Introduction to dbt

SQL on steroids

Practical use case

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You did not believe me, here is a taste

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Question time

01

Use case

Legal company

Why we had to choose dbt over many options

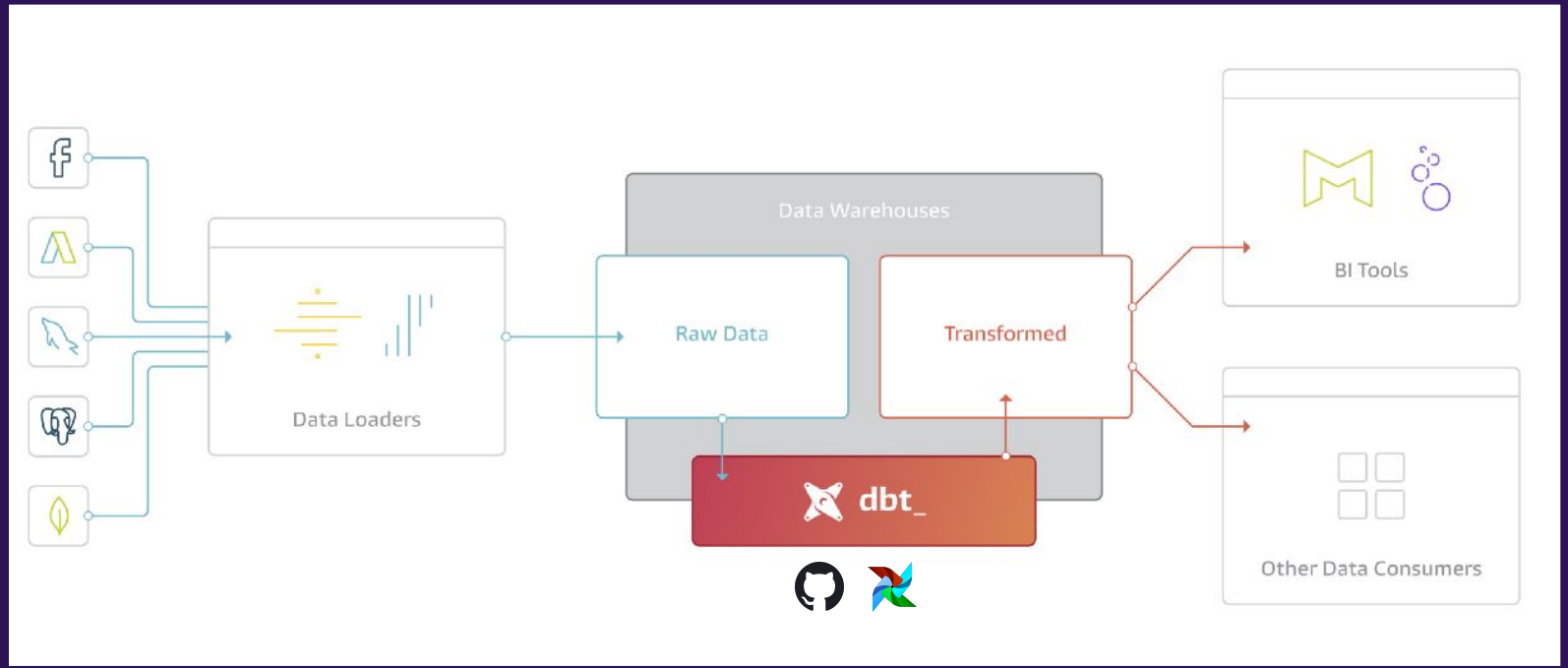
Requirements

- Clean several data sources from a sql database
- Aggregate the cleaned sources to provide insight for the data analysts

- Create a documentation (if possible interactive) for analyst to learn about the data
- Possibility of versioning and of collaboration with multiple teams

- Aggregate only events from aggregator like segment to provide user and session information
    - BUT, we do not know the number of events, their types, etc...

Implementation



02

What is dbt
And what dbt is not

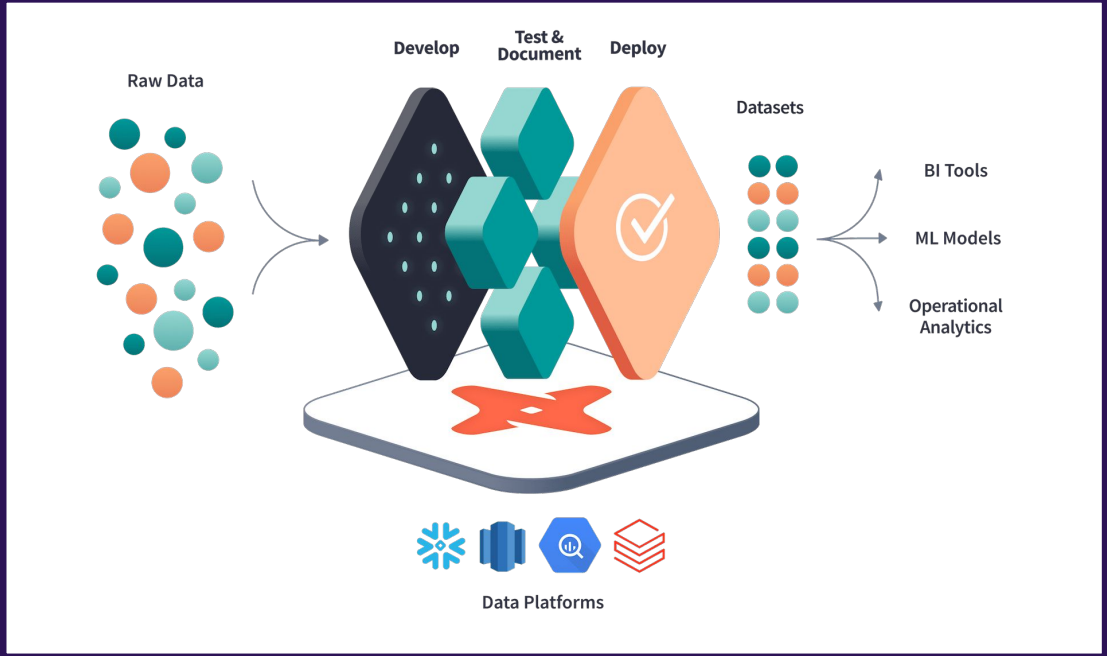
Dbt – Data Building Tool

DBT is :

- A python package
- A way to use “functionnal” SQL
- A documentation generator
- A testing framework

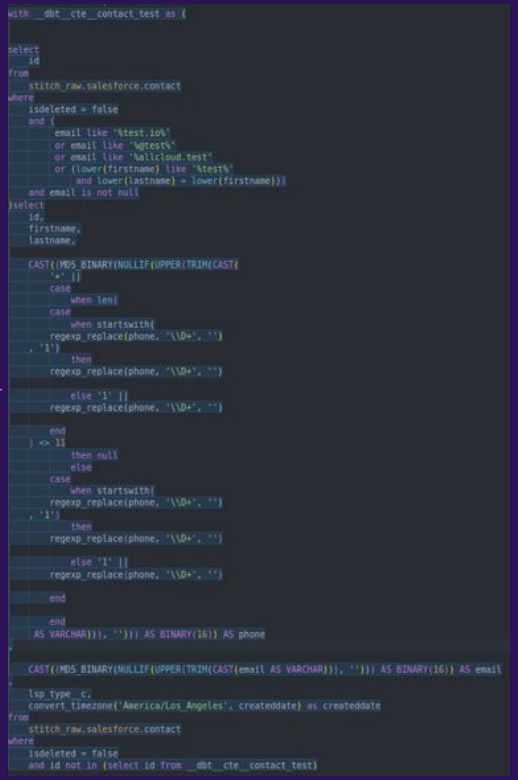
DBT is not:

- A SQL runner
- An end to end platform -> it is an interface



Dbt compilation

```sql
select
    id,
    firstname,
    lastname,
    {{ phone_to_hash('phone', 'phone') }},
    {{ mail_to_hash('email', 'email') }},
    lsp_type__c,
    convert_timezone('{{ var("timezone") }}', createddate) as createddate
from
    {{ source('salesforce', 'contact') }}
where
    isdeleted = false
    and id not in (select id from {{ ref('contact_test') }})
```

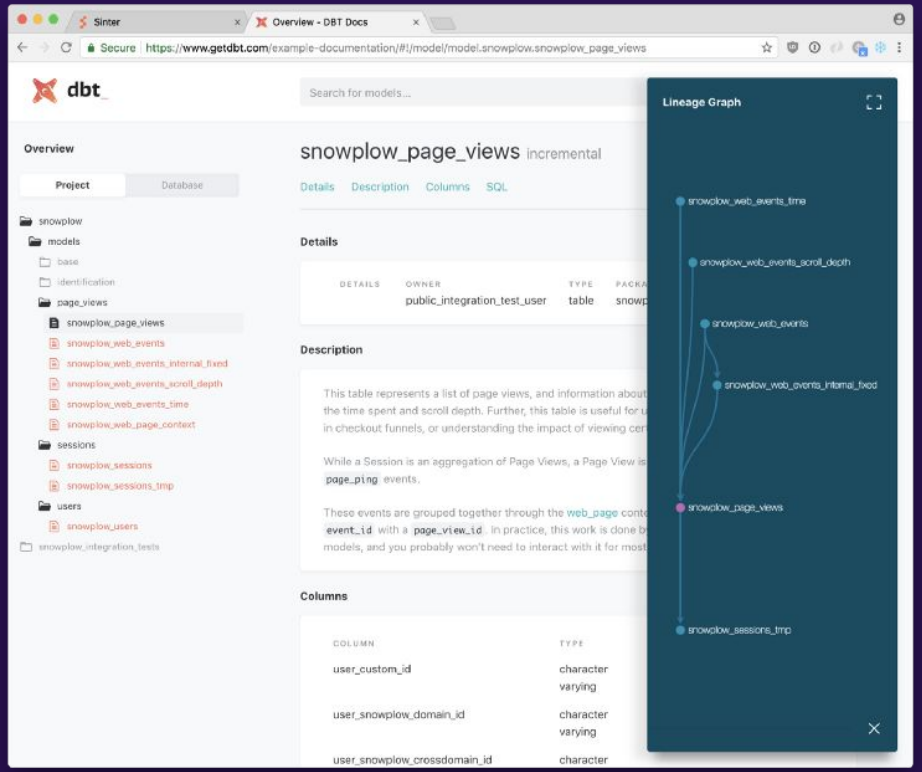


```sql
with __dbt__cte__contact_test as (


select
    id
from
    stitch_raw.salesforce.contact
where
    isdeleted = false
    and (
        email like '%test.io%'
        or email like '%@test%'
        or email like '%allcloud.test'
        or (lower(firstname) like '%test%'
            and lower(lastname) = lower(firstname)))
    and email is not null
)select
    id,
    firstname,
    lastname,

    CAST((MD5_BINARY(NULLIF(UPPER(TRIM(CAST(
        '+' ||
        case
            when len(
        case
            when startswith(
        regexp_replace(phone, '\\D+', '')
    , '1')
            then
        regexp_replace(phone, '\\D+', '')

            else '1' ||
        regexp_replace(phone, '\\D+', '')

        end
    ) <> 11
            then null
            else
        case
            when startswith(
        regexp_replace(phone, '\\D+', '')
    , '1')
            then
        regexp_replace(phone, '\\D+', '')

            else '1' ||
        regexp_replace(phone, '\\D+', '')

        end

        end
    AS VARCHAR))), '')) AS BINARY(16)) AS phone
,

    CAST((MD5_BINARY(NULLIF(UPPER(TRIM(CAST(email AS VARCHAR))), ''))) AS BINARY(16)) AS email
,
    lsp_type__c,
    convert_timezone('America/Los_Angeles', createddate) as createddate
from
    stitch_raw.salesforce.contact
where
    isdeleted = false
    and id not in (select id from __dbt__cte__contact_test)
```

“Code is Law” - Lawrence Lessig

Documentation Generation

- Dynamically obtain a dependency graph
- See the tests involved
- Get a description of each tables and fields as well as their types



Question time

Demo time

Wouhouuuu !!!

Thanks!

Does anyone have any questions?

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Github of demo:

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