Wide Field Astronomy Unit (WFAU)

Virtual Observatory
Data Access

Federated TAP service
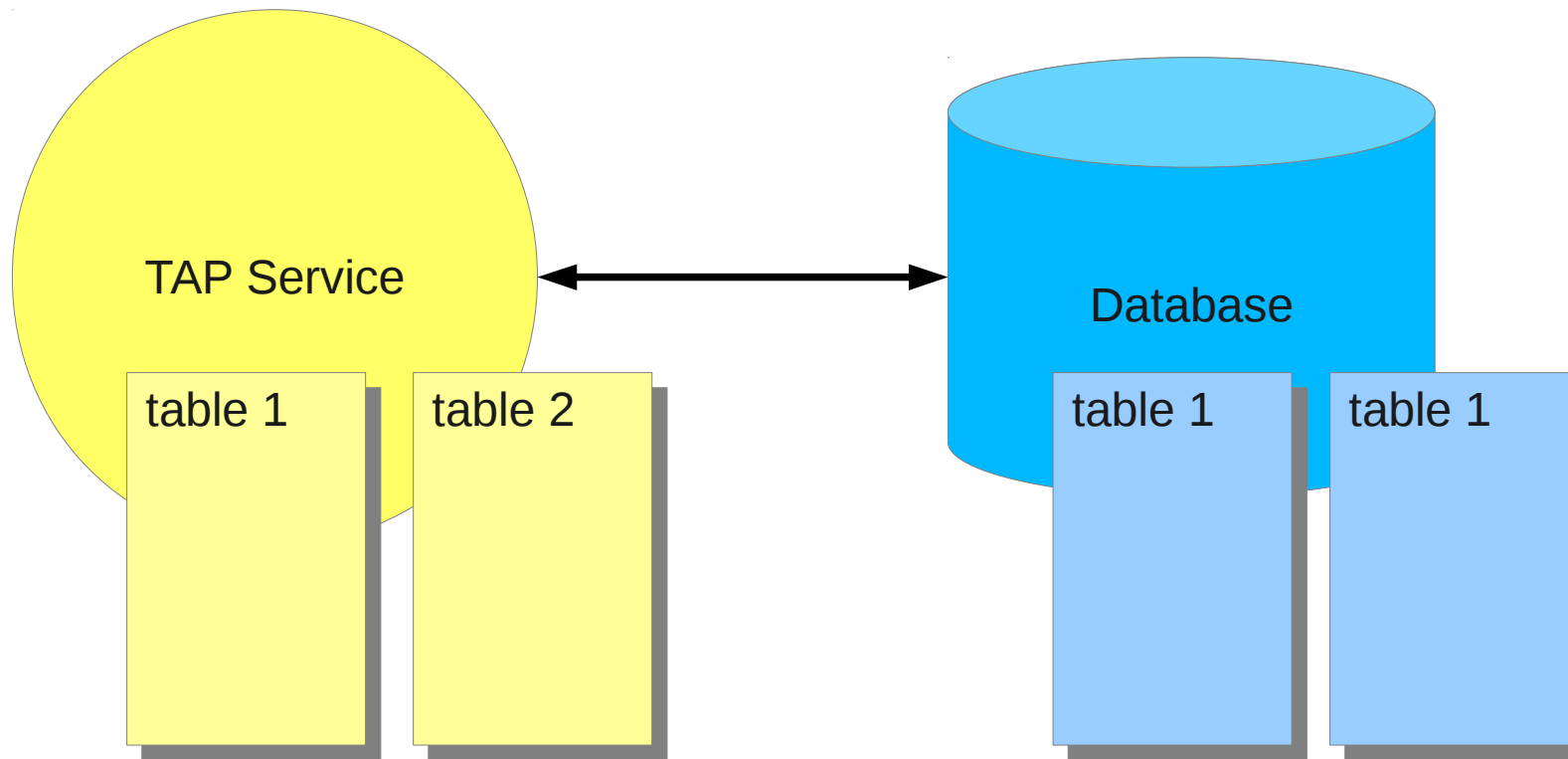
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TAP Service

Database

table 1   table 2

table 1   table 1

TAP service

Provides a common abstraction
for database systems.

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TAP service

Provides a common abstraction for database systems

Hiding the implementation details of the underlying database system

Services from different data providers look and behave the same way.

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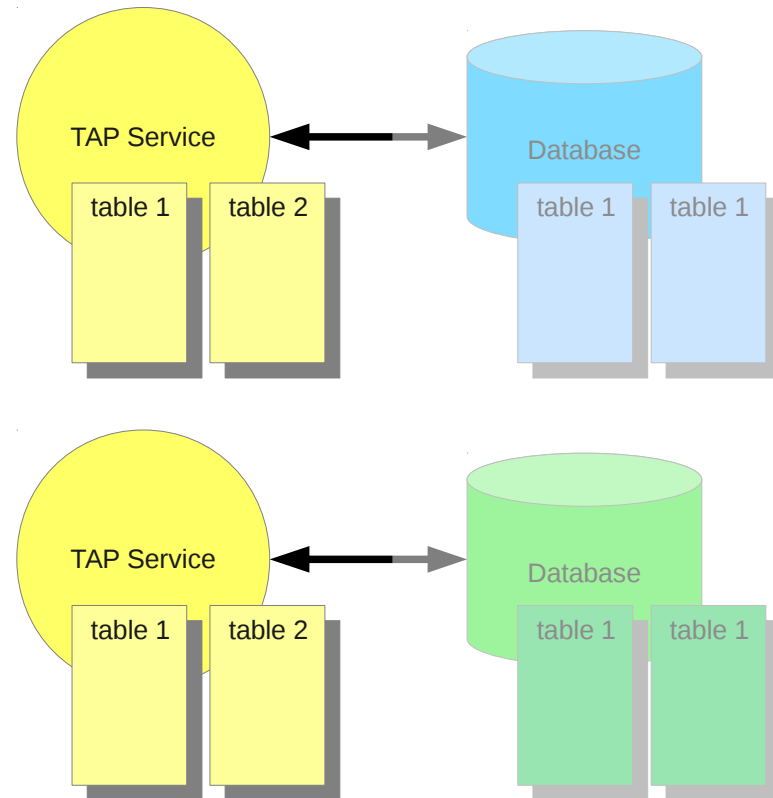
Developed by EPCC group at
Edinburgh University.

Designed to federate SQL queries
across a set of databases.

```
SELECT
    service1.table1.coumn1,
    service2.table2.coumn3,
FROM
    service1.table1
JOIN
    service2.table2
ON
    ....
WHERE
    ....
```
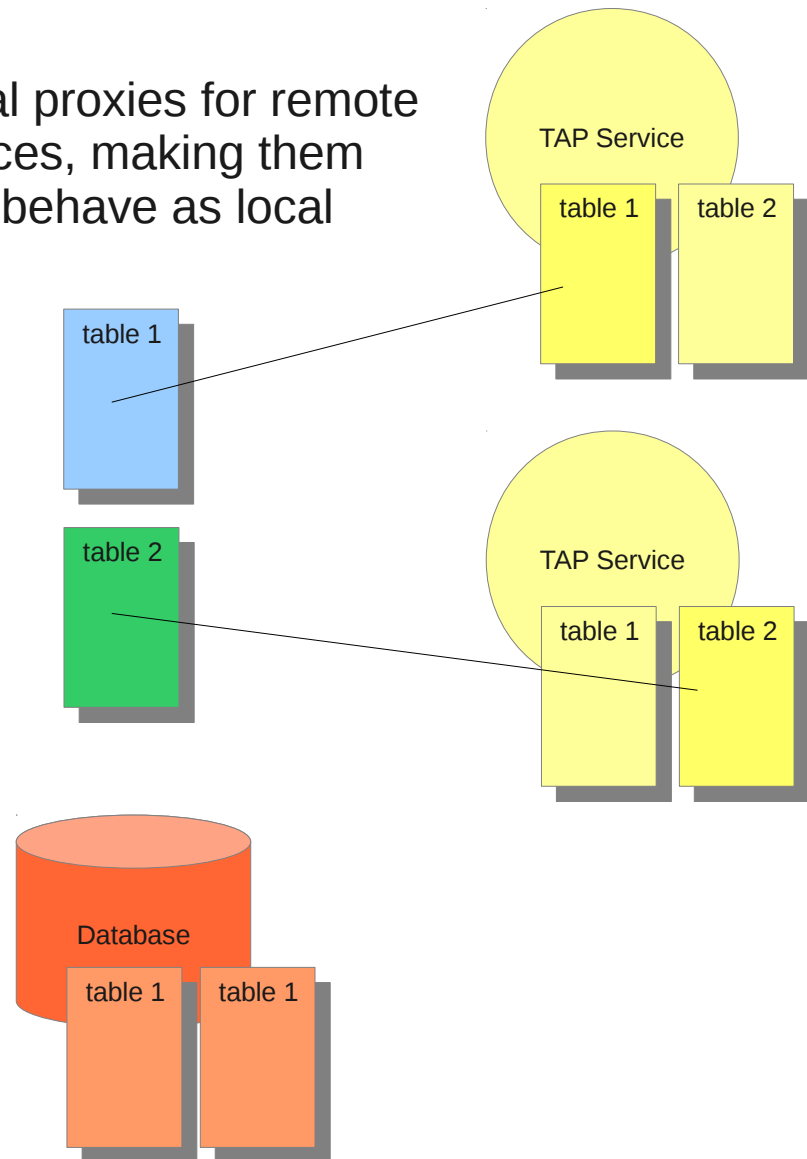
Database

table 1   table 1

Database
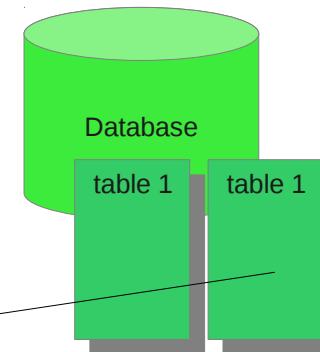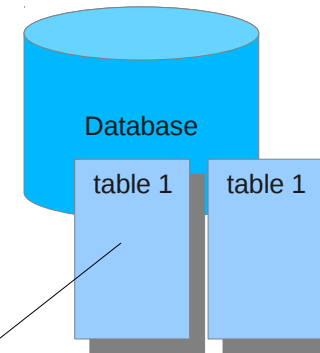
table 1   table 1

Splits the original SQL
query into sub-queries for
each database.

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Using OGSA-DAI to combine data from local and remote resources.

Using local proxies for remote TAP services, making them appear to behave as local tables.

```
SELECT
    service1.table1.coumn1,
    service2.table2.coumn2,
    service3.table3.coumn3,
FROM
    service1.table1
JOIN
    service2.table2
ON
    ....
WHERE
    ....
```

TAP Service

table 1   table 2

table 1

table 2

TAP Service

table 1   table 2

Database

table 1   table 1

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Local and remote resources behave the same way.

Re-publishing as a TAP service, making the tables *appear* to be part of the same dataset.

TAP Service

table 1 table 2

Database

table 1 table 1

TAP Service

table 1 table 2

Database

table 1 table 1

TAP Service

table 1 table 2 table 2

Database

table 1 table 1

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An ADQL query on the constructed TAP service can span tables from local and remote datasets.

User does not need to know where the data is located.

Virtual Observatory :-)

TAP Service
table 1 table 2

Database
table 1 table 1

TAP Service
table 1 table 2

TAP Service
table 1 table 2 table 2

TAP Service
table 1 table 2

Database
table 1 table 1

Database
table 1 table 1

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