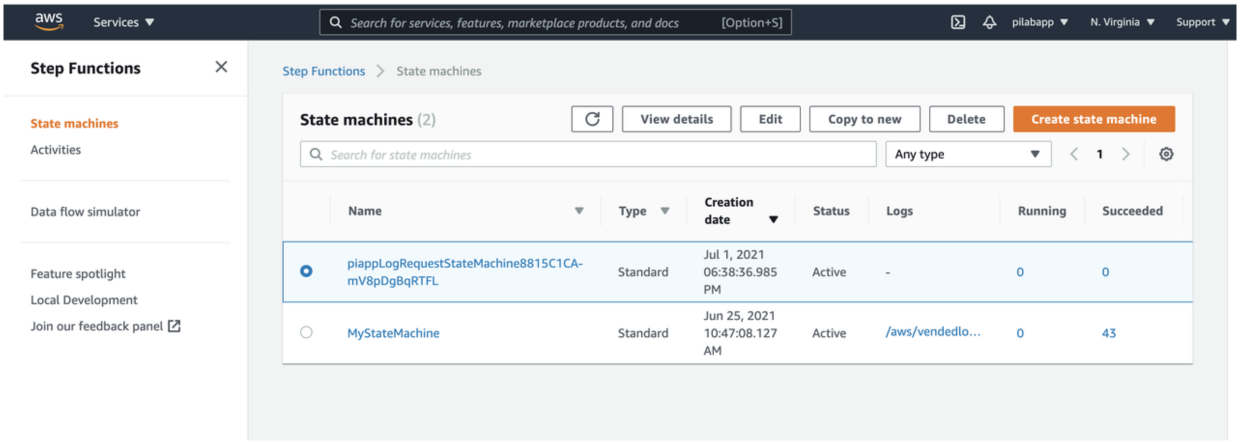
*From Date: Apr 12, 2021

*To Date: Apr 15, 2021

Step 2 - Run AWS Stepfunction

Go to AWS Services → Step functions → Open state machine that starts with name “piappLogRequestStateMachine****”

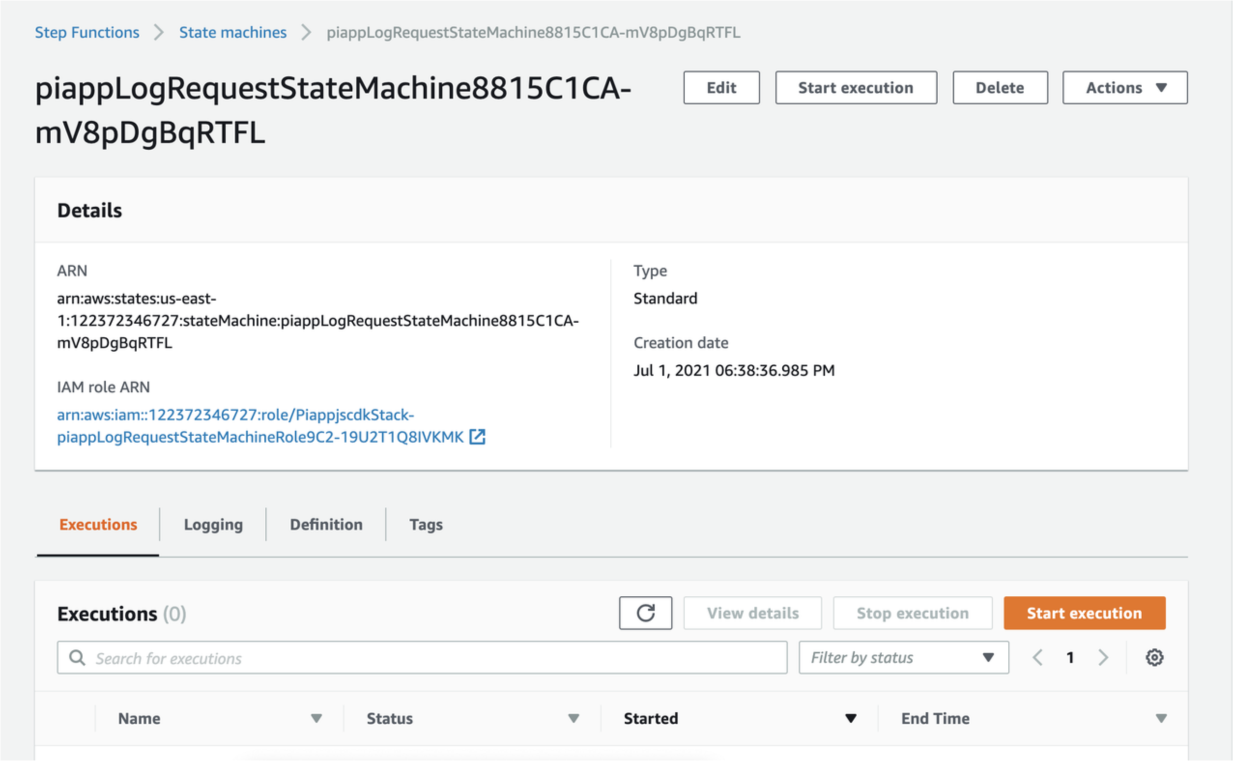
Test Pull job function:



State machines (2)

	Name	Type	Creation date	Status	Logs	Running	Succeeded
●	piappLogRequestStateMachine8815C1CA-mV8pDgBqRTFL	Standard	Jul 1, 2021 06:38:36.985 PM	Active	-	0	0
○	MyStateMachine	Standard	Jun 25, 2021 10:47:08.127 AM	Active	/aws/vendedlo...	0	43

Click “Start Execution”, use default JSON and click “Start execution”



Step Functions > State machines > piappLogRequestStateMachine8815C1CA-mV8pDgBqRTFL

piappLogRequestStateMachine8815C1CA-mV8pDgBqRTFL

Details

ARN
arn:aws:states:us-east-1:122372346727:stateMachine:piappLogRequestStateMachine8815C1CA-mV8pDgBqRTFL

IAM role ARN
arn:aws:iam::122372346727:role/PiappjscdkStack-piappLogRequestStateMachineRole9C2-19U2T1Q8IVKMK

Type
Standard

Creation date
Jul 1, 2021 06:38:36.985 PM

Executions (0)

Name	Status	Started	End Time

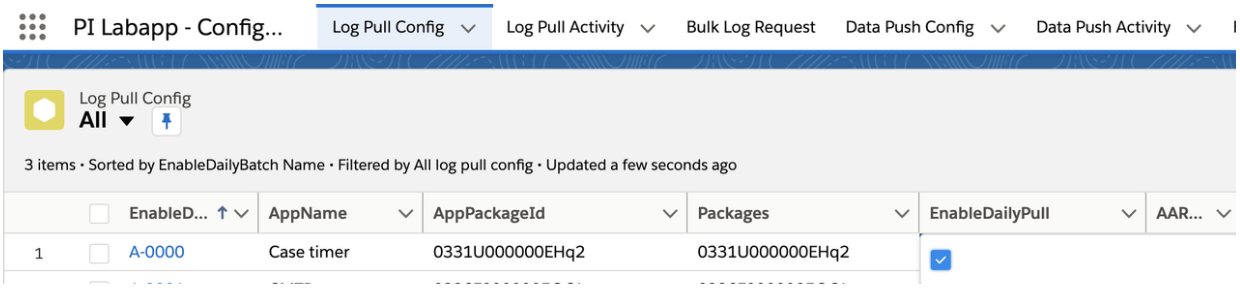
Enable automation

Load history data

In Salesforce, you can also create manual requests to pull logs for couple of days in past for an app as shown.

Go live

In Salesforce, go to the Log Pull Config tab and enable the daily pull:



Log Pull Config
All ▼

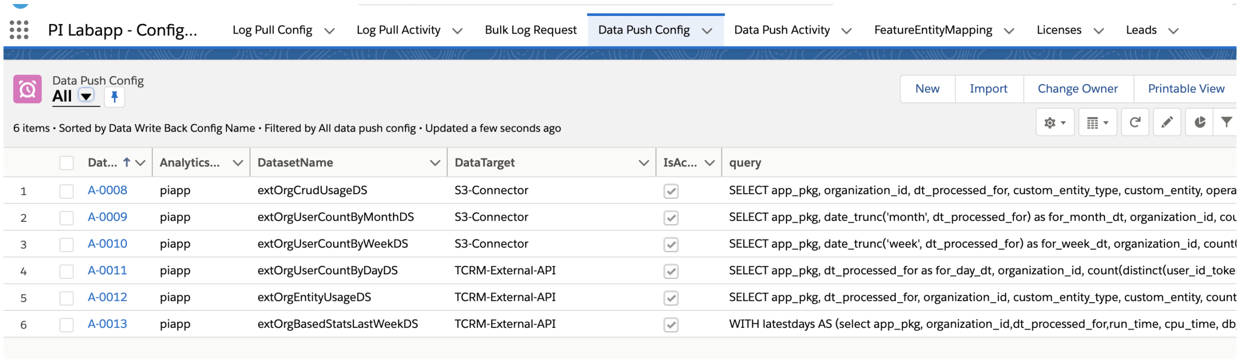
3 items • Sorted by EnableDailyBatch Name • Filtered by All log pull config • Updated a few seconds ago

		EnableD... ↑	AppName	AppPackageId	Packages	EnableDailyPull	AAR...
1	□	A-0000	Case timer	0331U000000EHq2	0331U000000EHq2	☑	

In AWS, schedule the Step function to run daily (recommended) or hourly:

Business Intelligence

Following configuration shows 2 modes i.e. DataTarget is either S3-Connector or TCRM-External-API

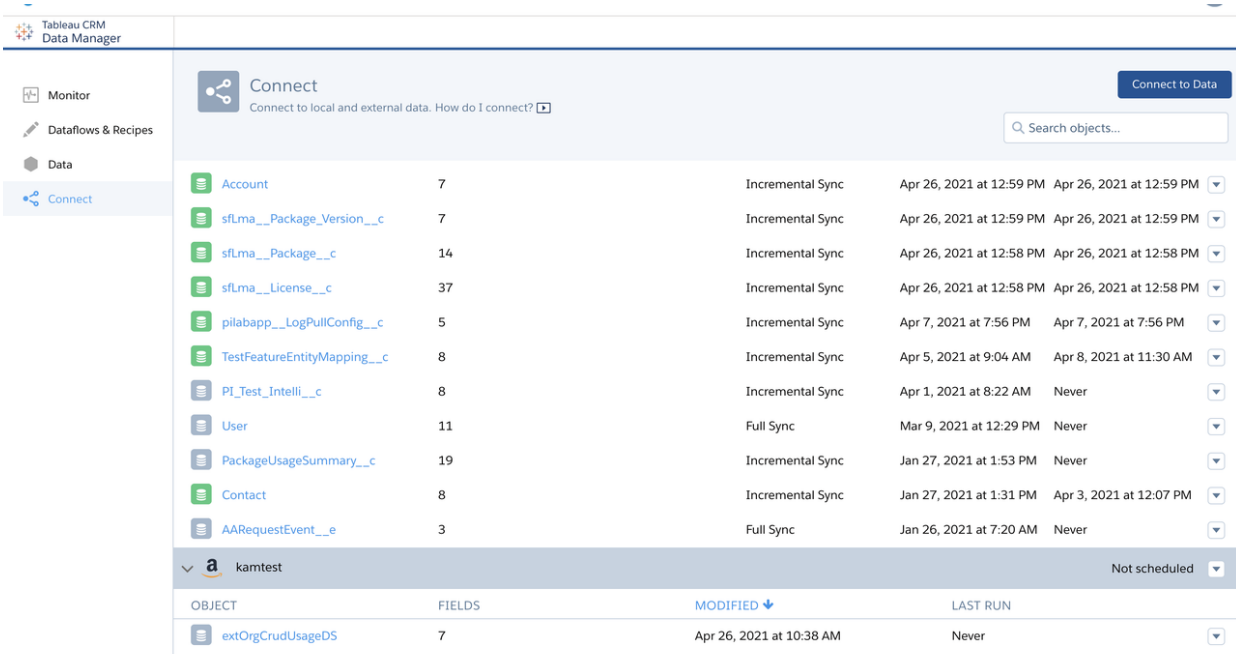


6 items • Sorted by Data Write Back Config Name • Filtered by All data push config • Updated a few seconds ago

	Dat...	Analytics...	DatasetName	DataTarget	IsAc...	query
1	A-0008	piapp	extOrgCrudUsageDS	S3-Connector	✓	SELECT app_pkg, organization_id, dt_processed_for, custom_entity_type, custom_entity, opera
2	A-0009	piapp	extOrgUserCountByMonthDS	S3-Connector	✓	SELECT app_pkg, date_trunc('month', dt_processed_for) as for_month_dt, organization_id, cou
3	A-0010	piapp	extOrgUserCountByWeekDS	S3-Connector	✓	SELECT app_pkg, date_trunc('week', dt_processed_for) as for_week_dt, organization_id, count(
4	A-0011	piapp	extOrgUserCountByDayDS	TCRM-External-API	✓	SELECT app_pkg, dt_processed_for as for_day_dt, organization_id, count(distinct(user_id_toke
5	A-0012	piapp	extOrgEntityUsageDS	TCRM-External-API	✓	SELECT app_pkg, dt_processed_for, organization_id, custom_entity_type, custom_entity, count
6	A-0013	piapp	extOrgBasedStatsLastWeekDS	TCRM-External-API	✓	WITH latestdays AS (select app_pkg, organization_id,dt_processed_for,run_time, cpu_time, db

Mode 1- Pull data using TCRM’s S3 connector

Connect to summary S3 bucket and create data objects. Please refer to this document



Account	7	Incremental Sync	Apr 26, 2021 at 12:59 PM	Apr 26, 2021 at 12:59 PM
sfLma__Package_Version__c	7	Incremental Sync	Apr 26, 2021 at 12:59 PM	Apr 26, 2021 at 12:59 PM
sfLma__Package__c	14	Incremental Sync	Apr 26, 2021 at 12:58 PM	Apr 26, 2021 at 12:58 PM
sfLma__License__c	37	Incremental Sync	Apr 26, 2021 at 12:58 PM	Apr 26, 2021 at 12:58 PM
pilabapp__LogPullConfig__c	5	Incremental Sync	Apr 7, 2021 at 7:56 PM	Apr 7, 2021 at 7:56 PM
TestFeatureEntityMapping__c	8	Incremental Sync	Apr 5, 2021 at 9:04 AM	Apr 8, 2021 at 11:30 AM
PI_Test_Intelli__c	8	Incremental Sync	Apr 1, 2021 at 8:22 AM	Never
User	11	Full Sync	Mar 9, 2021 at 12:29 PM	Never
PackageUsageSummary__c	19	Incremental Sync	Jan 27, 2021 at 1:53 PM	Never
Contact	8	Incremental Sync	Jan 27, 2021 at 1:31 PM	Apr 3, 2021 at 12:07 PM
AARequestEvent__e	3	Full Sync	Jan 26, 2021 at 7:20 AM	Never

kamtest — Not scheduled

OBJECT	FIELDS	MODIFIED	LAST RUN
extOrgCrudUsageDS	7	Apr 26, 2021 at 10:38 AM	Never

Mode 2- Data pushed to TCRM datasets using External API

AWS “Summary Sync” job pushes summary data to TCRM datasets using External API. Please refer to this document