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Understanding SQLTXPLAIN (SQLT) Main Report by Navigating Through Some Samples

Carlos Sierra
Consulting Technical Advisor
Center of Expertise (CoE)



Carlos Sierra



Consulting Technical Advisor - Center of Expertise (CoE)

- Job/Hobby: SQL Tuning frequent practitioner
- Experience: Oracle since 1996
- Home: Orlando, Florida
- Besides SQL Tuning: Spinning, Biking, Racquetball and Parenting!
- Author of: SQLTXPLAIN (SQLT), TRCANLZR (TRCA), SQLHC, etc.

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SQLT Installation Parameters



Provided inline or when asked

- Optional Connect Identifier (ie: @PROD)
- Password for user SQLTXPLAIN
- Default Tablespace
- Temporary Tablespace
- Main application user of SQLT
- Oracle Pack license [T | D | N]



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SQLT Main Methods

All act on one SQL statement



- SQLT XTRACT
- SQLT XECUTE
- SQLT XTRXEC
- SQLT XPLAIN
- SQLT XTRSBY

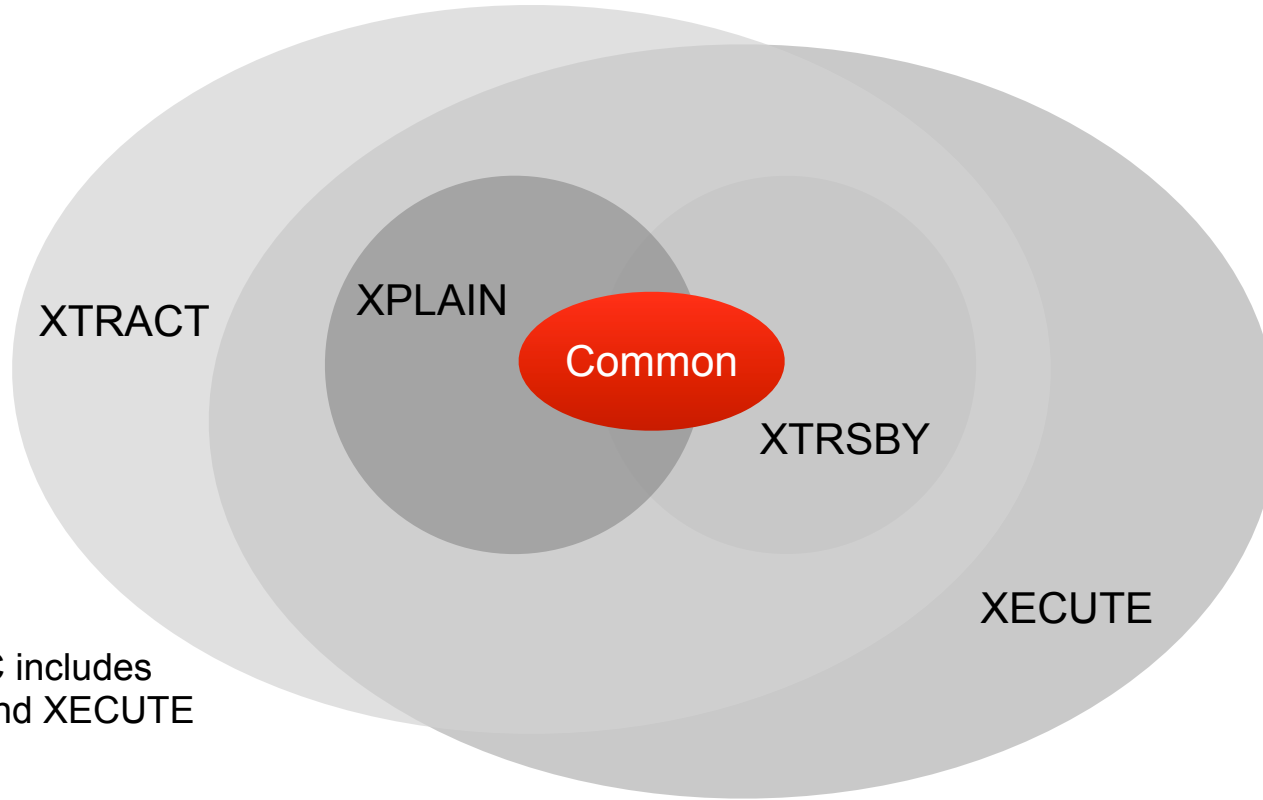
All 5 have these requirements

- SQL*Plus connecting as application user
- Application user must have SQLT_USER_ROLE granted
- Password for SQLTXPLAIN must be provided
- One SQL per use of SQLT
- SQLT has its own configuration parameters

How to use SQLT Main Methods

Method	Script	Features
SQLT XTRACT	sqlt/run/sqltxtract.sql	<ul style="list-style-type: none">❑ Most common method❑ Inputs SQL_ID❑ SQL statement is not executed
SQLT XECUTE	sqlt/run/sqltxecute.sql	<ul style="list-style-type: none">❑ Inputs a script name which contains<ul style="list-style-type: none">✓ ALTER SESSION commands (if applicable)✓ Binds declaration and assignment (if applicable)✓ SQL statement
SQLT XTRXEC	sqlt/run/sqltxtract.sql	<ul style="list-style-type: none">❑ Combines XTRACT and XECUTE❑ Inputs SQL_ID
SQLT XPLAIN	sqlt/run/sqltxplain.sql	<ul style="list-style-type: none">❑ Inputs a file name which contains a SQL statement❑ What if SQL contains binds?❑ Leave them in place, OR Replace with literals of same data type
SQLT XTRSBY	sqlt/run/sqltxtrsbby.sql	<ul style="list-style-type: none">❑ For read-only databases❑ Executes in Primary and connects into stand-by❑ Works like XTRACT❑ Inputs SQL_ID and DBLINK

SQLT Output Overlap



- XTRXEC includes XTRACT and XECUTE

What is included in Main Report?

Partial list of contents (1/3)

- Health-checks
- SQL text
- Parameters
- Cursor sharing
- SQL Tuning Advisor (STA) report
- Execution plans



What is included in Main Report?

Partial list of contents (2/3)

- Plan stability
- Active Session History (ASH)
- SQL performance metrics
- SQL Monitor
- Segment and session statistics
- Tables



What is included in Main Report?

Partial list of contents (3/3)

- Indexes
- CBO statistics
- Objects and dependencies
- Policies
- Metadata



Navigating the SQLT Main Html Report

215187.1 SQLT XTRACT 11.4.4.7 Report: `sqlt_s92947_main.html`

Typical Navigation

1. SQL Text
2. Plans Summary
3. Observations (health-checks)
4. Branch as per findings



Global

- Observations
- SQL Text
- SQL Identification
- Environment
- CBO Environment
- Fix Control
- CBO System Statistics
- DBMS_STATS Setup
- Initialization Parameters
- NLS Parameters
- I/O Calibration
- Tool Configuration Parameters

Cursor Sharing and Binds

- Cursor Sharing
- Adaptive Cursor Sharing
- Peeked Binds
- Captured Binds

SQL Tuning Advisor

- STA Report
- STA Script

Plans

- Summary
- Performance Statistics
- Performance History (delta)
- Performance History (total)
- Execution Plans

Plan Control

- Stored Outlines
- SQL Profiles
- SQL Plan Baselines

SQL Execution

- Active Session History
- AWR Active Session History
- SQL Statistics
- SQL Detail ACTIVE Report
- Monitor Statistics
- Monitor ACTIVE Report
- Monitor HTML Report
- Monitor TEXT Report
- Segment Statistics
- Session Statistics
- Session Events
- Parallel Processing

Tables

- Tables
- Statistics
- Statistics Versions
- Modifications
- Properties
- Physical Properties
- Constraints
- Columns
- Indexed Columns
- Histograms
- Partitions
- Indexes

Objects

- Objects
- Dependencies
- Fixed Objects
- Fixed Object Columns
- Nested Tables
- Policies
- Audit Policies
- Tablespaces
- Metadata

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Demonstration

SQLT Main Report Navigation



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My Oracle Support Notes and Contact Info

Review these

- **215187.1** SQLTXPLAIN (SQLT) Tool
- 1454160.1 SQLTXPLAIN (SQLT) FAQ
- <http://carlos-sierra.net>
- carlos.sierra@oracle.com

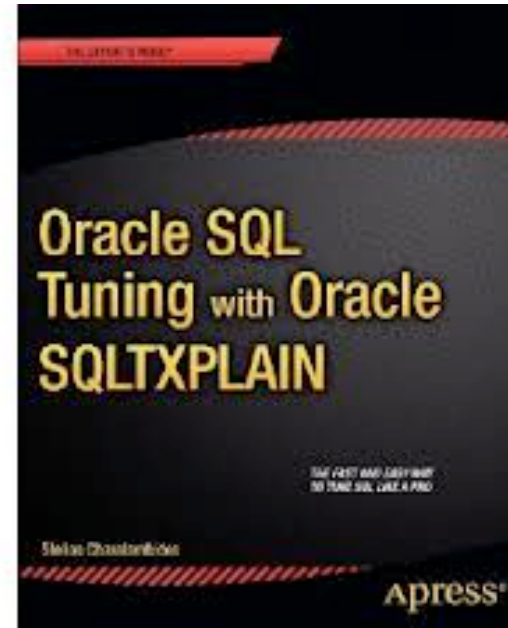


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Oracle SQL Tuning with Oracle SQLTXPLAIN

Stelios Charalambides (2013)

- Publishing Information
- Beginner to Intermediate



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