# Steps for Creating the extension tablefunc

1. Go to the binary folder of the postgres

***/opt/damocles/postgres/postgres-xl-9.5r1.4***

1. Then contrib folder

***cd contrib/***

1. Then tablefunc folder

***cd tablefunc***

in our case it is below path

***/opt/damocles/postgres/postgres-xl-9.5r1.4/contrib/tablefunc***

1. ***make***
2. ***make install***

Please do 1 to 5 steps in all data and coordinator nodes if they are in separate server

1. Access the psql

in our case its is

***psql -p 20004 alltrade\_iot***

1. This will create the extension for postgres database. follow step 7 for each server and database as per requirement .

***create extension tablefunc***

1. Check the extension on psql

***select \* from pg\_extension ;***

extname | extowner | extnamespace | extrelocatable | extversion | extconfig | extcondition

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plpgsql | 10 | 11 | f | 1.0 | |

tablefunc | 10 | 2200 | t | 1.0 | |

You check the function of the tablefunc using \df

***\df crosstab***

List of functions

Schema | Name | Result data type | Argument data types | Type

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public | crosstab | SETOF record | text | normal

public | crosstab | SETOF record | text, integer | normal

public | crosstab | SETOF record | text, text | normal

## --Illustration of crosstab

***create table evaluations (student text, subject text, evaluation\_result float, evaluation\_date date);***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Smith, John', 'Music', 7.0, '2016-03-01' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Smith, John', 'Maths', 4.0, '2016-03-01' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Smith, John', 'History', 9.0, '2016-03-22' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Smith, John', 'Language', 7.0, '2016-03-15' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Smith, John', 'Geography', 9.0, '2016-03-04' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Gabriel, Peter', 'Music', 2.0, '2016-03-01' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Gabriel, Peter', 'Maths', 10.0, '2016-03-01' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Gabriel, Peter', 'History', 7.0, '2016-03-22' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Gabriel, Peter', 'Language', 4.0, '2016-03-22' );***

***Insert into evaluations (student , subject, evaluation\_result, evaluation\_date) values ('Gabriel, Peter', 'Geography', 10.0, '2016-03-04' );***

--The SELECT must return 3 columns.

--The first column in the SELECT will be the identifier of every row in the pivot table or final result.

--The second column in the SELECT represents the categories in the pivot table.

--The third column in the SELECT represents the value to be assigned to each cell of the pivot table.

***SELECT \****

***FROM crosstab( 'select student, subject, evaluation\_result from evaluations order by 1,2')***

***AS final\_result(Student TEXT, Geography float,History float,Language float,Maths float,Music float);***

student | geography | history | language | maths | music

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Gabriel, Peter | 10 | 7 | 4 | 10 | 2

Smith, John | 9 | 9 | 7 | 4 | 7

***SELECT \****

***FROM crosstab( 'select subject, student, evaluation\_result from evaluations order by 1, 3')***

***AS final\_result(Subject Text, Smith float, Gabriel float);***

subject | smith | gabriel

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Geography | 9 | 10

History | 7 | 9

Language | 4 | 7

Maths | 4 | 10

Music | 2 | 7

***SELECT \****

***FROM crosstab( 'select subject, student, evaluation\_result from evaluations order by 1, 3 limit 4')***

***AS final\_result(Subject Text, Smith float, Gabriel float);***

subject | smith | gabriel

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Geography | 9 | 10

History | 7 | 9