

# Historical Query/Response System

Last Updated: February 12, 2010

The historical query/response system allows a user to request intraday (both tick and minute) data as well as end of day data. In order to accomplish this, three types of queries are provided (Tick, Minute, and EOD).

All query URLs are located under the historical server application directory:  
<http://ds01.ddfplus.com/historical/>.

## Historical Data Queries

### Tick Queries

Tick queries return all tick records for a specified symbol during a specified period between a start and an end date/time. A maximum number of records to be returned can also be specified, along with either the start or end date/time, or both. The request handler for tick queries is *queryticks.ashx*.

The result set returned from a tick query will always be confined to a single day. In other words, if ticks for different days are required, then more than one query will have to be executed in order to retrieve all the ticks.

If both a start and an end date/time are specified, then all ticks within the specified period will be returned, as long as the period is contained within a single day. If a maximum number of records is specified along with both date/times and the number of tick records between those dates exceeds the maximum number of records to be returned, then the excess records will be cut off from the beginning or the end of the result set depending on the sort order specified in the query (if ascending order is specified, excess records will be cut off from the chronological end of the result set, otherwise they will be cut off from the chronological beginning).

If no start date/time is specified and an end date/time is specified along with a maximum number of records to be returned, then a number of records up to the maximum number specified or back to the beginning of the specified end day will be returned, whichever is smaller. If no maximum number of records is specified, then all the tick records between the end date/time specified and the beginning of the specified end day will be returned.

If no end date/time is specified and a start date/time is specified along with a maximum number of records to be returned, then a number of records up to the maximum number specified or up to the end of the specified start day will be returned, whichever is smaller. If no maximum number of records is specified, then all the tick records between the start

date/time specified and the end of the specified start day are returned.

If no date/times are specified, then the start date/time will default to the beginning of the current day and the end date/time will default to the beginning of the next day. If a maximum number of records is specified, the query will be treated as if both start and end date/times had been specified with their default values (refer to maximum number of records when both dates are specified in paragraph above).

**Note:** although query date/times can only be specified down to the second, tick timestamps are returned down to the millisecond, and several ticks can actually occur in the same millisecond, so when specifying a maximum number of ticks in a query, all ticks within a given second will be returned even if they exceed the maximum number of ticks specified.

### **Tick Query Parameters**

The following parameters are either required or supported in tick queries (required parameters are marked with an asterisk):

***username\****: this parameter should be set to the user name provided by ddfplus to the user account.

***password\****: this parameter should be set to the password provided by ddfplus for the user name passed in parameter username.

***symbol\****: this parameter should be set to the symbol for which the query should return data.

***start***: this parameter should be set to the desired start date/time for the query (the result set will include records back to, and including, this value). If not set, the value will default to the beginning of the day specified in the end parameter, if end is specified, or to the beginning of the current day, if end is not specified. The value should conform to the format `yyyymmdd[hhmm[ss]]`, where fields in brackets are optional. Any optional fields that are not explicitly set will default to 0 (i.e. 20090203 will default to 20090203000000 or February 3, 2009 at 00:00:00).

***end***: this parameter should be set to the desired end date/time for the query (the result set will include records up to, but not including, this value). If not set, the value will default to the end of the day specified in the start parameter, if specified, or to the end of the current day, if start is not specified. The value should conform to the format `yyyymmdd[hhmm[ss]]`, where fields in brackets are optional. Any optional fields that are not explicitly set will default to 0 (i.e. 20090203 will default to 20090203000000 or February 3, 2009 at 00:00:00).

***maxrecords***: this parameter should be set to the maximum number of records desired. If not specified, the number of records returned will be determined by the date/time

parameters specified as well as any defaults that apply to the query.

**order:** this parameter can be set to one of two values (*asc* and *desc*) in order to specify the chronological order of the result set returned. If this parameter is not specified, the order results is not guaranteed.

**Note:** all times are in Eastern Time for equities and Central Time for everything else.

### Tick Query Results Format

Results are returned by tick queries in comma delimited text format, one tick record per line, as follows:

YYYY-MM-DD HH:MM:SS.FFF,TRADING\_DAY,SESSION\_CODE,PRICE,SIZE

#### Example:

```
2009-02-03 13:30:00.000,10,G,823.5,1
2009-02-03 13:30:00.125,10,G,823.75,7
```

The session code (session code for futures and sale condition for equities) is a single character that is documented in the [ddfplus broadcast feed specifications](#) on the ddfplus developer website.

### Tick Query Examples

In order to query all the ticks for Google between 9 am and 12 pm on February 3, 2009, execute:

[http://ds01.ddfplus.com/historical/queryticks.ashx?  
username=username&password=password&symbol=GOOG&start=20090203090000&e  
nd=20090203120000](http://ds01.ddfplus.com/historical/queryticks.ashx?username=username&password=password&symbol=GOOG&start=20090203090000&end=20090203120000)

In order to query the last 1000 ticks for Google for the current day in descending order, execute:

[http://ds01.ddfplus.com/historical/queryticks.ashx?  
username=username&password=password&symbol=GOOG&maxrecords=1000&order=  
desc](http://ds01.ddfplus.com/historical/queryticks.ashx?username=username&password=password&symbol=GOOG&maxrecords=1000&order=desc)

In order to query the first 1000 ticks for Google for the February 3, 2009, in ascending order, execute:

[http://ds01.ddfplus.com/historical/queryticks.ashx?  
username=username&password=password&symbol=GOOG&start=20090203&maxrecor](http://ds01.ddfplus.com/historical/queryticks.ashx?username=username&password=password&symbol=GOOG&start=20090203&maxrecor)

[ds=1000&order=asc](#)

## **Minute Queries**

Minute queries return all minute records for a specified symbol during a specified period between a start and an end date/time. A maximum number of records to be returned can also be specified, along with either the start or end date/time, or both. The request handler for minute queries is *queryminutes.ashx*.

An optional interval can be specified in order to aggregate sets of contiguous minute records (the number of minute records in each set is equal to the specified interval) into one record. If the interval is omitted, then a 1 minute interval (no aggregation) will be the default.

If both a start and an end date/time are specified, then all minutes within the specified period will be returned. If a maximum number of records is specified along with both date/times and the number of minute records between those dates exceeds the maximum number of records to be returned, then the excess records will be cut off from the beginning or the end of the result set depending on the sort order specified in the query (if ascending order is specified, excess records will be cut off from the chronological end of the result set, otherwise, excess records will be cut off from the chronological beginning; otherwise).

If no start date/time is specified and an end date/time is specified along with a maximum number of records to be returned, then a number of records up to the maximum number specified or back to the beginning of the available minute data will be returned, whichever is smaller. If no maximum number of records is specified, then all the minute records between the end date/time specified and the beginning of the specified end day will be returned.

If no end date/time is specified and a start date/time is specified along with a maximum number of records to be returned, then a number of minute records up to the maximum number specified or up to the most current minute record available will be returned, whichever is smaller. If no maximum number of records is specified, then all the minute records between the start date/time specified and the end of the specified start day are returned.

If no date/times and no maximum number of records are specified, then the start date/time will default to the beginning of the current day and the end date/time will default to the beginning of the next day. If a maximum number of records is specified, the query will be treated as if the start date/time is specified to the beginning of available data and the end date/time is specified to the end of available data (refer to maximum number of records when both dates are specified in paragraph above).

**Trading Day** for futures contracts signifies the actual trading day used to construct the

daily o/h/l/c values. For the (ES) E-Mini S&P futures Trading \_Day will start at 3:30pm the previous day, and finish at 3:15pm the next day.

**Historical market data** reflects all trades made during all sessions of the market, including electronic trades executed for futures markets during regular holidays.

The **date/times** for all futures and forex contracts are always in CST. Times are adjusted for daylight savings time.

### **Minute Query Parameters**

The following parameters are either required or supported in minute queries (required parameters are marked with an asterisk):

***username\****: this parameter should be set to the user name provided by ddfplus to the user account.

***password\****: this parameter should be set to the password provided by ddfplus for the user name passed in parameter username.

***symbol\****: this parameter should be set to the symbol for which the query should return data.

***start***: this parameter should be set to the desired start date/time for the query (the result set will include records back to, and including, this value). If not set, the value will default to the beginning of available data if a maximum number of records is specified; otherwise it will default to the beginning of the day specified in the end parameter, if specified, or to the beginning of the current day, if end is not specified. The value should conform to the format `yyyymmdd[hhmm[ss]]`, where fields in brackets are optional. Any optional fields that are not explicitly set will default to 0 (i.e. 20090203 will default to 20090203000000 or February 3, 2009 at 00:00:00).

***end***: this parameter should be set to the desired end date/time for the query (the result set will include records up to, but not including, this value). If not set, the value will default to the end of available data, if a maximum number of records is specified; otherwise, the value will default to the end of the day specified in the start parameter, if specified, or to the end of the current day, if start is not specified. The value should conform to the format `yyyymmdd[hhmm[ss]]`, where fields in brackets are optional. Any optional fields that are not explicitly set will default to 0 (i.e. 20090203 will default to 20090203000000 or February 3, 2009 at 00:00:00).

***maxrecords***: this parameter should be set to the maximum number of records desired. If not specified, the number of records returned will be determined by the date/time parameters specified as well as any defaults that apply to the query.

***interval***: this parameter is the size of the interval to be used when aggregating records. If

not specified, the default will be set to 1 and no aggregation will be performed.

**order:** this parameter can be set to one of two values (*asc* and *desc*) in order to specify the chronological order of the result set returned. If this parameter is not specified, the order results is not guaranteed.

**Note:** all times are in Eastern Time for equities and Central Time for everything else.

### Minute Query Results Format

Results are returned by minute queries in comma delimited text format, one minute record per line, as follows:

YYYY-MM-DD HH:MM,TRADING\_DAY,OPEN,HIGH,LOW,CLOSE,VOLUME

#### Example:

```
2009-02-03 14:44,10,821.75,823.25,820.75,823,10279
2009-02-03 14:43,10,823.25,823.75,821.75,821.75,11888
```

### Minute Query Examples

In order to query all the minute records for Google between 9 am and 12 pm on February 3, 2009, execute:

[http://ds01.ddfplus.com/historical/queryminutes.ashx?  
username=username&password=password&symbol=GOOG&start=200902030900&end  
=200902031200](http://ds01.ddfplus.com/historical/queryminutes.ashx?username=username&password=password&symbol=GOOG&start=200902030900&end=200902031200)

In order to query the last 1000 minute records for Google for the current day in descending order, execute:

[http://ds01.ddfplus.com/historical/queryminutes.ashx?  
username=username&password=password&symbol=GOOG&maxrecords=1000&order=  
desc](http://ds01.ddfplus.com/historical/queryminutes.ashx?username=username&password=password&symbol=GOOG&maxrecords=1000&order=desc)

In order to query the first 1000 minute records for Google for the February 3, 2009, in ascending order, execute:

[http://ds01.ddfplus.com/historical/queryminutes.ashx?  
username=username&password=password&symbol=GOOG&start=20090203&maxreco  
ds=1000&order=asc](http://ds01.ddfplus.com/historical/queryminutes.ashx?username=username&password=password&symbol=GOOG&start=20090203&maxrecords=1000&order=asc)

In order to query 5-minute interval records for Google between 9 am and 12 pm on

February 3, 2009, execute:

[http://ds01.ddfplus.com/historical/queryminutes.ashx?  
username=username&password=password&symbol=GOOG&start=200902030900&end  
=200902031200&interval=5](http://ds01.ddfplus.com/historical/queryminutes.ashx?username=username&password=password&symbol=GOOG&start=200902030900&end=200902031200&interval=5)

## **Nearby Minute Queries**

Nearby minute queries are basically identical in functionality and format to <minute queries>, with three important differences:

- They only apply to futures contracts.
- Only the root symbol is used by the query (even though a full contract symbol can be passed in that includes the month and year, both the month and year are ignored). The results of the query will include data for one or more active contracts during the period requested. A contract is considered to be active from (and including) the day of expiration of the previously active contract to (and including) the day prior to its expiration.
- Each record in the result set includes the name of the active contract to which the record belongs, since the different records returned may belong to different contracts.

Except for these three exceptions, everything else works the same way it does for <minute queries>

## **Nearby Minute Query Results Format**

Results are returned by nearby minute queries in comma delimited text format, one minute record per line, as follows:

CONTRACT,YYYY-MM-DD  
HH:MM,TRADING\_DAY,OPEN,HIGH,LOW,CLOSE,VOLUME

### **Example:**

ESU09,2009-09-11 00:13,11,1040,1040,1039.75,1039.75,4

## **Nearby Minute Query Examples**

In order to query all the nearby minute records for ES between June 1 and (not including) July 1, 2009, execute:

[http://ds01.ddfplus.com/historical/querynearbyminutes.ashx?  
username=username&password=password&symbol=ES&start=20090601&end=2009070](http://ds01.ddfplus.com/historical/querynearbyminutes.ashx?username=username&password=password&symbol=ES&start=20090601&end=2009070)

1

In order to query 1-hour interval records for ES between June 1 and (not including) July 1, 2009, execute:

[http://ds01.ddfplus.com/historical/querynearbyminutes.ashx?  
username=username&password=password&symbol=ES&start=20090601&end=20090701&interval=60](http://ds01.ddfplus.com/historical/querynearbyminutes.ashx?username=username&password=password&symbol=ES&start=20090601&end=20090701&interval=60)

## **Form T Minute Queries**

Form T minute queries are basically identical in functionality and format to minute queries, with two important differences:

- They only apply to stocks.
- They include minutes (or aggregated minute intervals) created using Form T trades (pre-/post-market trades). Form T trades are described in Appendix A of the ddf Broadcast Feed documentation, titled ddfplus Processing of Special Sale Conditions [http://www.ddfplus.com/client/feed\\_specs\\_appA.shtml](http://www.ddfplus.com/client/feed_specs_appA.shtml).

Except for these two exceptions, everything else works the same way it does for minute queries.

## **Form T Minute Query Results Format**

Results are returned by Form T minute queries in comma delimited text format, one minute record per line, as follows:

YYYY-MM-DD HH:MM,TRADING\_DAY,OPEN,HIGH,LOW,CLOSE,VOLUME

Example:

2009-09-11 00:13,11,1040,1040,1039.75,1039.75,4

## **Form T Minute Query Examples**

In order to query all the minute records (including Form T trades) for IBM between September 1 and (not including) September 10, 2009, execute:

<http://ds01.ddfplus.com/historical/queryformtminutes.ashx?>



[username=username&password=password&symbol=IBM&start=20090901&end=20090910](http://ds01.ddfplus.com/historical/queryformtminutes.ashx?username=username&password=password&symbol=IBM&start=20090901&end=20090910)

In order to query 1-hour interval records (including Form T trades) for IBM between September 1 and (not including) September 10, 2009, execute:

[http://ds01.ddfplus.com/historical/queryformtminutes.ashx?  
username=username&password=password&symbol=IBM&start=20090901&end=20090910&interval=60](http://ds01.ddfplus.com/historical/queryformtminutes.ashx?username=username&password=password&symbol=IBM&start=20090901&end=20090910&interval=60)

### **End of Day (EOD) Queries**

EOD queries return all records (daily, weekly or monthly) for a specified symbol during a specified period between a start and an end date. A maximum number of records to be returned can also be specified along with an end date (the maximum number of records is ignored if a start date is specified). The request handler for EOD queries is *queryeod.ashx*.

An optional data parameter specifies whether the records returned are daily, weekly or monthly, and whether plain, nearby, or continuation records are returned. If not specified, daily records are returned.

A “nearby record” is the nearest futures contract to expiration at any given date in time. Example: Corn Dec 2008, Corn Sep 2008, Corn July 2008 ...

A “continuation record” is the same contract month over different contract years. Example: Corn Dec 2008, Corn Dec 2007, Corn Dec 2006 ...

If both a start and an end date are specified, then all records within the specified period will be returned. If a start date is specified, the maximum number of records is ignored.

If no start date is specified and an end date is specified along with a maximum number of records to be returned, then a number of records up to the maximum number specified or back to the beginning of the available data will be returned, whichever is smaller. If no maximum number of records is specified, then all the records between the end date specified and the beginning of the available data will be returned.

If no end date is specified and a start date is specified all the records between the start date and the most current available data will be returned. The maximum number of records is ignored if a start date is specified.

If no dates and no maximum number of records are specified, then all the available records will be returned. If a maximum number of records is specified, the query will be treated as if the end date is specified to the most current available data (refer to maximum

number of records when end date is specified in paragraph above).

### **End of Day (EOD) Query Parameters**

The following parameters are either required or supported in minute queries (required parameters are marked with an asterisk):

***username\****: this parameter should be set to the user name provided by ddfplus to the user account.

***password\****: this parameter should be set to the password provided by ddfplus for the user name passed in parameter username.

***symbol\****: this parameter should be set to the symbol for which the query should return data.

***start***: this parameter should be set to the desired start date for the query (the result set will include records back to, and including, this value). If not set, the value will default to the beginning of available. The value should conform to the format *yyyymmdd*.

***end***: this parameter should be set to the desired end date for the query (the result set will include records up to, and including, this value). If not set, the value will default to the end of available data (the current day). The value should conform to the format *yyyymmdd*.

***maxrecords***: this parameter should be set to the maximum number of records desired. If not specified, the number of records returned will be determined by the date parameters specified as well as any defaults that apply to the query.

***order***: this parameter can be set to one of two values (*asc* and *desc*) in order to specify the chronological order of the result set returned. If this parameter is not specified, the order results is not guaranteed.

***data***: this parameter can be set to one of nine values (*daily*, *dailynearest*, *dailycontinue*, *weekly*, *weeklynearest*, *weeklycontinue*, *monthly*, *monthlynearest*, and *monthlycontinue*) in order to specify whether daily, weekly or monthly records are to be returned, and whether they should be plain, nearest, or continuation records. Nearest and continuation are ignored for equities, and if specified the query will simply return plain records.

A “nearby record” is the nearest futures contract to expiration at any given date in time.  
Example: Corn Dec 2008, Corn Sep 2008, Corn July 2008 ...

A “continuation record” is the same contract month over different contract years.  
Example: Corn Dec 2008, Corn Dec 2007, Corn Dec 2006 ..

***volume***: this parameter can be set to one of two values (*contract* and *total*) in order to

specify whether the volume returned should be the contract volume or the total volume. If not specified, the value will default to *contract*. This does not apply (is ignored) for equities.

### **End of Day (EOD) Query Results Format**

Results are returned by EOD queries in comma delimited text format, one record per line, as follows:

SYMBOL,YYYY-MM-DD,OPEN,HIGH,LOW,CLOSE,VOLUME[,OPENINTEREST]

#### **Example (fragment of weekly nearest for ESH09):**

```
ESZ08,2008-12-08,872.25,919.25,829,886,3269325,3301807
ESZ08,2008-12-15,883.5,919.25,857.25,881.25,2670206,3198151
ESH09,2008-12-22,884.25,891.5,852.75,869,654227,2287817
ESH09,2008-12-29,869,932.75,853.25,925.5,853185,2344054
```

#### **Example:**

```
CSCO,2009-02-09,16.99,17.05,16.62,16.85,37633398
CSCO,2009-02-10,16.59,16.93,15.92,16.05,69148797
CSCO,2009-02-11,16.18,16.27,15.85,16.17,46280102
CSCO,2009-02-12,15.97,16.22,15.63,16.2,57651598
```

**Note:** open interest does not apply to equities, and is therefore omitted.

### **End of Day (EOD) Query Examples**

In order to query all the daily records for Google between February 3, 2009, and February 23, 2009 execute:

[http://ds01.ddfplus.com/historical/queryeod.ashx?  
username=username&password=password&symbol=GOOG&start=20090203&end=20090223&data=daily](http://ds01.ddfplus.com/historical/queryeod.ashx?username=username&password=password&symbol=GOOG&start=20090203&end=20090223&data=daily)

In order to query the last 10 weekly records for Google up to the current day execute:

[http://ds01.ddfplus.com/historical/queryeod.ashx?  
username=username&password=password&symbol=GOOG&maxrecords=10&data=weekly](http://ds01.ddfplus.com/historical/queryeod.ashx?username=username&password=password&symbol=GOOG&maxrecords=10&data=weekly)

In order to query the last 100 daily nearest records for ESH09 execute:

[http://ds01.ddfplus.com/historical/queryeod.ashx?  
username=username&password=password&symbol=ESH09&maxrecords=100&data=da](http://ds01.ddfplus.com/historical/queryeod.ashx?username=username&password=password&symbol=ESH09&maxrecords=100&data=da)

[ilynearest](#)

In order to query the 100 daily nearest records up to February 3, 2009 for ESH09 with total volume execute:

[http://ds01.ddfplus.com/historical/queryeod.ashx?  
username=username&password=password&symbol=ESH09&end=20090203&maxrecor  
ds=100&data=dailynearest&volume=total](http://ds01.ddfplus.com/historical/queryeod.ashx?username=username&password=password&symbol=ESH09&end=20090203&maxrecords=100&data=dailynearest&volume=total)