



DATABASE QUERYING MODULE

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What is DQM?

Database Querying Module (DQM) is a mechanism that allows execution of a limited number of SQL queries against underline database using UniPay's user interface. Generally, it works using a concept similar to the one that the entire user interface is built on. However, it allows execution of a raw query with a limited SQL syntax.

Why is DQM needed?

DQM serves two purposes. Firstly, it simplifies support around merchant, allowing execution of custom queries and export of the result data in excel, which helps support team to respond to the queries quicker. Secondly, it simplifies management of the system. It allows technical administrators with an appropriate level of access to query database directly even in those cases when no direct access to the database is available. Therefore, DQM shortens resolution time for various issues and reduces the amount of communication needed to resolve a particular issue.


How does DQM work?

DQM works as any other form in the system. However, it uses a separate dedicated read-only database connection and allows the direct execution of SQL queries with a limited syntax. The result can be viewed right away on the user interface or downloaded in CSV format for subsequent use.

How are queries verified before they are executed?

There are security measures that are put in place to ensure that queries are verified before execution and the mechanism remains PCI compliant:

1. DQM ensures that there is only one statement provided. If more than one statement is provided, the query is rejected.
2. DQM verifies that the type of statement is SELECT. Everything else will be rejected.
3. DQM verifies that SELECT query does not contain the following options:
 - HIGH_PRIORITY
 - SQL_CACHE
 - SQL_BUFFER_RESULT
 - FOR UPDATE
 - LOCK IN SHARE MODE
 - INSERT INTO
4. DQM allows to retrieve and display on the user interface at most 500 rows (imposes the limit of 500). It also provides an option to download result as CSV file. In this case, up to 10,000 rows can be retrieved.

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5. Any attempts to reference any databases other than unipay database are disallowed. Any direct or indirect references (through joins) to the following list of tables are disallowed:
- unipay.ca_key
 - unipay.key_registry
 - unipay.resource_content
 - unipay.iapp_data_vault
 - unipay.iapp_vault_content

Who can access DQM?

DQM can be accessed by the gateway users who have System 2 security level. DQM does not take into account data access policy and assumes that the user have access to all portfolios, resellers and merchants within the system.