

Version 1.0 (Estimated Release date 02/05/2014)

Features

1. Table auto creation
2. Keys (unique index)
3. Tags (non-unique index)
4. Typeless columns
5. Insert statement
6. Select statement
7. Update statement
8. Delete statement
9. Subscribe statement
10. Unsubscribe statement
11. Filtering (where clause) by key or by tag(no conditional logic yet release 1.1 :))
12. Select, Update, Subscribe and Delete can have where clause

Components

Server - cross-platform pubsubsql server (Initial release will support Linux/Windows) with CLI interface

Client

golang API

Java API

.Net API

Java GUI (Interactive Query)

.Net GUI (Interactive Query)

Interactive Query GUI will enable user to connect to pubsubsql server and execute sql statements. There will be 3 panels. Query, Results and Messages. The Results panel will have a grid to display data. In addition to request/response mechanism, user will be able to subscribe to a result set and receive updates in real time as underlying data changes (continuous querying).

Commands

Command Options

1. help
2. status
3. stop
4. start
 - start 127.0.0.1:777
 - start 777
 - start
 - response {"status": "ok", "ip": "127.0.0.1", "port": "777"}
5. connect
 - connect 127.0.0.1:777
 - connect 777
 - connect
 - response {"status": "ok", "ip": "127.0.0.1", "port": "777"}

CLI output

- **pubsubsql>**
default ip and default port
- **pubsubsql 127.0.0.1:777>**
ip and port

CLI Commands

all of the above except for start and connect

SQL Commands

All responses will be in the form of JSON documents. It is done in order to make it easier to implement client APIs

6. key table column
Creates unique key (unique index) for table on column
 - request - key stocks ticker
 - response {"status": "ok"} - key was successfully defined

- response {"status": "error" "msg": "error message"}

7. tag table column

Creates non-unique tag (non unique index) for table on column

- request - tag stocks sector
- response {"status": "ok"} - tag was successfully defined
- response {"status": "error" "msg": "error message"}

8. insert

- request - insert into stocks (ticker, sector, bid, ask) values ('IBM', 'tech', 140, 141)
- response {"status": "ok", "inserted": 1} - 1 row was inserted
- response {"status": "error" "msg": "error message"}

9. update - will auto create row if it was not inserted

- request - update stocks set bid = 142, ask = 143 where ticker = 'IBM'
- response {"status": "ok", "updated": 1} - 1 row was updated
- response {"status": "ok", "updated": 0} - 0 row was updated
- response {"status": "error" "msg": "error message"}

10. delete

- request - delete from stocks where ticker = 'IBM'
- response {"status": "ok", "deleted": 1} - 1 row was deleted
- response {"status": "ok", "deleted": 0} - 0 row was deleted
- response {"status": "error" "msg": "error message"}

11. select

- request - select * from stocks where sector = 'tech'
To be decided if anything other than * is supported in release 1.0
- response
{"status": "ok", "rows": 2, "data":
[

```
{ "id": "0", "ticker": "IBM", "sector": "tech", "bid": 140, "ask": 141 },
{ "id": "1", "ticker": "GOOG", "sector": "tech", "bid": 1200, "ask": 1220 },
}
```

- response { "status": "ok", "rows": 0 } - 0 row was returned
- response { "status": "error", "msg": "error message" }

12. subscribe

- request - subscribe * from stocks where sector = 'tech'
- response { "status": "ok" } pubsubid is a server generated unique identifier for a particular subscription (needs review)
- response { "status": "error", "msg": "error message" }

13. subscribe asynchronous responses

- insert - record was inserted and subscribed

```
{ "status": "ok", "action": "insert", "data":
[
{ "id": "0", "ticker": "IBM", "sector": "tech", "bid": 140, "ask": 141 }
]
}
```
- add - record was subscribed or record was updated and subscribed

```
{ "status": "ok", "action": "add", "data":
[
{ "id": "0", "ticker": "IBM", "sector": "tech2", "bid": 140, "ask": 141 }
]
}
```
- update - subscribed record was updated.

```
{ "status": "ok", "action": "update", "data":
[
{ "id": "0", "ticker": "IBM", "sector": "tech2", "bid": 140, "ask": 141 }
]
}
```
- remove - subscribed record was updated and unsubscribed

```
{ "status": "ok", "action": "remove", "data":
[
{ "id": "0" },
]
}
```
- delete - subscribed record was deleted

```
{ "status": "ok", "action": "remove", "data":
[
{ "id": "0" }
]
}
```

14. unsubscribe

- request - unsubscribe from stocks - removes all of the subscriptions for a given table for a particular connection
- response {“status”:“ok” }
- response {“status”:“error” “msg”:“error message”} - in case no subscriptions were found