



See and Use your Stats in Whole New Ways!

Collect,
Gauge,
React!

Fully developed by
DBAs for DBAs.

.....
Incredible simple to
install and manage.

.....
Resides securely in
your own database

.....
Keeps an eye on your
database 24 x7 and
can automatically take
corrective action.

.....
The next-gen Oracle
performance
monitoring and
reaction framework!

"ZZTAT (" See -Stat ") is opening up for changing reactive database administration to a proactive and self-healing system."

Written from the ground up with security in mind

The framework is based on the principle of least privilege. No overpowered roles or grants such as DBA, SELECT ANY TABLE, etc are required! The entire framework runs as a normal unprivileged database user. Optional features which require more powerful privileges are all channeled through a single package residing in the SYS user.

Do not require any additional Oracle licensing

It will run on Standard Edition One and Two, as well as on Enterprise Edition without any Management Packs right out of the box! Optionally if you want zztat to be able to send emails, the XML database component is required – which has become a mandatory component in Oracle version 12.

Written entirely in SQL and PL/SQL!

Do not require any outside database agents, no Java code, no Python, PERL or C. The entire framework runs inside the database!

Do not just monitor – it can also automatically react!

The real power of zztat lies with its architecture. Metrics to collect data, Gauges to analyze the data, and reactions to automatically act based on the data collected. Is your tablespace running full? Have zztat automatically add a new datafile and solve this problem for you any time of the day or night! Experiencing latching contention? Have zztat automatically collect all detailed latch samples at super high speed for you! Is your application or job being blocked by a user connected from his desktop? Have the session automatically terminated by zztat to free all blocked sessions. Are half of your user sessions blocked by a single session due to contention or locking? Have zztat gather diagnostics automatically, and it will abort the session to preserve the stability of your application and allow you to diagnose the problem afterward.

ZZtat is a framework – you can customize it any way you like!

The framework allows you to easily add your own metrics, gauges, thresholds, and even define your own reactions. zztat comes with a very elaborated API that enables you to do this all with just a few commands.

The Goal

From the initial idea, zztat was designed to make the DBA more productive and cost-efficient. It provides prompt ROI through its automated & reactive nature. It supports the DBA by providing the required diagnostics automatically when a situation that requires intervention arises. The framework is highly customizable and easily extensible. Automation is the future, and that's exactly zztat does best!



More info and download: clouddb.solutions contact us: sales@clouddb.solutions

Peace of mind

Metrics, gauges,
reactions -
everything is
fully
customizable
and expandable.

For more information
please visit our website:
clouddb.solutions

Core Concept

- **Metric** - The metric collects data and replicates it to the repository.
- **Gauge** - The gauge analyzes the data and evaluates it against thresholds.
- **React** - The reaction performs one or more corrective or supportive actions based on gauge results.

Architecture

- **Process oriented** - Modular framework; dedicated processes performing set tasks.
- **Centralized** - The centralized repository where it all can be managed. Can't be overridden on the target itself.
- **Graphical UI** - Easy management with an intuitive user interface.
- **DBMS_SCHEDULER** - Framework actions triggered by the powerful Oracle job scheduler.
- **Full PL/SQL API** - Fully criptable and quick integration with configuration management such as Ansible Puppet, .

Blackout Modes

- **Full Blackout** - Framework shuts down with exception of processes needed to end blackout.
- **Silent Blackout** - Framework remains active and collects data but will not trigger reactions.
- **Flexible Windows** - Timed windows and blackout schedules allow for flexible blackout plans .

Example of Quick Benefits

- Automatically add data files to your tablespaces when they became full and as long space is available.
- Automatically resolve contentions by terminating offending sessions.
- Produce detailed reports of contentions that can't be automatically resolved to enable quick diagnosis.
- Easily analyze high process memory usage through provided break-down reports.
- Automatically track interesting SQL that was observed to have caused issues in the past.
- Collect information in the real-time when an issue happens, making the information available to you to analyze the problem later.
- ZZtat writes important supplemental information with regards to your database health to the database alert log.

Extensible

- Quickly add custom metrics to collect additional data points of interest.
- Easily add new gauges to introduce new checks on the collected data.
- Write your own reactions in PL/SQL and quickly integrate them into the framework.



More info and download: clouddb.solutions contact us: sales@clouddb.solutions

Full Patching Mechanism

The framework can

automatically

distribute

patches to all

target

databases, and

apply it

automatically!

Default Metrics

- **Archive Destinations** - Status of archive log destinations
- **Archive Logs** - Archive log production volume
- **ASM Disks** - State of the ASM disks .
- **ASM Diskgroups** - State and space usage of ASM disk groups.
- **Blocked Sessions** - React to blocked sessions.
- **Connection Pools** - Expected number of sessions within a specific range. For middle-tier connection pools.
- **Database Heartbeats** - Database availability .
- **Database Upgrades** - Automatic handling of database upgrades and refresh of internal metrics.
- **Datafiles** - Space usage and accessibility.
- **Extents** - Extent usage .
- **Idle Sessions** - React to idle sessions based on the client used, or origin, etc.
- **Latch Contentions** - With optional high-speed sampling on x\$ksuplat, automatic report production.
- **Marked SQL** - Mark SQL to be tracked.
- **Mutex Contentions** - Optional high-speed sampling on x\$mutex_sleep, automatic report production.
- **Option Usage Alerts** - React when an Oracle Database Option that requires licensing is used.
- **Session Memory Use** - Detailed PGA use reporting, down to Oracle kernel area layers.
- **Session Stats** - Session statistics based on v \$sesstat.
- **Session Waits** - v\$session_wait with optional high-speed sampling on x\$kslwt.
- **Tablespace** - Space usage and availability . Automatic datafile addition.
- **Top SQL** - Based on exec , fetch , ela , disk reads, etc.
- **Used Features** - Maintains history of dba_feature_usage_statistics.
- **User Passwords** - Can react before a password expires.

** (This is not a complete list. It merely highlights some of the areas zztat can handle out of the box)

Reactions

- **Sending Emails** - Traditional, but with added details whenever available.
- **Alert Log** - Writing messages to the alert log to indicate a problem.
- **zztat Log** - Everything is tracked there, but alerts can also be written there.
- **Custom Logfile** - Write to a custom log file.
- **PGA Reports** - Light non-intrusive version and a super-detailed version that uses pga_detail_get.
- **Latch Reports** - Detailed breakdown of latch gets.
- **Wait Reports** - Detailed report of session waits .
- **Session Termination** - Automatic termination of a session.
- **Datafile Addition** - Automatic data file addition, as long as space is available. ASM only.
- **Marking SQLs** - Marked SQL is tracked and has its execution plan & statistics collected.
- **High-Speed Sampling** - x\$kslwt, x\$mutex_sleep and x\$ksuplat for now. More to come!
- **System State Dump** - Never be faced with an SR that requests information you can't get any more.
- **Hanganalyze** - If a certain percentage of sessions hang, collect hanganalyze automatically.
- **Library Cache Dump** - Trigger when extreme parsing activity is seen.
- **Row Cache Dump** - Trigger when shared pool memory errors are seen.

** (This is not a complete list. And of course you can define your own reactions)

Reaction Chains

- **Add Datafile + Send Email** - You can combine reactions at will by assigning them to reaction chains.
- **Mark SQL + High-Speed Sampling + Latch Report** - Latch reports are far more detailed if high-speed samplings performed before the report is taken.
- **Mark SQL + PGA Report + Terminate Session** - If a session was terminated because it jeopardized stability, you'll know exactly why.

** (Reaction chains are fully customizable; any reaction can be fired as part of a chain)

Available Add-Ons

- Diagnostic & Tuning Pack (1) • Audit Pack • Oracle Control Plugin (3) • RAC Pack (2)
- Alert Log Scanner Pack (1) • Management GUI Pack • Data Guard (2) • File Base Synchronization Pack (3)
- Oracle Licensing Pack (1)

(1) Available on Q1 2018 - (2) Available on Q3 2018 - (3) Available on Q4 2018

Note: Add-Ons road map is for reference purpose only and can vary on each patching release.

More info and download: clouddb.solutions contact us: sales@clouddb.solutions

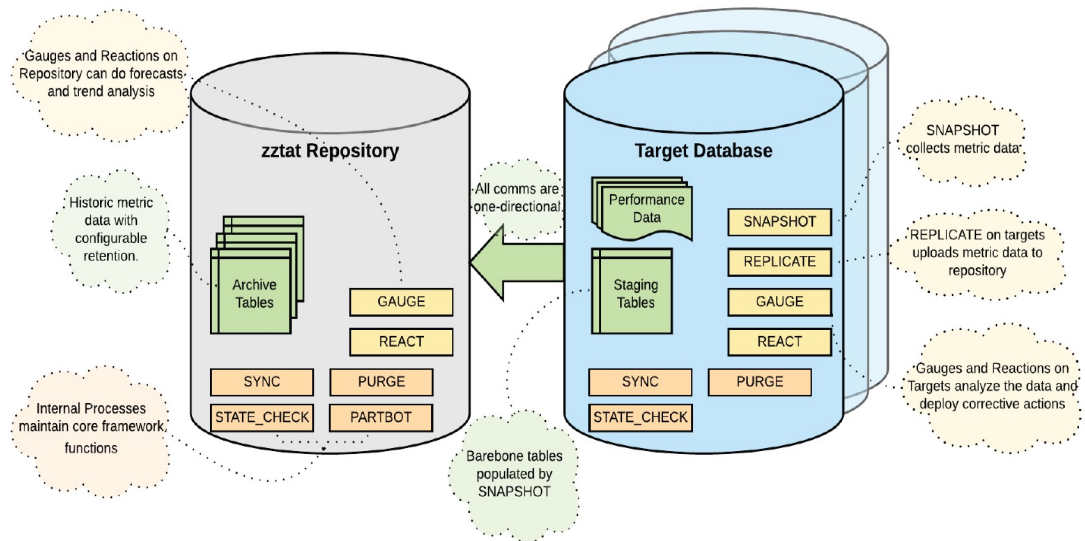
For more information
please visit our website:
clouddb.solutions



The Next-Gen Oracle Performance Monitoring and Reaction Framework

Best Possible
ROI

Because DBAs
have more
important things
to do than doing
only BAU all the
time.



Secure

Built from the ground-up with security in mind .

- No connections to your production databases (in the default operation mode)
- No agents (this also means there are no huge memory- and CPU-hogging processes running on your servers)
- Only a single package resides in SYS (and that's optional, too!) - the entire framework runs as a normal unprivileged user
- Limited access is used whenever possible (zztat follows the principle of least privilege at its core)
- No ANY-privileges (one exception: CREATE ANY CONTEXT, since Oracle doesn't provide a CREATE CONTEXT privilege)

PGA

ZZtat maintains a table of Oracle kernel functions, their mnemonics, and a description. When the PGA report gets its data from v\$sqlprocess_memory_detail, the NAME and HEAP_NAME columns would refer to Oracle kernel areas, such as kdbl or qmrb as per example. Any normal monitoring tool ends there and you're then left to perhaps search My Oracle Support for any possible meaning of that NAME or HEAP NAME.

ZZtat automatically tries to match PGA areas to its kernel function library. This means you will immediately see right there in the report if e.g. the session is using so much memory because it's processing XML (qm*) or PL/SQL collections (pmu*).

Technical Specifications

ORACLE DATABASES*	11g to 12c (32 & 64 bit versions)
ORACLE EDITIONS	Oracle Enterprise Edition Oracle Standard Edition (SE, SE1 and SE2)
STORAGE	ASM file system and Normal file systems
OPERATING SYSTEMS*	ZZtat runs on all Oracle-supported platforms
ORACLE LICENSES	No additional Oracle Database License Required Diagnostics & Tuning pack licenses are also not required



Oracle is a registered trademark of the Oracle Corporation.

More info and download: clouddb.solutions contact us: sales@clouddb.solutions



For more information
please visit our website:
clouddb.solutions