Track Port

# Legacy

The track\_port system has existed in various forms over a number of years. Here I am documenting how track\_port has been working since around 2006. The core of the system is a mysql database and a number of scripts used to maintain/query the database. The details of each of these components will be outlined and described in the following sections, but here is a short summary of each component.

The database consists of a number of tables, but there are three tables that are most important. The table transaction\_list contains information about every position (symbol, open info, close info, etc.). With this information, portfolio tracking is possible. The table port\_history keeps track of portfolio names and their historical values and cash positions. Finally, the table finance\_quote contains daily quote data for all tracked symbols.

There are three main scripts that are used to update/query the database. The script quote\_query is a perl script that runs during the market open and repeatedly looks up quote info for all symbols. It then stores this info in the database finance\_quote table. The script port\_edit.cgi is a perl script used to enter/modify information in the database transaction\_list table. It is accessed using a web query. IOW, this is how positions are opened and closed (as well as providing some modify capability). Finally, the script pull\_transaction\_report.py is a python script used to show tabular portfolio info using a web query.

## Database

### Table transaction\_list

#### Describe

mysql> describe transaction\_list;

+--------------+------------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+--------------+------------------+------+-----+---------+----------------+

| id | int(10) unsigned | NO | PRI | NULL | auto\_increment |

| fileportname | varchar(256) | YES | | | |

| symbol | varchar(32) | YES | | | |

| sector | varchar(32) | YES | | | |

| position | varchar(16) | YES | | | |

| descriptor | varchar(16) | YES | | | |

| shares | decimal(14,4) | YES | | 0.0000 | |

| open\_price | decimal(14,4) | YES | | 0.0000 | |

| open\_date | date | YES | | NULL | |

| closed | tinyint(1) | YES | | 0 | |

| close\_price | decimal(14,4) | YES | | 0.0000 | |

| close\_date | date | YES | | NULL | |

| expiration | date | YES | | NULL | |

| strike | decimal(14,4) | YES | | 0.0000 | |

+--------------+------------------+------+-----+---------+----------------+

14 rows in set (0.00 sec)

#### Additional Info

The field position can be “cash” or “long”. The former is used for deposits, withdrawals, dividends, adjustments, etc. Essentially, anything that involves a dollar amount as opposed to an actual position. The latter is used for a security position. The original intent was that this could be “long” or “short” depending on how the position was opened. However, short positions are denoted with negative share counts.

The field descriptor is used to describe the type of position for long positions, ie. stock, call or put. For cash positions, it can be “initial” or “intermediate”. The former will set the date when the portfolio was created.

All the other fields are self-explanatory.

One further note regarding the field sector, dividends are marked as such by setting sector to “dividend”. By doing so, it is possible to include dividends as part of a position’s overall return.

### Table port\_history

#### Describe

mysql> describe port\_history;

+--------------+------------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+--------------+------------------+------+-----+---------+----------------+

| id | int(10) unsigned | NO | PRI | NULL | auto\_increment |

| date | date | YES | | NULL | |

| fileportname | varchar(256) | YES | | | |

| total | decimal(14,4) | YES | | 0.0000 | |

| cash | decimal(14,4) | YES | | 0.0000 | |

+--------------+------------------+------+-----+---------+----------------+

5 rows in set (0.00 sec)

#### Additional Info

Every day the market is open, a new row is created for each port with that date. The total is the total value of the portfolio (including cash). The cash is the amount of cash in the port on that date. This is the only place that cash is tracked. In retrospect, it would have been better to create a cash position for each portfolio in the transaction\_list table.

### Table finance\_quote

#### Describe

mysql> describe finance\_quote;

+------------+------------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+------------+------------------+------+-----+---------+-------+

| symbol | varchar(32) | NO | PRI | | |

| name | varchar(32) | YES | | NULL | |

| last | decimal(14,4) | YES | | 0.0000 | |

| high | decimal(14,4) | YES | | 0.0000 | |

| low | decimal(14,4) | YES | | 0.0000 | |

| date | date | YES | | NULL | |

| time | time | YES | | NULL | |

| net | decimal(14,4) | YES | | 0.0000 | |

| p\_change | decimal(6,2) | YES | | 0.00 | |

| volume | int(10) unsigned | YES | | 0 | |

| avg\_vol | int(10) unsigned | YES | | 0 | |

| bid | decimal(14,4) | YES | | 0.0000 | |

| ask | decimal(14,4) | YES | | 0.0000 | |

| close | decimal(14,4) | YES | | 0.0000 | |

| open | decimal(14,4) | YES | | 0.0000 | |

| day\_range | varchar(64) | YES | | NULL | |

| year\_range | varchar(64) | YES | | NULL | |

| eps | decimal(14,4) | YES | | 0.0000 | |

| pe | decimal(14,4) | YES | | 0.0000 | |

| div\_date | date | YES | | NULL | |

| dividend | decimal(14,4) | YES | | 0.0000 | |

| div\_yield | decimal(14,4) | YES | | 0.0000 | |

| cap | decimal(20,4) | YES | | NULL | |

| ex\_div | date | YES | | NULL | |

| nav | decimal(14,4) | YES | | 0.0000 | |

| yield | decimal(14,4) | YES | | 0.0000 | |

| exchange | varchar(32) | YES | | NULL | |

| success | tinyint(1) | YES | | 0 | |

| errormsg | varchar(40) | YES | | NULL | |

| method | varchar(32) | YES | | NULL | |

+------------+------------------+------+-----+---------+-------+

30 rows in set (0.00 sec)

#### Additional Info

Most of this data is not capture anymore as quote services have evolved over the years.

## Scripts

### Perl quote\_query

### Perl port\_edits.cgi

### Python pull\_transaction\_report.py