Hyperic Report Definition Language

Hyperic Report Definition Language (RDL) provides an easy, secure way to access the contents of the HQ database in reports you design yourself using JasperSoft iReport v3.0.0. You do not have to have a deep understanding of the HQ database schema to use Hyperic RDL for building queries and reports.

Hyperic RDL is based on SQL; it supports a subset of SQL, with a few additions.

Hyperic RDL SQL Support

Hyperic RDL's SQL limitations are:

- Hyperic RDL only supports SELECT statements.
- Hyperic RDL only support the newer style of JOIN, where the joins are fully qualified in the FROM clause.
- Hyperic RDL does not support recursive selects that use the WITH clause.

Hyperic RDL Pseudo Tables

In addition to its SQL based functionality, Hyperic RDL provides two pseudo tables that generate the correct SQL to obtain metrics and availability data from HQ.

METRICS Table

The syntax for accessing the METRICS pseudo table is:

```
METRICS(start-time, end-time)
```

The `METRICS()` function returns all the metric data as if there is a table named METRICS, where each rows describes a single measured value. Each row contains the following columns.

Column Name	Data Type	Contains
`MEASUREMENT_ID`	Long	The ID of the measurement this entry is for. By joining to the EAM_MEASUREMENT table you can find out more details of the measurement and the resource the measurement is for.
`TIMESTAMP`	Long	The timestamp indicating when the measurement happened. Number of milliseconds since Jan 1, 1970 00:00:00 UTC
`VALUE`	Double	The value of the measurement.

AVAILABILITY Table

The syntax for accessing the AVAILABILITY pseudo table is:

```
AVAILABILITY(start-time, end-time)
```

The AVAILABILITY() function returns a table named AVAILABILITY, where each rows describes a time period and whether or not the resource was available. Each row contains the following columns.

Column Name	Data Type	Contains
`MEASUREMENT_ID`	Long	The ID of the Availability Measurement.
`STARTIME`	Long	The start timestamp for the interval. Number of milliseconds since Jan 1, 1970 00:00:00 UTC
`AVAILVAL`	Double	Was the system up or down? A value of 1.0 means the system was available, a value of 0.0 means it was unavailable

Time Columns

For both tables, the various time columns can be converted to a Java Date with new Date($F{timefield});.

Start time and end-time can either be a reference to a JasperReports parameter or a date-time calculation. Date-time calculation can be either a timestamp or a timestamp +/- an interval. An interval is a number followed by one of "d", "h", "m" or "s", for days, hours, minutes or seconds. If no interval type is given it is treated as milliseconds.

You can also reference a time of "now()" to use the current time.

Metric Reference	Data Returned
`METRICS('2008-01-01','2008-31-01 23:59:59.999')`	All the data for January
`METRICS($P{start}, $P{end})`	Data between the runtime values of the 'start' and 'end' parameters
`METRICS(NOW() - 5m, NOW())`	Data for the last five minutes