

rdbstats

2.0.7

Generated by Doxygen 1.7.1

Fri Aug 6 2010 10:50:10

Contents

1	rdbstats	1
1.1	Copyright	1
2	Directory Hierarchy	1
2.1	Directories	1
3	Class Index	1
3.1	Class Hierarchy	1
4	Class Index	2
4.1	Class List	2
5	Directory Documentation	3
5.1	rdbstats/ Directory Reference	3
6	Class Documentation	3
6.1	RdbStats Class Reference	3
6.1.1	Detailed Description	5
6.1.2	Member Function Documentation	5
6.2	RdbStatsAve Class Reference	6
6.2.1	Detailed Description	7
6.2.2	Member Function Documentation	7
6.3	RdbStatsPercentiles Class Reference	8
6.3.1	Detailed Description	10
6.3.2	Constructor & Destructor Documentation	10
6.3.3	Member Function Documentation	10
6.4	RdbStatsPercentilesAve Class Reference	11
6.4.1	Detailed Description	12
6.4.2	Member Function Documentation	13
6.5	RdbStatsPercentilesMed Class Reference	13
6.5.1	Detailed Description	14
6.5.2	Member Function Documentation	15

6.6	Row Class Reference	15
6.6.1	Detailed Description	15
6.7	SelectedCols Class Reference	15
6.7.1	Detailed Description	16
6.7.2	Constructor & Destructor Documentation	16
6.8	StatsResult< Type > Class Template Reference	17
6.8.1	Detailed Description	17
6.8.2	Member Data Documentation	17

1 rdbstats

1.1 Copyright

Copyright (C) 2006 Smithsonian Astrophysical Observatory

This file is part of rdbstats

rdbstats is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

rdbstats is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor Boston, MA 02110-1301, USA

2 Directory Hierarchy

2.1 Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

rdbstats **3**

3 Class Index

3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

RdbStats	3
RdbStatsAve	6
RdbStatsPercentiles	8
RdbStatsPercentilesAve	11
RdbStatsPercentilesMed	13
Row	15
SelectedCols	15
StatsResult< Type >	17

4 Class Index

4.1 Class List

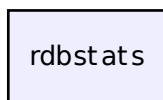
Here are the classes, structs, unions and interfaces with brief descriptions:

RdbStats	3
RdbStatsAve	6
RdbStatsPercentiles	8
RdbStatsPercentilesAve	11
RdbStatsPercentilesMed	13
Row	15
SelectedCols	15
StatsResult< Type >	17

5 Directory Documentation

5.1 rdbstats/ Directory Reference

Directory dependency graph for rdbstats/:



Files

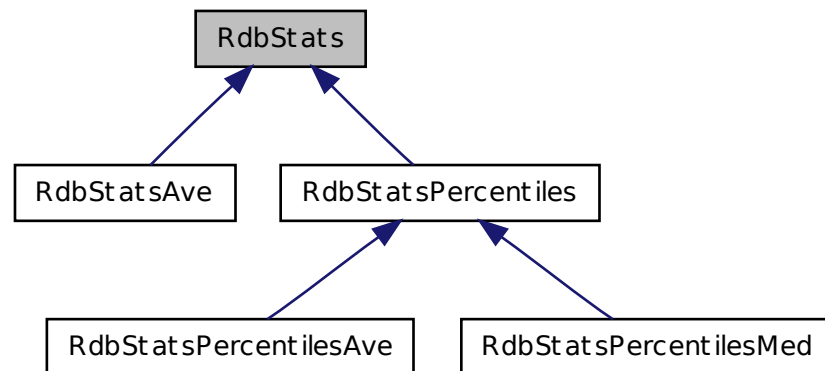
- file **main.cc**
- file **RdbStats.cc**
- file **RdbStats.h**
- file **RdbStatsAve.cc**
- file **RdbStatsAve.h**
- file **RdbStatsPercentiles.cc**
- file **RdbStatsPercentiles.h**
- file **RdbStatsPercentilesAve.cc**
- file **RdbStatsPercentilesAve.h**
- file **RdbStatsPercentilesMed.cc**
- file **RdbStatsPercentilesMed.h**
- file **Row.cc**
- file **Row.h**
- file **SelectedCols.cc**
- file **SelectedCols.h**
- file **StatsResult.cc**
- file **StatsResult.h**

6 Class Documentation

6.1 RdbStats Class Reference

```
#include <RdbStats.h>
```

Inheritance diagram for RdbStats:



Public Member Functions

- **RdbStats** (RDB &irdbtable, const string &name) throw (Exception)
- virtual int **calculate_statistics** () throw ()
Perform the final statistic for the set.
- double **get_absolute_average** () const
To get the absolute value of the average.
- virtual void **init** () throw ()
- virtual void **normalize_results** (const double norm) throw ()
- virtual void **set_output_columns** (RDB &ordbtable) throw (Exception)
- virtual void **update_statistics** () throw (Exception)
Read the column from RDB++, update the statistics for the column.

Protected Types

- enum **Stats** {
 AVG, MAX, MIN, SD,
 SUM, SUM2, SUM_T }

Protected Member Functions

- double **get_value** () throw (Exception)

Protected Attributes

- double **num_n**
- string **column_name**
- double **the_statistics** [7]

6.1.1 Detailed Description

The base class to calculate : average, maximum, minimum, num, stddev and sum. The derived classes are: RdbStatsPercentile, RdbStatsQuartile.

Definition at line 38 of file RdbStats.h.

6.1.2 Member Function Documentation

6.1.2.1 int RdbStats::calculate_statistics () throw () [virtual]

Perform the final statistic for the set.

Reimplemented in [RdbStatsAve](#), [RdbStatsPercentiles](#), [RdbStatsPercentilesAve](#), and [RdbStatsPercentilesMed](#).

Definition at line 77 of file RdbStats.cc.

Referenced by [RdbStatsPercentiles::calculate_statistics\(\)](#), and [RdbStatsAve::calculate_statistics\(\)](#).

6.1.2.2 double RdbStats::get_absolute_average () const [inline]

To get the absolute value of the average.

Definition at line 50 of file RdbStats.h.

Referenced by [RdbStatsPercentilesAve::calculate_statistics\(\)](#), and [RdbStatsAve::calculate_statistics\(\)](#).

6.1.2.3 void RdbStats::update_statistics () throw (Exception) [virtual]

Read the column from RDB++, update the statistics for the column.

Reimplemented in [RdbStatsPercentiles](#).

Definition at line 204 of file RdbStats.cc.

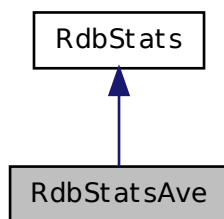
The documentation for this class was generated from the following files:

- RdbStats.h
- RdbStats.cc

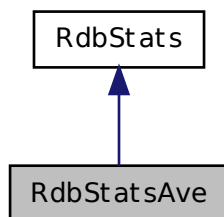
6.2 RdbStatsAve Class Reference

```
#include <RdbStatsAve.h>
```

Inheritance diagram for RdbStatsAve:



Collaboration diagram for RdbStatsAve:



Public Member Functions

- **RdbStatsAve** (RDB &irdbtable, const string &name) throw (Exception)
- virtual int [calculate_statistics](#) () throw ()

Perform the final statistic for the set.

6.2.1 Detailed Description

To normalize the results wrt to the average

Definition at line 33 of file RdbStatsAve.h.

6.2.2 Member Function Documentation

6.2.2.1 int RdbStatsAve::calculate_statistics () throw () [virtual]

Perform the final statistic for the set.

Reimplemented from [RdbStats](#).

Definition at line 66 of file RdbStatsAve.cc.

References [RdbStats::calculate_statistics\(\)](#), and [RdbStats::get_absolute_average\(\)](#).

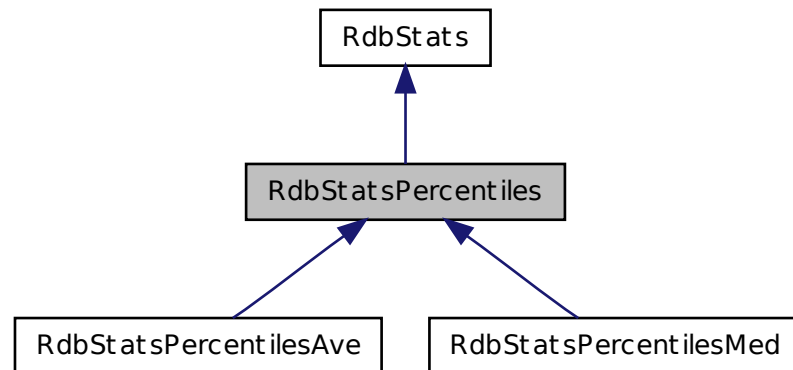
The documentation for this class was generated from the following files:

- RdbStatsAve.h
- RdbStatsAve.cc

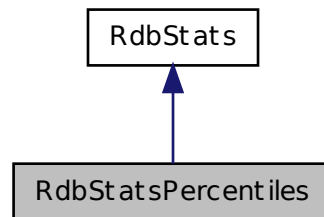
6.3 RdbStatsPercentiles Class Reference

```
#include <RdbStatsPercentiles.h>
```

Inheritance diagram for RdbStatsPercentiles:



Collaboration diagram for RdbStatsPercentiles:



Public Member Functions

- [RdbStatsPercentiles](#) (RDB &irdbtable, const string &name, const string &percent_list, bool implicitquartile) throw (Exception)
--percentiles 12,34.. and --quartile
- **RdbStatsPercentiles** (RDB &irdbtable, const string &name) throw (Exception)
- virtual int [calculate_statistics](#) () throw ()
Perform the final statistic for the set.
- void **init** () throw ()
- virtual void **normalize_results** (const double norm) throw ()
- void **set_output_columns** (RDB &ordbtable) throw (Exception)
- virtual void [update_statistics](#) () throw (Exception)
Read the column from RDB++, update the statistics for the column.

Protected Attributes

- vector< double > **data**
- vector< pair< string, double > > **the_percentile**
- double **the_median**
- double * **the_percentile_result**

6.3.1 Detailed Description

A class to calculate the percentiles, [RdbStatsPercentiles](#) is a special case of the class [RdbStats](#).

Definition at line 39 of file RdbStatsPercentiles.h.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 `RdbStatsPercentiles::RdbStatsPercentiles (RDB & irdbtable, const string & name, const string & percent_list, bool implicitquartile) throw (Exception)`

--percentiles 12,34.. and --quartile

Definition at line 35 of file RdbStatsPercentiles.cc.

6.3.3 Member Function Documentation

6.3.3.1 `int RdbStatsPercentiles::calculate_statistics () throw () [virtual]`

Perform the final statistic for the set.

Reimplemented from [RdbStats](#).

Reimplemented in [RdbStatsPercentilesAve](#), and [RdbStatsPercentilesMed](#).

Definition at line 210 of file RdbStatsPercentiles.cc.

References [RdbStats::calculate_statistics\(\)](#).

Referenced by [RdbStatsPercentilesMed::calculate_statistics\(\)](#), and [RdbStatsPercentilesAve::calculate_statistics\(\)](#).

6.3.3.2 `void RdbStatsPercentiles::update_statistics () throw (Exception) [virtual]`

Read the column from RDB++, update the statistics for the column.

Reimplemented from [RdbStats](#).

Definition at line 300 of file RdbStatsPercentiles.cc.

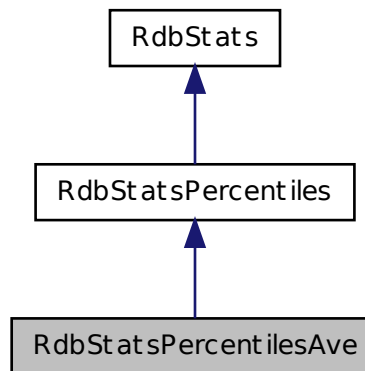
The documentation for this class was generated from the following files:

- RdbStatsPercentiles.h
- RdbStatsPercentiles.cc

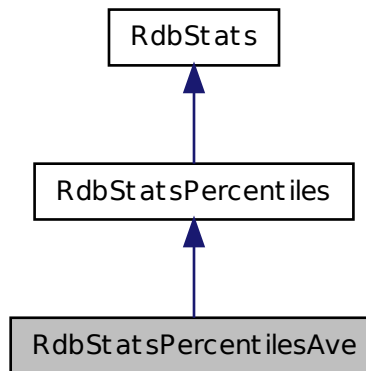
6.4 RdbStatsPercentilesAve Class Reference

```
#include <RdbStatsPercentilesAve.h>
```

Inheritance diagram for RdbStatsPercentilesAve:



Collaboration diagram for RdbStatsPercentilesAve:



Public Member Functions

- **RdbStatsPercentilesAve** (RDB &irdbtable, const string &name, const string &percent_list, bool implicitquartile) throw (Exception)
- **RdbStatsPercentilesAve** (RDB &irdbtable, const string &name) throw (Exception)
- virtual int [calculate_statistics](#) () throw ()

Perform the final statistic for the set.

6.4.1 Detailed Description

A class to calculate the percentiles, [RdbStatsPercentilesAve](#) is a special case of the class [RdbStatsPercentiles](#).

Definition at line 36 of file RdbStatsPercentilesAve.h.

6.4.2 Member Function Documentation

6.4.2.1 `int RdbStatsPercentilesAve::calculate_statistics () throw ()` `[virtual]`

Perform the final statistic for the set.

Reimplemented from [RdbStatsPercentiles](#).

Definition at line 101 of file `RdbStatsPercentilesAve.cc`.

References `RdbStatsPercentiles::calculate_statistics()`, and `RdbStats::get_absolute_average()`.

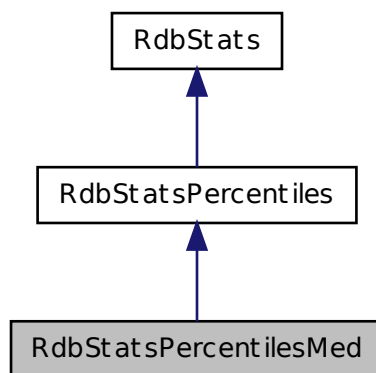
The documentation for this class was generated from the following files:

- `RdbStatsPercentilesAve.h`
- `RdbStatsPercentilesAve.cc`

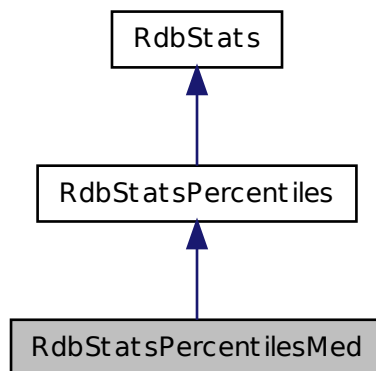
6.5 RdbStatsPercentilesMed Class Reference

```
#include <RdbStatsPercentilesMed.h>
```

Inheritance diagram for `RdbStatsPercentilesMed`:



Collaboration diagram for RdbStatsPercentilesMed:



Public Member Functions

- **RdbStatsPercentilesMed** (RDB &irdbtable, const string &name, const string &percent_list, bool implicitquartile) throw (Exception)
- **RdbStatsPercentilesMed** (RDB &irdbtable, const string &name) throw (Exception)
- virtual int [calculate_statistics](#) () throw ()

Perform the final statistic for the set.

6.5.1 Detailed Description

A class to calculate the percentiles, [RdbStatsPercentilesMed](#) is a special case of the class [RdbStatsPercentiles](#).

Definition at line 36 of file RdbStatsPercentilesMed.h.

6.5.2 Member Function Documentation

6.5.2.1 `int RdbStatsPercentilesMed::calculate_statistics () throw ()` [`virtual`]

Perform the final statistic for the set.

Reimplemented from [RdbStatsPercentiles](#).

Definition at line 100 of file `RdbStatsPercentilesMed.cc`.

References `RdbStatsPercentiles::calculate_statistics()`.

The documentation for this class was generated from the following files:

- `RdbStatsPercentilesMed.h`
- `RdbStatsPercentilesMed.cc`

6.6 Row Class Reference

Public Member Functions

- **Row** (const vector< string > &row_options) throw (Exception)
- const vector< pair< long, long > > &**get_range** ()

Friends

- ostream & **operator**<< (ostream &os, [Row](#) &a)
- ostream & **operator**<< (ostream &os, [Row](#) *a)

6.6.1 Detailed Description

Definition at line 34 of file `Row.h`.

The documentation for this class was generated from the following files:

- `Row.h`
- `Row.cc`

6.7 SelectedCols Class Reference

Public Member Functions

- [SelectedCols](#) (const vector< string > &cols, RDB &rdbtable, clo::parser &clo) throw (Exception)

The user has specified selected columns.

- [SelectedCols](#) (RDB &rdbtable, clo::parser &clo) throw (Exception)

The --all option has been invoked.

- const vector< string > & **get_selected_cols** () const
- void **print** (ostream &os) const

Protected Attributes

- vector< string > **selected_cols**

Friends

- ostream & **operator**<< (ostream &os, [SelectedCols](#) &a)
- ostream & **operator**<< (ostream &os, [SelectedCols](#) *a)

6.7.1 Detailed Description

Definition at line 49 of file SelectedCols.h.

6.7.2 Constructor & Destructor Documentation

6.7.2.1 SelectedCols::SelectedCols (const vector< string > & cols, RDB &rdbtable, clo::parser & clo) throw (Exception)

The user has specified selected columns.

Definition at line 31 of file SelectedCols.cc.

6.7.2.2 SelectedCols::SelectedCols (RDB & rdbtable, clo::parser & clo) throw (Exception)

The --all option has been invoked.

Definition at line 55 of file SelectedCols.cc.

The documentation for this class was generated from the following files:

- SelectedCols.h
- SelectedCols.cc

6.8 StatsResult< Type > Class Template Reference

```
#include <StatsResult.h>
```

Public Member Functions

- **StatsResult** (Type &col, RDB &otable) throw (Exception)
- void **calculate_statistics** () throw ()
- void **update_statistics** () throw (Exception)

Protected Attributes

- Type & [rdb_stats_columns](#)
The reference to the selected rdb data column.
- RDB & [ordbtable](#)
The reference to the output rdb table.

6.8.1 Detailed Description

template<class Type> class StatsResult< Type >

A container class to hold the relevant data for the rdb data columns.

Definition at line 36 of file StatsResult.h.

6.8.2 Member Data Documentation

6.8.2.1 **template<class Type> RDB& StatsResult< Type >::ordbtable** **[protected]**

The reference to the output rdb table.

Definition at line 54 of file StatsResult.h.

6.8.2.2 **template<class Type> Type& StatsResult< Type >::rdb_stats_columns** **[protected]**

The reference to the selected rdb data column.

Definition at line 51 of file StatsResult.h.

The documentation for this class was generated from the following files:

- StatsResult.h
- StatsResult.cc

Index

- calculate_statistics
 - RdbStats, [5](#)
 - RdbStatsAve, [7](#)
 - RdbStatsPercentiles, [10](#)
 - RdbStatsPercentilesAve, [13](#)
 - RdbStatsPercentilesMed, [15](#)
- get_absolute_average
 - RdbStats, [5](#)
- ordbtable
 - StatsResult, [17](#)
- rdb_stats_columns
 - StatsResult, [17](#)
- RdbStats, [3](#)
 - calculate_statistics, [5](#)
 - get_absolute_average, [5](#)
 - update_statistics, [5](#)
- rdbstats/ Directory Reference, [3](#)
- RdbStatsAve, [6](#)
 - calculate_statistics, [7](#)
- RdbStatsPercentiles, [8](#)
 - calculate_statistics, [10](#)
 - RdbStatsPercentiles, [10](#)
 - update_statistics, [10](#)
- RdbStatsPercentilesAve, [11](#)
 - calculate_statistics, [13](#)
- RdbStatsPercentilesMed, [13](#)
 - calculate_statistics, [15](#)
- Row, [15](#)
- SelectedCols, [15](#)
 - SelectedCols, [16](#)
- StatsResult, [17](#)
 - ordbtable, [17](#)
 - rdb_stats_columns, [17](#)
- update_statistics
 - RdbStats, [5](#)
 - RdbStatsPercentiles, [10](#)