



VIRTUAL VIEW HIERARCHIES

FOR FUN, PROTOTYPING AND
EXTENDING APPS TO USE ICEBERG



About me

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What are SQL views?

1

```
CREATE VIEW iceberg.myapp.myview
AS
SELECT ...
WHERE ...
```

2

```
SELECT * FROM iceberg.myapp.myview
WHERE ...
```

Classical use-cases:

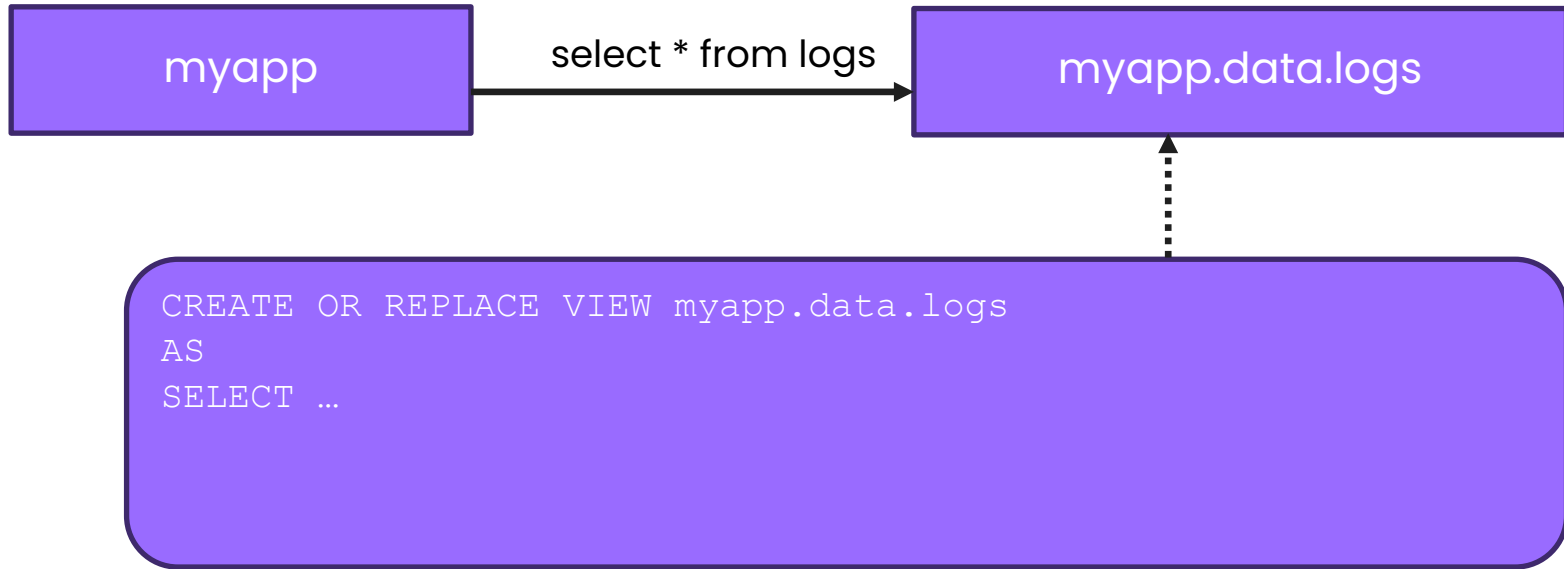
- Hiding joins
- Adding computed columns
- Hiding sensitive columns
- Hiding sensitive rows
- Caching query results



What is a virtual view?

- Logical views (classic use-cases)
- Materialized views (for caching/performance)
- Virtual views 🎉 (detached from physical schemas)
 - Organized by application or feature
 - Layered into (one or many) hierarchies
 - Layers are reconfigurable or dynamically generated
 - Useful for prototyping and extending apps to use Iceberg 🔥

Virtualizing data sources through views



Prototyping data sources (using static values)

Iceberg or
viewzoo
connector



```
CREATE OR REPLACE VIEW myapp.data.logs  
AS  
SELECT VALUES (1, 'a'), (2, 'b'), (3, 'c')
```

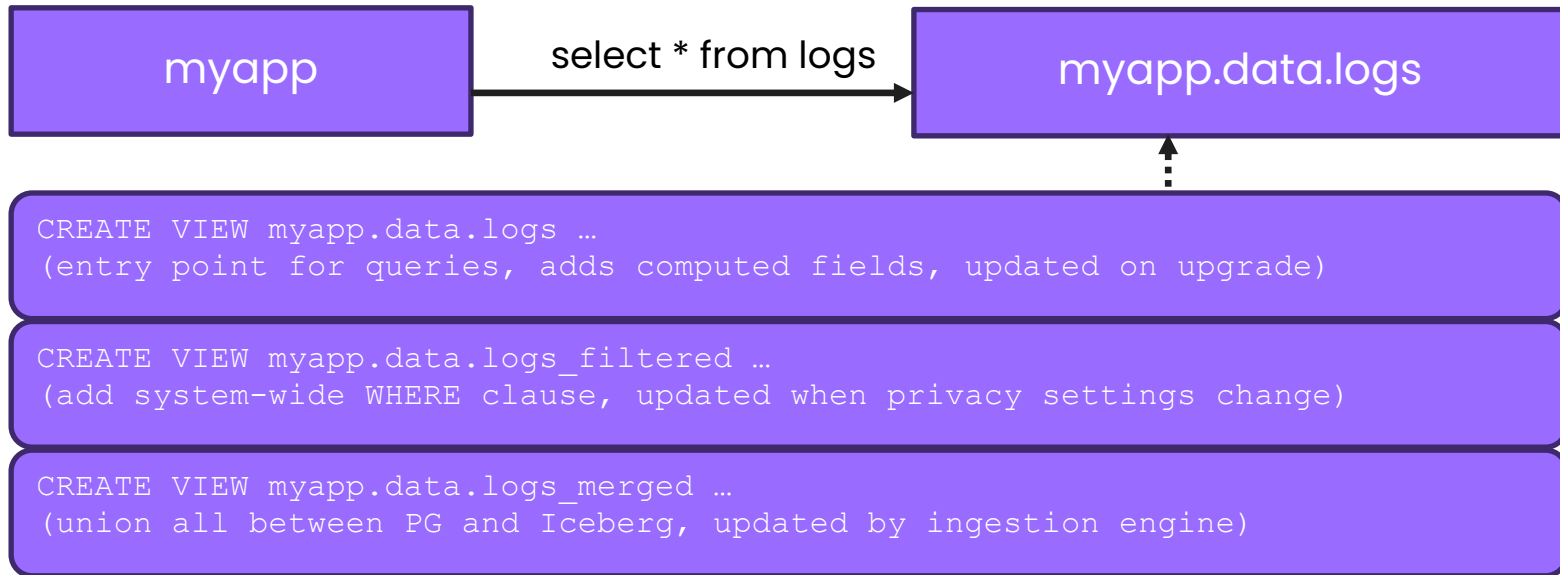
Configuring short-term storage (with PostgreSQL)



Configuring long-term storage (with Iceberg)



Defining view hierarchy (with swappable layers)



Trino almost completely supports virtual views

- Trino views can span more than one connector
- Trino views can return a predefined result set
- A parent view can be replaced by a new definition, without breaking dependent child views
- The only tricky bit is where to keep virtual views
 - 👉 pick a common connector (Iceberg), or try **viewzoo**

About viewzoo

- Connector for lightweight storage of logical views
- No external database or object store required
- Views read/written to local directory on coordinator
- Materialized views not supported
- Apache 2 licensed

github.com/robfromboulder/viewzoo

THANK YOU.

For additional information
regarding Graylog API Security
please visit:

graylog.org/products/api-security/