



Database package

Updated 7/27/2020



Enterprise

Build

A2019

Databases support internal operations of an enterprise by storing a variety of data, such as sales transactions, product catalogs, inventories, and customer profiles. Use the Database package to connect to a database, begin a transaction, and manipulate the stored data by retrieving, inserting, updating, deleting, and exporting it to a CSV file.

Before you start

Perform the following actions within the Database package as part of using the set of available actions:

1. Establish a connection with the database server using the **Connect** action.
See [Using Connect action for database](#).
2. Choose from the following:
 - Use the **Read from** action to retrieve records from the database. [Using the Read from action](#)
 - If you are automating a task that involves making changes to the database, insert the **Begin database transaction** action, followed by the actions that automate the changes.
This action ensures that all records are updated or deleted in their entirety, and prevents accidental updates or deletions of incomplete data if the bot encounters an error during run time.
3. If you used the **Begin database transaction** action in this session, insert the **End database transaction** to commit the changes.
4. Every set of database actions ends with the **Disconnect** action to terminate the connection to the database server.

Actions in the Database package

The Database package includes the following actions:

Action	Description
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Action	Description
Begin database transaction	<p>Starts a database transaction.</p> <p>The actions that you insert between the Begin database transaction and End database transaction actions are treated as a single unit. The bot must run all of the actions successfully in order to update the database. This prevents a partial entry in the event that one of the actions fail.</p> <p>For example, in double-entry accounting every debit requires the recording of a credit. If a company receives \$5000 of products, the accountant must debit \$5000 to inventory and credit \$5000 to accounts payable.</p> <p>Insert the actions that record these entries between the Begin database transaction and End database transaction actions to ensure that either both entries are recorded or neither is recorded in the database.</p> <p>In the Session name field, enter the name of the session you used to connect to the database server in the Connect action.</p>
Connect	See Using Connect action for database.
Disconnect	Disconnects from a database. In the Session name field, enter the name of the session you used to connect to the database server in the Connect action.
End database transaction	Commits all the database operations that were performed with the actions that followed the Begin database transaction action, under the condition that the bot successfully ran those actions. In the Session name field, enter the name of the session you used to connect to the database server in the Connect action.
Export to data table	See Using the Export to data table action.

Action	Description
Insert/Update/Delete	<p>Executes an INSERT, UPDATE, or DELETE statement from the database.</p> <ul style="list-style-type: none"><li>• In the Session name field, enter the name of the session you used to connect to the database server in the Connect action.<li>• In the Statement field, enter the SQL statement to insert, update, or delete the records.<ul style="list-style-type: none"><li>◦ Use an INSERT statement to create new records in a table:<div style="border: 1px solid black; padding: 5px;"><pre>INSERT INTO table_name (column1, column2, column3, ...) VALUES (value1, value2, value3, ...);</pre></div><li>◦ Use an UPDATE statement to modify a record:<div style="border: 1px solid black; padding: 5px;"><pre>UPDATE table_name SET column1 = value1, column2 = value2, ... WHERE condition;</pre></div><li>◦ Use a DELETE statement to remove a record:<div style="border: 1px solid black; padding: 5px;"><pre>DELETE FROM table_name WHERE condition;</pre></div> <li>• In the Timeout for the query in seconds field, specify the time within which the statement execution should stop, even if the execution is not completed. <hr/>

Action	Description
Manage stored procedure	<p>Creates, updates, and deletes a stored procedure within the specified database. A stored procedure is SQL code saved to the database, enabling you to run it repeatedly.</p> <ul style="list-style-type: none">• In the Session name field, enter the name of the session you used to connect to the database server in the Connect action.• In the Enter full command field, enter the command to create, update, or delete the stored procedure. You can specify input and output parameters for the command; you provide values or variables holding the values in the Run stored procedure action. <p>Recommended: Declare a delimiter and use it to close the SQL statement.</p> <p>MySQL example: In this example, the bot checks if there is a procedure in the database named <code>sum_of_two</code> . If not, the bot creates a procedure that accepts two input parameters (num1 and num2), adds them together, and produces the sum as the output parameter:</p> <pre>DROP PROCEDURE IF EXISTS sum_of_two; DELIMITER \$\$ CREATE PROCEDURE sum_of_two(IN num1 INT,IN num2 INT,OUT sum INT) BEGIN SET sum := num1 + num2; END \$\$</pre> <ul style="list-style-type: none">• In the Timeout for the query in seconds field, specify the time within which the statement execution should stop, even if the execution is not completed.
Read from	See Using the Read from action.
Run stored procedure	See Using the Run stored procedure action.