EmPower

Unlocking the Power of Keboola with Custom Components

About
Adam

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Let me introduce myself

I've been building components at Keboola for over 2 years, while trying to make the process of development easier for all.

Adam Developer

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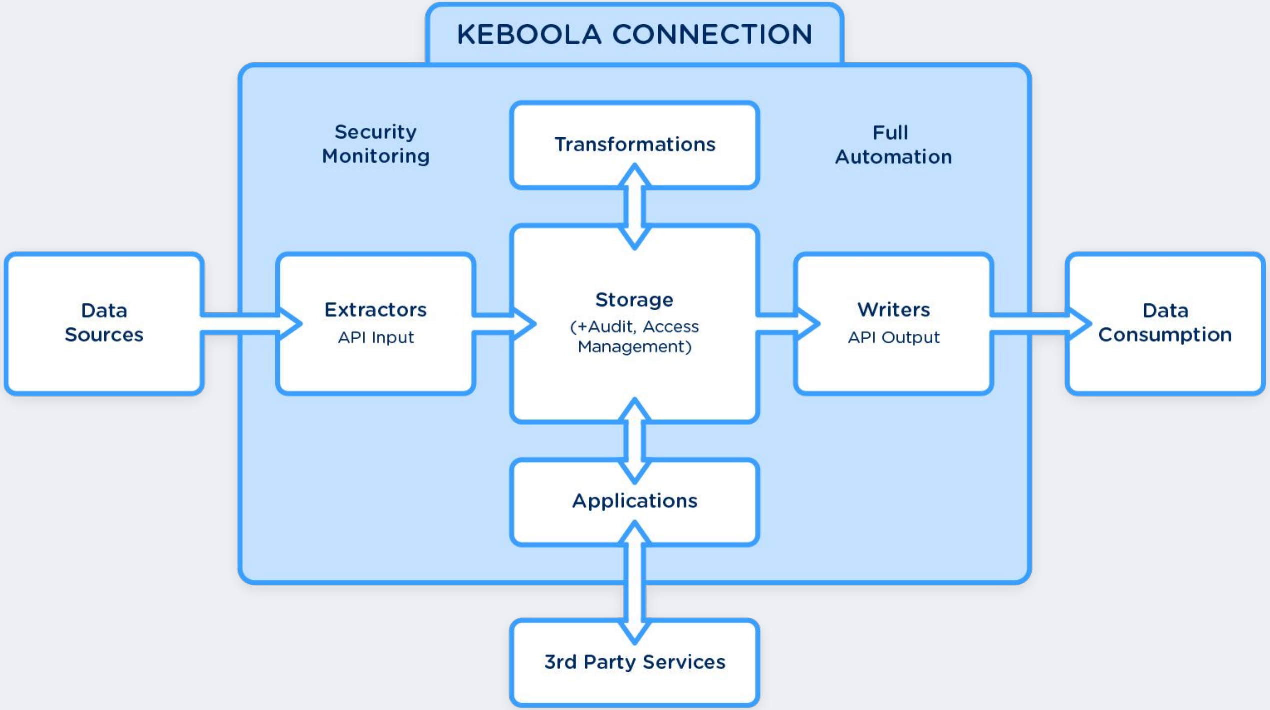
Bird's Eye View



Types of Components

Data Sources (Extractors)

Import data from external sources. Example : MySQL database, Google Sheets, any REST API

Data Destinations (Writers)

Output data from Keboola Connection to external sources. Example : MySQL database, S3, Tableau

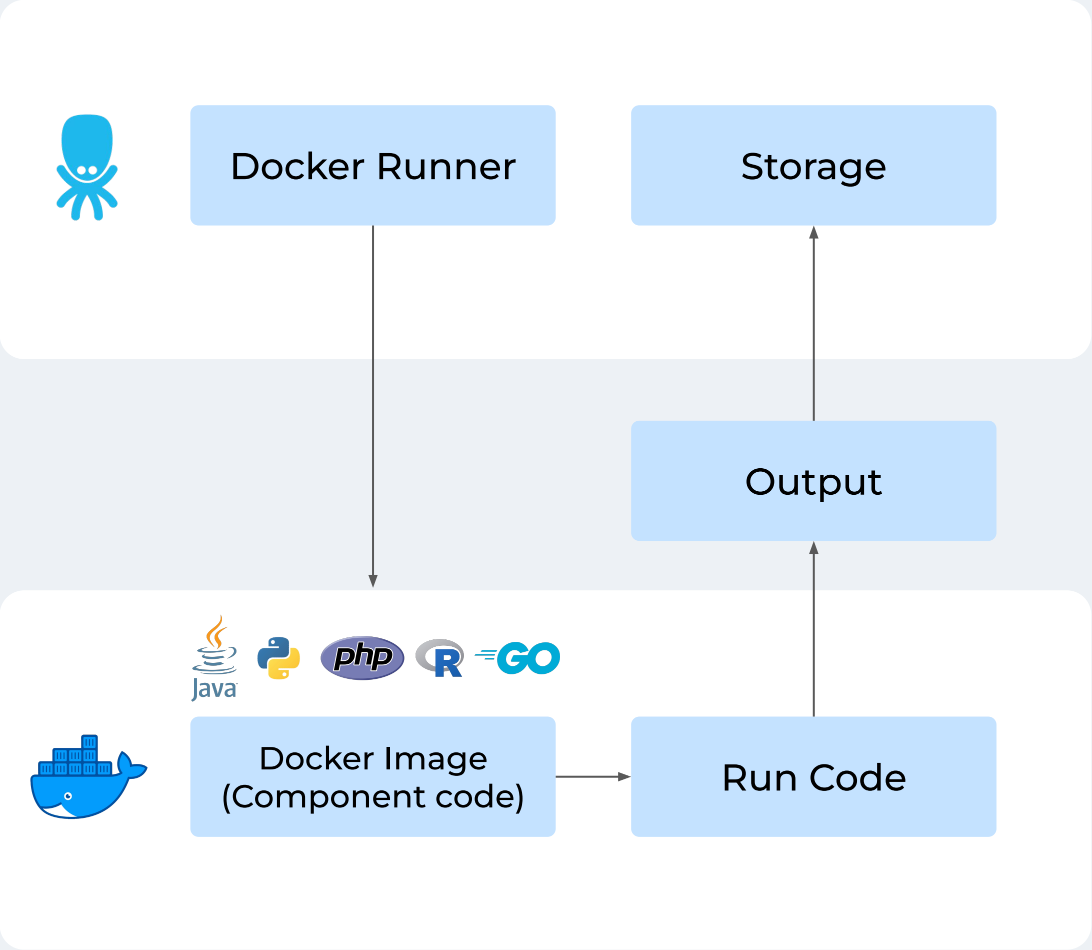
Applications

Enrich data or add values in new ways. Example: NLP Analysis application

Processors

Adjust the input or outputs of other components. Example: Breaking up XLSX files into CSV tables

What is a Component ?



Docker Runner

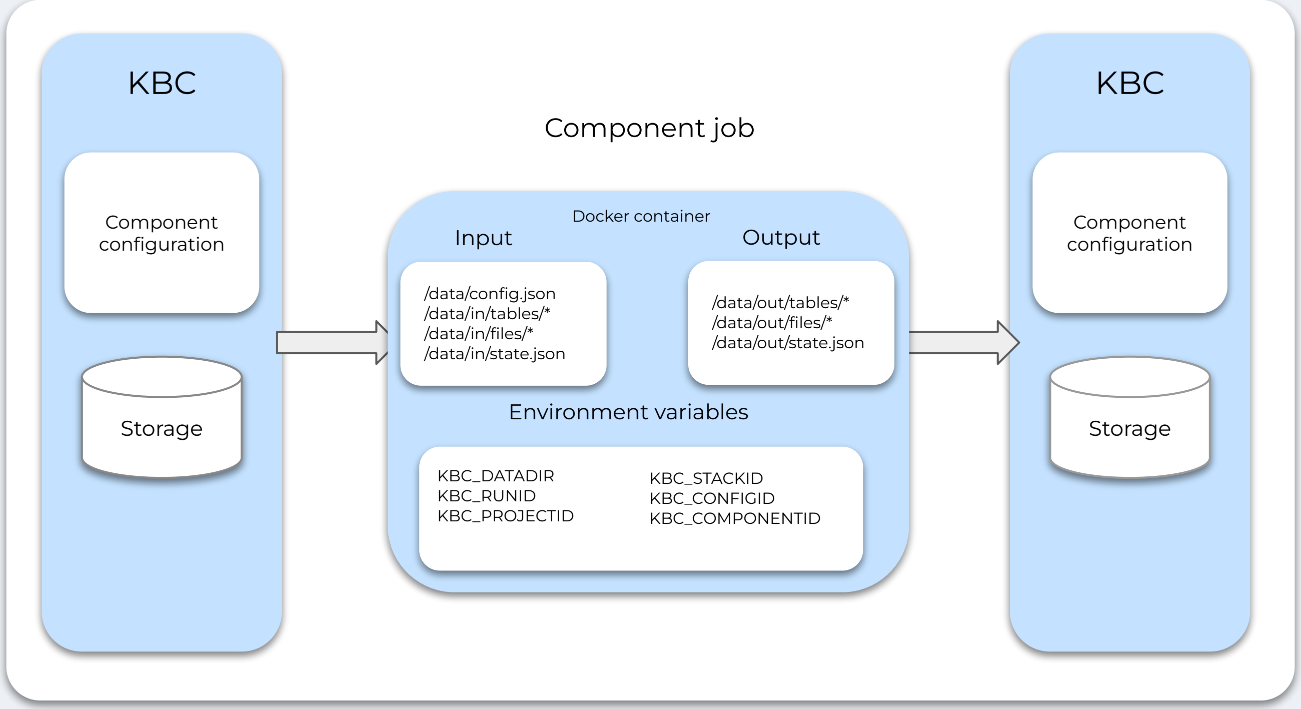
Storage

Output

Docker Image (Component code)

Run Code

What is a Component ?



KBC

Component configuration

Storage

Component job

Docker container

Input

```
/data/config.json
/data/in/tables/*
/data/in/files/*
/data/in/state.json
```

Output

```
/data/out/tables/*
/data/out/files/*
/data/out/state.json
```

Environment variables

```
KBC_DATADIR          KBC_STACKID
KBC_RUNID            KBC_CONFIGID
KBC_PROJECTID        KBC_COMPONENTID
```

KBC

Component configuration

Storage

Process of Component Development

01 Register the component in the Developer Portal

02 Develop the component code and UI

03 Test component locally

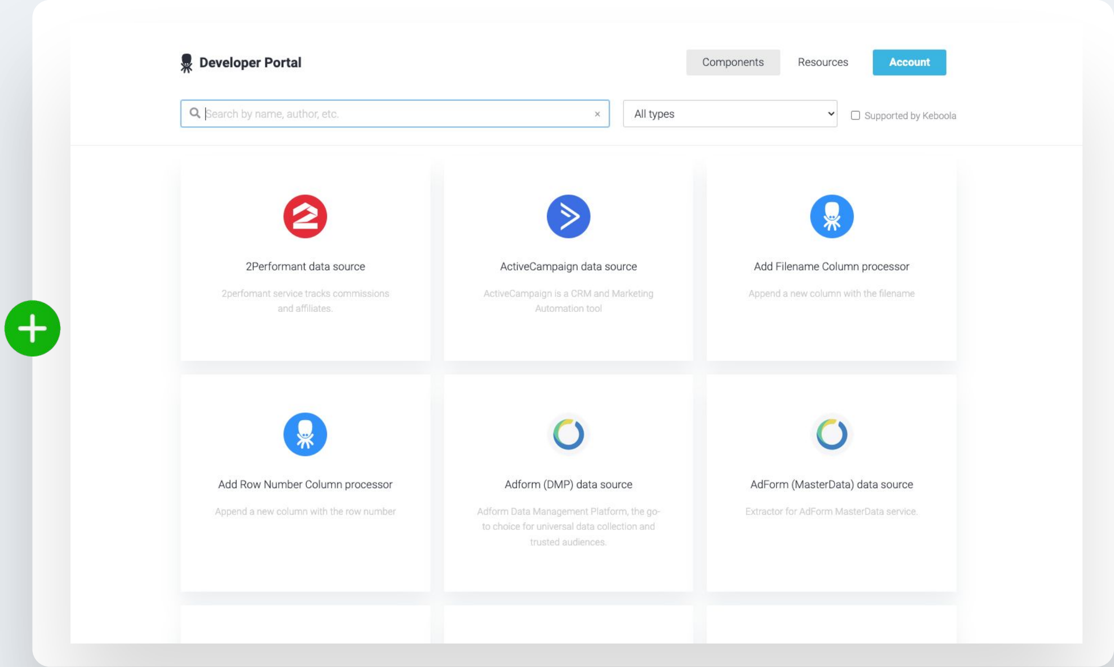
04 Deploy component code to Developer Portal

05 Run component in Keboola

06 Document and Publish the component

07 Add features requested by the users and fix any bugs

Developer
Portal



2Performant data source

2perfomant service tracks commissions and affiliates.

ActiveCampaign data source

ActiveCampaign is a CRM and Marketing Automation tool

Add Filename Column processor

Append a new column with the filename

Add Row Number Column processor

Append a new column with the row number

Adform (DMP) data source

Adform Data Management Platform, the go-to choice for universal data collection and trusted audiences.

AdForm (MasterData) data source

Extractor for AdForm MasterData service.

Developer Portal

1. **Docker Repository Details**

   Information on where the docker image is stored and what the current image tag is.

2. **UI Schema and widgets**

   Definition of the component UI in KBC and all the UI functionality

3. **Component metadata**

   Descriptions, documentations, default configurations, etc.

4. **Additional parameters**

   Logger configurations, Sync action definitions, and more.

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Demo Info

Requirements

Keboola Project

If you do not have one, you can join our PAYG

Keboola Developer Account & Vendor

Create an account at components.keboola.com and either create a new vendor or join an existing one

Python Installed

Have python 3.7 or higher installed on your machine

Github Account

For creating a Repository to store and deploy the component code

Steps of the Workshop

01 View a simple Python script to convert to a component

02 Register the component in the Developer Portal

03 Create a repository in Github

04 Setup CI variables in Github

05 Initialize Python component template with cookiecutter

06 Push template to repository and deploy it to Keboola

07 Develop the component code and UI

08 Test component locally

09 Deploy component code to Developer Portal

10 Run component in Keboola

Keboola Component
Python Library

Python Wrapper over the Keboola Common Interface

Easily get data from and save data to the right folders, and create the necessary metadata for the files

Handles all configuration and state manipulation

Easily access the configuration of the component and the state file.

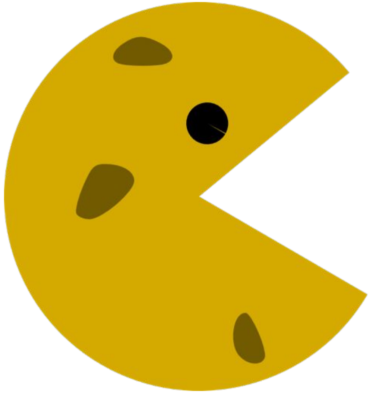
Contains the ComponentBase

A base class for all components, no need to rewrite boilerplate code.

No Docker needed for development

Run your components just like any other python script

Cookiecutter Template



Used to easily setup boilerplate ComponentBase component in one command

Automatically sets up CI/CD pipeline for Bitbucket or Github (Gitlab soon)

Set developer portal component UI and descriptions during deployment

```
pip install cookiecutter
python -m cookiecutter bb:kds_consulting_team/cookiecutter-python-component.git
```

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Demo Time