Blockchain Council

Certified Hyperledger Developer

Hyperledger Composer Query Language

Query Language

- Queries in Hyperledger Composer are written in a bespoke query language.

- Queries are defined in a single query file called (queries.qry) within a business network definition.

- The native query language can filter results returned using criteria and can be invoked in transactions to perform operations, such as updating or removing assets on result sets.

- Queries contain a WHERE clause, which defines the criteria by which assets or participants are selected.

www.blockchain-council.org

Types of Queries

- Hyperledger Composer supports two types of queries: named queries and dynamic queries.

- **Named queries** are specified in the business network definition and are exposed as GET methods by the composer-rest-server component.

- **Dynamic queries** may be constructed dynamically at runtime within a Transaction Processor function, or from client code.

Syntax of the Query

- All Queries must contain these two properties:

  - Description

  - Statement

- **Description:** The description property is a string which describes the function of the query. It must be included but can contain anything.

- **Statement:** The statement property contains the defining rules of the query, and can have the operators like SELECT, FROM, WHERE, AND, ORDER, LIMIT etc.

- Queries may embed parameters using the _$ syntax. The query parameters must be primitive types.

Sample Query

```
query Q10 {
    description: "Select all members whose name is john"
    statement:
        SELECT org.example.Member
            WHERE (Name == 'John')
}
```

Access Control rules

- Access Control rules for Queries:

  - When returning the results of a query, access control rules are applied to the results. Any content which the current user does not have authority to view is stripped from the results.

- For example, if the current user sends a query that would return all assets, if they only have authority to view a limited selection of assets, the query would return only that limited set of assets.

THANK YOU!

Any questions?
You can mail us at
hello@blockchain-council.org

Blockchain Council™