1·VIEW

SQL Reader – User Guide

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1 Introduction

This document provides you with information on how to set up an SQL Reader in OneView.

This SQL Reader extender reads response time and availability data from a local or remote SQL server database and extracts transactions. The information is passed on to OneView. You need to install the Oneview SQL Reader prior to setting up an SQL Reader test. Please refer to separate documentation on how to install the OneView SQLReader.

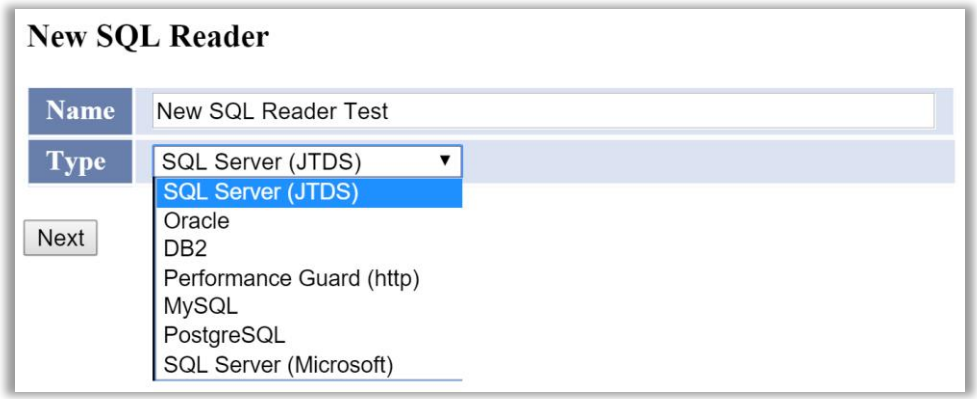
Below is an introduction on how to set up an SQL Reader test using the SQL Reader Extender. Details on the specific fields can be found using the '?' next to the field.

1.1 Requirements for SQL Reader

- Java Runtime Environment version 1.5 or later must be installed
- Java binaries should be in system path
- Network access to a SQL Server database

1.2 New SQL Reader Test

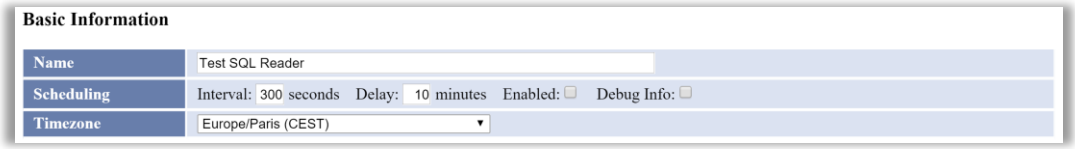
Choose New Test from the list of service types and type a descriptive name for your SQL Reader test. The name will be part of the source name in Oneview. You can choose between a number of different SQL database formats.



Each of the SQL database types contains a sample SQL statement to start with.

1.2.1 Basic Information

This section provides the basics regarding naming, test interval, delay information and time zone.



Name: The name of the test (as entered on the first page) – provide a descriptive name. The name will be a part of the source name in OneView. The test name is used for display in the SQL Reader and is not a part of the transaction name.

Scheduling: The section on scheduling contains the information on the number of minutes between each database poll, and the number of minutes that log data should be delayed.

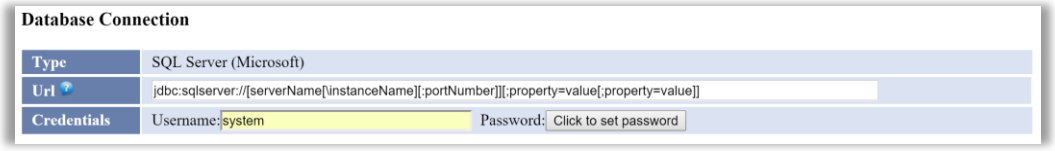
By clicking 'Enable' you can enable or disable a test. You should always test a transaction prior to enabling the test – be aware that if the test is not enabled the test will not be performed automatically.

If the Debug Info is checked, additional debug information will be written to the log file when performing the test.

Timezone: Pick the time zone for the timestamps in the database.

1.2.2 Database Connection

The database connection section contains information on the SQL database URL and user information for accessing the database.



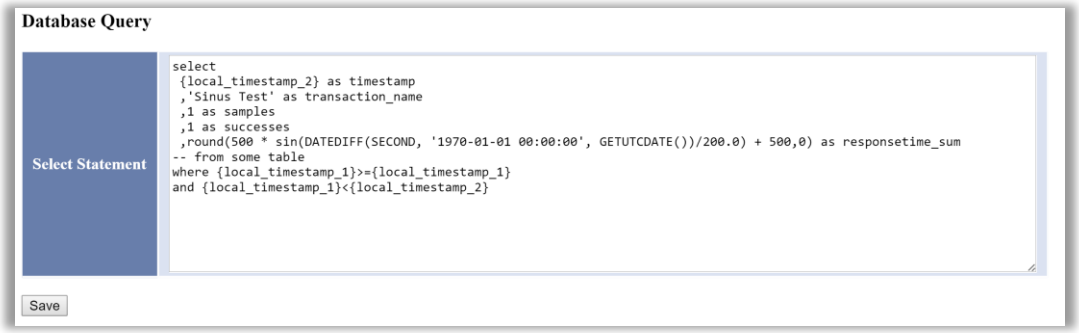
Type: A number of different types of SQL databases are supported – this field provides you with information on which one has been chosen. The information is inherited from the start of a new test.

URL: The URL is defined as a fully qualified JDBC URL that identifies the database instance to connect to.

Credentials: If the SQL database requires authentication fill in information on username and password.

1.2.3 Database Query

The database query section contains the SQL select statement. Depending on the type of database the format for this statement differs to match the format used in the database. Use the template provided below to set up your select statement.



Select Statement: This section contains an SQL-statement for retrieving response time and availability data from the database. Edit the statement to fit your requirements.

The SQL-statement must be a SELECT statement and the columns returned must be defined as follows:

Column	Value
1	Timestamp in milliseconds since 1970-1-1 midnight UTC
2	Transaction name
3	Number of executions
4	Number of successful executions
5	Sum of responsetimes in milliseconds
6	Minimum responsetime in milliseconds
7	Maximum responsetime in milliseconds
8	Sum of responsetimes squared

The result must be sorted by column 1 ascending and column 2 ascending. Timestamps must be constrained to a specific period, eg. >= {t1} and < {t2}, where names in {} are variables substituted by SQLReader:

Variable Name	SQL Type	Description
t1	BIGINT, NUMBER	Start time in milliseconds since 1-1-1970 UTC
t2	BIGINT, NUMBER	End time in milliseconds since 1-1-1970 UTC
local_timestamp_1	TIMESTAMP, DATETIME	Start timestamp in local time
local_timestamp_2	TIMESTAMP, DATETIME	End timestamp in local time
utc_timestamp_1	TIMESTAMP, DATETIME	Start timestamp in UTC
utc_timestamp_2	TIMESTAMP, DATETIME	End timestamp in UTC
timestamp_1	TIMESTAMP, DATETIME	Start timestamp in specified timezone
timestamp_2	TIMESTAMP, DATETIME	End timestamp in specified timezone

Allowed replacement parameters for time in SQL Statement

Time Start	Time End	Timezone	SQL Type
{t1}	{t2}	UTC Time	BIGINT (milliseconds since EPOCH)
{local_timestamp_1}	{local_timestamp_2}	Local time	Timestamp
{utc_timestamp_1}	{utc_timestamp_2}	UTC Time	Timestamp
{timestamp_1}	{timestamp_2}	Custom	Timestamp

1.2.4 Example of SQL statement

```
select
        timestamp,
        name,
        sum(samples),
        sum(successes),
        sum(responsetime),
        min(responsetime),
        max(responsetime),
        sum(responsetime*responsetime)
from table
where timestamp>={t1} and timestamp<{t2}
group by timestamp, name
order by timestamp, name
```

If the number of samples in your log is always 1, you may omit columns 6, 7 and 8 from your SQL statement as the minimum, maximum and squared columns are implicit in this case.

```
select
    timestamp,
    name,
    1,
    1,
    responsetime
from table
where timestamp>={t1} and timestamp<{t2}
order by timestamp, name
```

1.3 OneViewSQLReader.conf

By modifying the configuration file in the default SQL Reader directory, you can change the default values provided to your OneView SQL Reader installation.

This file contains the configuration parameters of OneViewSQLReader. The file is a standard java properties text file containing one parameter and value per line: <parameter>=<value>. Lines can be ignored by prefixing with a #-sign like this: #<parameter>=<value>

1.3.1 Parameters

The valid parameter names are found in the following table:

Parameter	Description	Default Value
OneView.url	URL of the OneView server, eg. http://127.0.0.1:1234/log	http://127.0.0.1:1234/log
OneView.sid	The OneView Source ID - a text string that identifies the performance data source	SQLReader
http.port	Web server port number	1237
http.treads	Maximum number of web server threads	5
Treads	Maximum number of simultanous SQL connections	3
service.restart.hours	Number of hours after startup at which the service will be restarted. A value of 0 means no restart.	0
Debug	If enabled debug information is send to stdout log. Values are “true” or “false”.	False

1.3.2 Example: Editing the Configuration File

OneView.url=http://oneview:1234/log OneView.sid=SQLReader
http.port=1237
debug=false
service.restart.hours=24

For each database that the SQL Reader should connect to an SQL entry must be created.