



## ★ SQL Tuning Health-Check Script (SQLHC) (Doc ID 1366133.1)

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## Document Details



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## Related Products

Oracle Database - Personal Edition  
 Oracle Database - Enterprise Edition  
 Oracle Database - Standard Edition

## APPLIES TO:

Oracle Database - Personal Edition - Version 10.2.0.1 and later  
 Oracle Database - Enterprise Edition - Version 10.2.0.1 and later  
 Oracle Database - Standard Edition - Version 10.2.0.1 and later  
 Oracle Database Products > Oracle Database Suite > Oracle Database  
 Information in this document applies to any platform.

## PURPOSE



In addition to this note, also take a look at proactive Database Healthchecks provided by ORACHK  
[Find out more](#)

## Download the SQL Tuning Health-Check Script

[Download the SQLHC Script Here \(.zip archive\).](#)

## What is the SQL Tuning Health-Check Script (SQLHC)?

The SQL Tuning Health-Check Script is a tool developed by the Oracle Server Technologies Center of Expertise. The tool, also known as SQLHC, is used to check the environment in which a single SQL Statement runs, checking Cost-based Optimizer (CBO) statistics, schema object metadata, configuration parameters and other elements that may influence the performance of the one SQL being analyzed.

## Licensing (SQLHC requires no license and is FREE)

As in the title of this section, SQLHC requires no license and is FREE.

Since SQLHC can use information from AWR reports if the Diagnostic or Tuning pack are installed, it asks if these packs are licensed at your site. For more details refer to the [licensing section in the SQLHC FAQ](#):

[Document 1454160.1](#) FAQ: SQL Health Check (SQLHC) Frequently Asked Questions

## Overview of the SQL Tuning Health-Check Script

An overview video about SQLHC is available here :

## Information Centers

[Index of Oracle Database Information Centers \[1568043.2\]](#)

[Oracle Database 11g Release 2 Information Center \[1436725.2\]](#)

[Information Center: Overview of Database Security Products \[1548952.2\]](#)

[Information Center: Overview Database Server/Client Installation and Upgrade/Migration \[1351022.2\]](#)

## Document References

[Script PXHCDR.SQL: Parallel Execution Health-Checks and Diagnostics Reports \[1460440.1\]](#)

[Best Practices: Proactive Data Collection for Performance Issues \[1477599.1\]](#)

[TRCANLZR \(TRCA\): SQL\\_TRACE/Event 10046 Trace File Analyzer - Tool for Interpreting Raw SQL Traces \[224270.1\]](#)

[How to Determine the SQL\\_ID for a SQL Statement \[1627387.1\]](#)

[SQL Tuning Health-Check Script \(SQLHC\) Video \[1455583.1\]](#)

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## Recently Viewed

[FAQ: SQL Health Check \(SQLHC\) Frequently Asked Questions \[1417774.1\]](#)

[How to Determine the SQL\\_ID for a SQL Statement \[1627387.1\]](#)

[SQL Tuning Health-Check Script \(SQLHC\) \[1366133.1\]](#)

[\\* Master Note: SQL Query Performance Overview \[199083.1\]](#)

[Script to produce HTML report with top consumers out of PL/SQL Profiler DBMS\\_PROFILER data \[243755.1\]](#)

[Document 1455583.1](#) SQL Tuning Health-Check Script (SQLHC) Video

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The intention of SQLHC is to allow users to avoid SQL Performance from being affected by avoidable problems by ensuring that the environment that an individual SQL runs in is sound.

It does this while leaving "no database footprint" ensuring it can be run on all systems.

When executed for one SQL\_ID, this script generates an HTML report with the results of a set of health-checks around the one SQL statement provided. You can find the SQL\_ID of a statement from an AWR or ASH report or you can select it from the database using the V\$SQL view. See:

[Document 1627387.1](#) How to Determine the SQL\_ID for a SQL Statement

Health-checks are performed over:

- CBO Statistics for schema objects accessed by the one SQL statement being analyzed
- CBO Parameters
- CBO System Statistics
- CBO Data Dictionary Statistics
- CBO Fixed-objects Statistics

NOTE: A webcast has been recorded entitled: "How to Improve SQL Performance with the New Health Check Tool?". This can be found, along with many other recorded webcasts, here:

[Document 740964.1](#) Advisor Webcast Archived Recordings

A FAQ for the SQL Healthcheck script (SQLHC) can be found here:

[Document 1417774.1](#) FAQ: SQLHC HealthCheck Frequently Asked Questions

Additionally, we welcome any additional health-checks that you may suggest.

If any specific health-checks are needed and not covered by this script, then as long as the health-check can be produced with a SQL Command (leaving no database footprint ) then these can be implemented in future versions.

Please add comments to this Document for any desired additions.

## Best Practices

### *Pro-Active Problem Avoidance and Diagnostic Collection*

Although some problems may be unforeseen, in many cases problems may be avoidable if signs are detected early enough. Additionally, if an issue does occur, it is no use collecting information about that issue after the event. SQLHC is one of the tools that support recommend for collecting such diagnostics. For information on suggested uses, other proactive preparations and diagnostics, see:

[Document 1482811.1](#) Best Practices: Proactively Avoiding Database and Query Performance Issues

[Document 1477599.1](#) Best Practices Around Data Collection For Performance Issues

## Ask Questions, Get Help, And Share Your Experiences With This Article

**Would you like to explore this topic further with other Oracle Customers, Oracle Employees, and Industry Experts?**

[Click here to join the discussion where you can ask questions, get help from others, and share your experiences with this specific article.](#)

Discover discussions about other articles and helpful subjects by clicking [here](#) to access the main My Oracle Support Community page for Database Tuning.

## REQUIREMENTS

Execute this script from SQL\*Plus connecting as SYS, DBA or a user with access to Data Dictionary views.

NOTE: The script ADDS NO OBJECTS TO THE DATABASE. It simply reports and advises on existing objects

## CONFIGURING

There is no configuration required.

## INSTRUCTIONS

1. Login to the database server and set the environment used by the Database Instance
2. [Download the "sqlhc.zip" archive file](#) and extract the contents to a suitable directory/folder
3. Connect into SQL\*Plus as SYS, a DBA account, or a user with access to Data Dictionary views and simply execute the

3. Connect into SQL\*Plus as SYS, a DBA account, or a user with access to Data Dictionary views and simply execute the "sqlhc.sql" script. It will request to enter two parameters:
- i. Oracle Pack License (Tuning, Diagnostics or None) [T|D|N] (required)  
If site has both Tuning and Diagnostics licenses then specify **T** (Oracle Tuning pack includes Oracle Diagnostics)
  - ii. A valid SQL\_ID for the SQL to be analyzed.

For example:

```
# sqlplus / as sysdba
SQL> START sqlhc.sql T djkbys8vkc64h
```

CAUTION

This sample code is provided for educational purposes only, and is not supported by Oracle Support. It has been tested internally, however, we do not guarantee that it will work for you. Ensure that you run it in your test environment before using.

SCRIPT

[Download the SQLHC Script Here \(.zip archive\).](#)

SAMPLE OUTPUT

1366133.1 SQLHC 11.4.3.7 Report: sqlhc\_V1122\_host01\_11.2.0.2.0\_155923.html

Tables Summary

#	Table Name	Owner	Num Rows	Table Sample Size	Indexes	Avg Index Sample Size	Table Columns	Columns With Histogram	Avg Column Sample Size
1	CUSTOMER	QTUNE	10751	10751	4	10751	5	2	6405
2	ORDER_LINE	QTUNE	239152	4933	4	178042	8	0	2932
3	PART	QTUNE			2		6	0	
4	SALES_ORDER	QTUNE	33895	33895	3	33895	5	1	28204

Base Statistics Summary. This could be compared with output from another system to check for differences.

Observations

#	Type	Name	Observation	More
1	CBO PARAMETER	DB_FILE_MULTIBLOCK_READ_COUNT	CBO initialization parameter "db_file_multiblock_read_count" with a value of "8" overriding its default value of "98"	Review the correctness of this non-default value "8". Unset this parameter unless there is a strong reason for keeping its current value. Default value is "98" as per V\$SYS_OPTIMIZER_ENV.
2	CBO PARAMETER	DB_FILE_MULTIBLOCK_READ_COUNT		The default value of this parameter is a value that corresponds to the maximum I/O size that can be performed efficiently. This value is platform-dependent and is 1MB for most platforms. Because the parameter is expressed in blocks, it will be set to a value that is equal to the maximum I/O size that can be performed efficiently divided by the standard block size.
3	CBO PARAMETER	HASH_AREA_SIZE		Review the correctness of this non-default value "1048576". Unset this parameter unless there is a strong reason for keeping its current value. Default value is "131072" as per V\$SYS_OPTIMIZER_ENV.

Suggestions for potential improvements

Various categories of observation are provided including Statistics and Parameter categories among others


The SQL that generated the output is at the end of the report

Discuss SQLHC!

The window below is a live discussion of this article (not a screenshot). We encourage you to join the discussion by clicking the "Reply" link below for the entry you would like to provide feedback on. If you have questions or implementation issues with the information in the article above, please share that below.

Все места > My Oracle Support Community > Oracle Database (MOSC) > SQL Performance (MOSC) > Обсуждения

27 Ответы    Последний ответ: 24.11.2014 3:21 автор: 975836

 Steve Dixon-Oracle 04.12.2013 11:40

Level

5

# Discussion about the SQL Health-Check Script (SQLHC)

## Notes:1366133.1 and 1455583.1

This thread is for the discussion about the SQL Health-Check Script (SQLHC) as Featured in:  
Note:1366133.1 SQL Tuning Health-Check Script (SQLHC)

and in the overview video in:

Note:1455583.1 SQL Tuning Health-Check Script (SQLHC) Video

Please post your comments about this article, questions and observations about SQLHC or just ways you have helped community users.

Thanks!

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=1455583.1>

51079 Просмотров

Метки:

Средний рейтинг пользователей

Моя оценка:

REFERENCES

[NOTE:1460440.1](#) - Script PXHCDR.SQL: Parallel Execution Health-Checks and Diagnostics Reports

[NOTE:1477599.1](#) - Best Practices: Proactive Data Collection for Performance Issues

[NOTE:224270.1](#) - TRCANLZR (TRCA): SQL\_TRACE/Event 10046 Trace File Analyzer - Tool for Interpreting Raw SQL Traces

[NOTE:1627387.1](#) - How to Determine the SQL\_ID for a SQL Statement

[NOTE:1455583.1](#) - SQL Tuning Health-Check Script (SQLHC) Video

[NOTE:215187.1](#) - SQLT Diagnostic Tool

[NOTE:1417774.1](#) - FAQ: SQL Health Check (SQLHC) Frequently Asked Questions

[NOTE:243755.1](#) - Script to produce HTML report with top consumers out of PL/SQL Profiler DBMS\_PROFILER data

[NOTE:1482811.1](#) - Best Practices: Proactively Avoiding Database and Query Performance Issues

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Attachments

- SQLHC PPT Presentation (1.32 MB)
- Annotated SQLHC example (89.48 KB)
- SQLHC Tool (80.38 KB)
- SQLHC Output Sample (1.2 MB)

Related

Products

- Oracle Database Products > Oracle Database Suite > Oracle Database > Oracle Database - Personal Edition > RDBMS > Generic SQL Performance, SQL Execution, Query Optimizer

Oracle Database Products > Oracle Database Suite > Oracle Database > Oracle Database - Enterprise Edition > RDBMS > Generic SQL Performance, SQL Execution, Query Optimizer

Oracle Database Products > Oracle Database Suite > Oracle Database > Oracle Database - Standard Edition > RDBMS > Generic SQL Performance, SQL Execution, Query Optimizer

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Keywords

CBO; CHECK; INSTALL & CONFIGURE; PERFORMANCE; SCRIPT; SQL TUNING; SQLHC

Translations

- English Source
- Chinese 简体中文
- Japanese 日本語

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