Q Oracle Trace File Analyzer Collecting and Analyzing Oracl... Search

neered Systems / Health Diagnostics / Trace File Analyzer

ollecting and Analyzing Oracle Database Diagnostic Data

3 On-demand Analysis and Diagnostic Collection

Run Oracle Trace File Analyzer on demand using tfact1 command-line tool.

- Collecting Diagnostics and Analyzing Logs On-Demand
 The tfactl command can use a combination of different database command tools when it performs analysis.
- Viewing System and Cluster Summary
 The summary command gives you a real-time report of system and cluster status.
- Investigating Logs for Errors
 Use Oracle Trace File Analyzer to analyze all your logs across your cluster to identify recent errors.
- Analyzing Logs Using the Included Tools
 Oracle Database support tools bundle is available only when you download Oracle
 Trace File Analyzer from My Oracle Support note 1513912.1.
- Searching Oracle Trace File Analyzer Metadata
 You can search all metadata stored in the Oracle Trace File Analyzer index using
 tfactl search -showdatatypes|-json [json details].
- Collecting Diagnostic Data and Using One Command Service Request Data Collections
- Uploading Collections to Oracle Support
 To enable collection uploads, configure Oracle Trace File Analyzer with your My
 Oracle Support user name and password.

Changing Oracle Grid Infrastructure Trace Levels
 Enabling trace levels enables you to collect enough diagnostics to diagnose the cause of the problem.

3.1 Collecting Diagnostics and Analyzing Logs On-Demand

The tfactl command can use a combination of different database command tools when it performs analysis.

The tfactl command enables you to access all tools using common syntax. Using common syntax hides the complexity of the syntax differences between the tools.

Use the Oracle Trace File Analyzer tools to perform analysis and resolve problems. If you need more help, then use the tfactl command to collect diagnostics for Oracle Support.

Oracle Trace File Analyzer does the following:

- Collects all relevant log data from a time of your choosing.
- Trims log files around the time, collecting only what is necessary for diagnosis.
- Packages all diagnostics on the node where tfactl was run from.

Real-time status with DB with DB tools

Oracle Grid Infrastructure & Databases

Perform diagnostic collection

Upload diagnostic collection to Oracle Support

Oracle Support

Figure 3-1 On-Demand Collections

Description of "Figure 3-1 On-Demand Collections"

Parent topic: On-demand Analysis and Diagnostic Collection

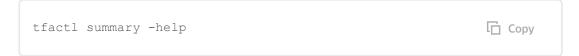
3.2 Viewing System and Cluster Summary

The summary command gives you a real-time report of system and cluster status.

Syntax

tfactl summary [options]

For more help use:



Parent topic: On-demand Analysis and Diagnostic Collection

3.3 Investigating Logs for Errors

Use Oracle Trace File Analyzer to analyze all your logs across your cluster to identify recent errors.

1. To find all errors in the last one day:



2. To find all errors over a specified duration:

```
$ tfactl analyze -last 18h
```

3. To find all occurrences of a specific error on any node, for example, to report ORA-00600 errors:

Example 3-1 Analyzing logs

```
tfactl analyze -last 14d
                                                      Сору
Jun/02/2016 11:44:39 to Jun/16/2016 11:44:39 tfactl> analyze -last 14
INFO: analyzing all (Alert and Unix System Logs) logs for the last 20
INFO: analyzing host: myserver69
                      Report title: Analysis of Alert, System Logs
                 Report date range: last ~14 day(s)
         Report (default) time zone: EST - Eastern Standard Time
               Analysis started at: 16-Jun-2016 02:45:02 PM EDT
             Elapsed analysis time: 0 second(s).
                Configuration file:
/u01/app/tfa/myserver69/tfa home/ext/tnt/conf/tnt.prop
               Configuration group: all
               Total message count: 957, from 02-May-201
09:04:07 PM EDT to 16-Jun-2016 12:45:41 PM EDT
  Messages matching last ~14 day(s): 225, from 03-Jun-201
02:17:32 PM EDT to 16-Jun-2016 12:45:41 PM EDT
       last ~14 day(s) error count: 2, from 09-Jun-201
09:56:47 AM EDT to 09-Jun-2016 09:56:58 AM EDT last ~14 day(s) ignore
 last ~14 day(s) unique error count: 2
Message types for last ~14 day(s)
   Occurrences percent server name
                                          type
          223 99.1% myserver69 generic
                                       ERROR
          2 0.9% myserver69
          225 100.0%
Unique error messages for last ~14 day(s)
   Occurrences percent server name error
        _____
            1 50.0% myserver69 Errors in file
/u01/app/racusr/diag/rdbms/rdb11204/RDB112041/trace/RDB112041 ora 254
(incident=6398):
                                          ORA-07445: exception
encountered: core dump [] [] [] [] []
                                          Incident details in:
/u01/app/racusr/diag/rdbms/rdb11204/RDB112041/incident/incdir 6398/RD
                                          Use ADRCI or Support Wo
                                          See Note 411.1 at My Or
                50.0% myserver69
                                          Errors in file
```

Related Topics

- tfactl summary
- tfactl analyze

Parent topic: On-demand Analysis and Diagnostic Collection

3.4 Analyzing Logs Using the Included Tools

Oracle Database support tools bundle is available only when you download Oracle Trace File Analyzer from My Oracle Support note 1513912.1.

Oracle Trace File Analyzer with Oracle Database support tools bundle includes the following tools:

Table 3-1 Tools included in Linux and UNIX

Tool	Description	
orachk Or exachk	Provides health checks for the Oracle stack.	
	Oracle Trace File Analyzer installs either Oracle EXAchk for engineered systems or Oracle ORAchk	

Tool	Description
	for all non-engineered systems. For more information, see My Oracle Support notes 1070954.1 and 1268927.2.
oswatcher	Collects and archives operating system metrics. These metrics are useful for instance or node evictions and performance Issues. For more information, see My Oracle Support note 301137.1.
procwatcher	Automates and captures database performance diagnostics and session level hang information. For more information, see My Oracle Support note 459694.1.
oratop	Provides near real-time database monitoring. For more information, see My Oracle Support note 1500864.1.
alertsummary	Provides summary of events for one or more database or ASM alert files from all nodes.
ls	Lists all files Oracle Trace File Analyzer knows about for a given file name pattern across all nodes.
pstack	Generates the process stack for the specified processes across all nodes.
grep	Searches for a given string in the alert or trace files with a specified database.
summary	Provides high-level summary of the configuration.
vi	Opens alert or trace files for viewing a given database and file name pattern in the vi editor.
tail	Runs a tail on an alert or trace files for a given database and file name pattern.
param	Shows all database and operating system parameters that match a specified pattern.
dbglevel	Sets and unsets multiple CRS trace levels with one command.

Tool	Description
history	Shows the shell history for the tfactl shell.
changes	Reports changes in the system setup over a given time period. The report includes database parameters, operating system parameters, and the patches applied.
calog	Reports major events from the cluster event log.
events	Reports warnings and errors seen in the logs.
managelogs	Shows disk space usage and purges ADR log and trace files.
ps	Finds processes.
triage	Summarizes oswatcher or exawatcher data.

Table 3-2 Tools included in Microsoft Windows

List of Examples	
List of Figures	
List of Tables	
Title and Copyright Information	
Preface	
Changes in this Release for Oracle Trace File Analyzer User's Guide 18.4.1	
1 Getting Started with Oracle Trace File Analyzer	

3.8 Changing Oracle Grid Infrastructure Trace Levels

4 REST Service

2 Automatic Diagnostic Collections

3 On-demand Analysis and Diagnostic

5 Maintaining Oracle Trace File Analyzer

Tool	Description
calog	Reports major events from the cluster event log.
changes	Reports changes in the system setup over a given time period. The report includes database parameters, operating system parameters, and patches applied.
dir	Lists all files Oracle Trace File Analyzer knows about for a given file name pattern across all nodes.
events	Reports warnings and errors seen in the logs.
findstr	Searches for a given string in the alert or trace files with a specified database.
history	Shows the shell history for the tfactl shell.
managelogs	Shows disk space usage and purges ADR log and trace files.
notepad	Opens alert or trace files for viewing a given database and file name pattern in the notepad editor.

On this page

- 3.1 Collecting Diagnostics Analyzing Logs On-Deman
- 3.2 Viewing System and Cli Summary
- 3.3 Investigating Logs for E

3.4 Analyzing Logs Using **Included Tools**

- 3.5 Searching Oracle Trace Analyzer Metadata
- 3.6 Collecting Diagnostic D Using One Command Servi **Data Collections**

to the Latest	Version

6 Performing Custom Collections

7 Managing and Configuring Oracle Trace File Analyzer

8 Managing Oracle Database and Oracle Grid Infrastructure Diagnostic Data

9 Troubleshooting Oracle Trace File Analyzer

A Oracle Trace File Analyzer Installer, Command-Line and Shell Options Index

Tool	Description
Shows all database and operating system parameters that match a specified pattern.	
summary Provides high-level summary of the configuration.	
tasklist Finds processes.	
o verify which tools you have ins	talled:

To run a tool from the command line:

	\$	tfactl	run	tool						Г Сору
--	----	--------	-----	------	--	--	--	--	--	--------

The following example shows how to use tfactl in shell mode. Running the command starts tfactl, connects to the database *MyDB*, and then runs oratop:

```
$ tfactl
                                                          Copy
tfactl > database MyDB
MyDB tfactl > oratop
```

Related Topics

- https://support.oracle.com/rs?type=doc&id=1513912.1
- https://support.oracle.com/rs?type=doc&id=1070954.1
- https://support.oracle.com/rs?type=doc&id=1268927.2
- https://support.oracle.com/rs?type=doc&id=301137.1
- https://support.oracle.com/rs?type=doc&id=459694.1
- https://support.oracle.com/rs?type=doc&id=1500864.1

https://support.oracle.com/rs?type=doc&id=215187.1

Parent topic: On-demand Analysis and Diagnostic Collection

3.5 Searching Oracle Trace File Analyzer Metadata

You can search all metadata stored in the Oracle Trace File Analyzer index using tfactl search -showdatatypes|-json [json_details].

You can search for all events for a particular Oracle Database between certain dates, for example,

```
tfactl search -json
'{
    "data_type":"event",
    "content":"oracle",
    "database":"rac11g",
    "from":"01/20/2017 00:00:00",
    "to":"12/20/2018 00:00:00"
}'
```

To list all index events: tfactl search -json '{"data type":"event"}'

To list all available datatypes: tfactl search -showdatatypes

Parent topic: On-demand Analysis and Diagnostic Collection

3.6 Collecting Diagnostic Data and Using One Command Service Request Data Collections

To perform an on-demand diagnostic collection:

```
$ tfactl diagcollect
```

Running the command trims and collects all important log files updated in the past 12 hours across the whole cluster. Oracle Trace File Analyzer stores collections in the repository directory. You can change the diagcollect timeframe with the -last n h | d option.

Oracle Support often asks you to run a Service Request Data Collection (SRDC). The SRDC depends on the type of problem you experienced. It is a series of many data gathering

instructions aimed at diagnosing your problem. Collecting the SRDC manually can be difficult, with many different steps required.

Oracle Trace File Analyzer can run SRDC collections with a single command:

To run SRDCs, use one of the Oracle privileged user accounts:

- ORACLE HOME owner
- GRID_HOME owner

Table 3-3 One Command Service Request Data Collections

Type of Problem	Available SRDCs		Collection Scope
ORA Errors	ORA-00020 ORA-04023		Local-only
	ORA-00060	ORA-04031	
	ORA-00600	ORA-04063	
	ORA-00700	ORA-07445	
	ORA-01031	ORA-08102	
	ORA-01555 ORA-08103		
	ORA-01578 ORA-27300 ORA-01628 ORA-27301 ORA-04030 ORA-27302		
		ORA-29548	
		ORA-30036	
Database Configuration Assistant problems	dbstandalonedbca		Local-only
Oracle Database performance problems	dbperf		Cluster-wide

Type of Problem	Available SRDCs	Collection Scope
Datapatch issues	dbdatapatch	Local-only
Oracle Text version 12.1.0.1 and later upgrade issues	dbtextupgrade	Local-only
Oracle Spatial Installation issues	dbspatialinstall	Local-only
Oracle Spatial Export/Import issues	dbspatialexportimport	Local-only
Data Pump Import performance problems	dbimpdpperf	Local-only
SQL performance problems	dbsqlperf	Local-only
Transparent Data Encryption (TDE) problems	dbtde	Local-only
Oracle Database resource problems	dbunixresources	Local-only
Other internal Oracle Database errors	internalerror	Local-only
Oracle Database patching problems	dbpatchinstall dbpatchconflict	Local-only
Original Oracle Database Export (exp)	dbexpdp dbexpdpapi dbexpdpperf dbexpdptts	Local-only
Original Oracle Database Import	dbimp	Local-only

Type of Problem	Available SRDCs	Collection Scope
(imp)	dbimpdp	
	dbimpdpperf	
RMAN	dbrman	Local-only
	dbrman600	
	dbrmanperf	
System change number	dbscn	Local-only
Oracle	dbggclassicmode	Local-only
GoldenGate	dbggintegratedmode	
Oracle Database	dbinstall	Local-only
install / upgrade problems	dbupgrade	
	dbpreupgrade	
Oracle Database storage problems	dbasm	Local-only
Excessive SYSAUX space is used by the Automatic Workload Repository (AWR)	dbawrspace	Local-only
Oracle Database	dbshutdown	
startup / shutdown problems	dbstartup	
XDB Installation or invalid object problems	dbxdb	Local-only
Oracle Data Guard problems	dbdataguard	Local-only
Alert log messages of Corrupt block relative dba problems	dbblockcorruption	Local-only

Type of Problem	Available SRDCs	Collection Scope
ASM / DBFS / DNFS / ACFS problems	dnfs	Local-only
Create / maintain partitioned / subpartitioned table / index problems	dbpartition	Local-only
Slow Create / Alter / Drop commands against partitioned table / index	dbpartitionperf	Local-only
SQL performance problems	dbsqlperf	Local-only
UNDO corruption problems	dbundocorruption	Local-only
Listener errors: TNS-12516 / TNS-12518 / TNS-12519 / TNS-12520	listener_services	Local-only
Naming service errors: ORA- 12154 / ORA- 12514 / ORA- 12528	naming_services	Local-only
Standard information for Oracle Database auditing	dbaudit	Local-only
Enterprise Manager tablespace usage metric problems	emtbsmetrics	Local-only (on Enterprise Manager Agent target)

Type of Problem	Available SRDCs	Collection Scope
Enterprise Manager general metrics page or threshold problems	emmetricalert	Local-only (on Enterprise Manager Agent target and repository database)
Enterprise Manager debug log collection Run emdebugon, reproduce the problem then run emdebugoff, which disables debug again and collects debug logs	emdebugoff emdebugoff	Local-only (on Enterprise Manager Agent target and Oracle Management Service)
Enterprise Manager target discovery / add problems	emcliadd emclusdisc emdbsys emgendisc emprocdisc	Local-only
Enterprise Manager OMS restart problems	emrestartoms	Local-only
Enterprise Manager Agent performance problems	emagentperf	Local-only
Enterprise Manager OMS Crash problems	emomscrash	Local-only
Enterprise Manager Java heap usage or performance problems	emomsheap	Local-only
Enterprise Manager OMS crash, restart or	emomshungcpu	Local-only

Type of Problem	Available SRDCs	Collection Scope
performance problems		
Oracle Exalogic full Exalogs data collection information	esexalogic	Local-only

For more information about SRDCs, run tfactl diagcollect -srdc -help.

What the SRDCs collect varies for each type, for example:

Table 3-4 SRDC collections

Command	What gets collected
\$ tfactl diagcollect -srdc ORA-04031	 IPS package Patch listing AWR report Memory information RDA HCVE output
\$ tfactl diagcollect -srdc dbperf	 ADDM report AWR for good period and problem period AWR Compare Period report ASH report for good and problem period OSWatcher IPS package (if there are any errors during problem period) Oracle ORAchk (performance-related checks)

Oracle Trace File Analyzer prompts you to enter the information required based on the SRDC type.

For example, when you run ORA-4031 SRDC:

\$ tfactl diagcollect -srdc ORA-04031

Oracle Trace File Analyzer prompts to enter event date/time and database name.

- 1. Oracle Trace File Analyzer scans the system to identify recent events in the system (up to 10).
- 2. Once the relevant event is chosen, Oracle Trace File Analyzer then proceeds with diagnostic collection.
- 3. Oracle Trace File Analyzer identifies all the required files.
- 4. Oracle Trace File Analyzer trims all the files where applicable.
- 5. Oracle Trace File Analyzer packages all data in a zip file ready to provide to support.

You can also run an SRDC collection in non-interactive silent mode. Provide all the required parameters up front as follows:

```
$ tfactl diagcollect -srdc srdc_type -database db -from "d [ Copy -
```

Example 3-2 Diagnostic Collection

```
$ tfactl diagcollect
                                                      Copy
Collecting data for the last 12 hours for all components...
Collecting data for all nodes
Collection Id: 20160616115923myserver69
Detailed Logging at :
/u01/app/tfa/repository/collection Thu Jun 16 11 59 23 PDT 2016 node
2016/06/16 11:59:27 PDT : Collection Name :
tfa Thu Jun 16 11 59 23 PDT 2016.zip
2016/06/16 11:59:28 PDT : Collecting diagnostics from hosts :
[myserver70, myserver71, myserver69]
2016/06/16 11:59:28 PDT : Scanning of files for Collection in progres
2016/06/16 11:59:28 PDT : Collecting additional diagnostic informatic
2016/06/16 11:59:33 PDT : Getting list of files satisfying time range
[06/15/2016 23:59:27 PDT, 06/16/2016 11:59:33 PDT]
2016/06/16 11:59:37 PDT : Collecting ADR incident files...
2016/06/16 12:00:32 PDT : Completed collection of additional diagnost
2016/06/16 12:00:39 PDT : Completed Local Collection
2016/06/16 12:00:40 PDT : Remote Collection in Progress...
_____
         Collection Summary
+----+
         | Status | Size | Time |
+----+
| myserver71 | Completed | 15MB | 64s |
| myserver70 | Completed | 14MB | 67s |
| myserver69 | Completed | 14MB | 71s |
'-----'
Logs are being collected to:
/u01/app/tfa/repository/collection Thu Jun 16 11 59 23 PDT 2016 node
/u01/app/tfa/repository/collection Thu Jun 16 11 59 23 PDT 2016 node
/u01/app/tfa/repository/collection Thu Jun 16 11 59 23 PDT 2016 node
/u01/app/tfa/repository/collection Thu Jun 16 11 59 23 PDT 2016 node
```

Example 3-3 One command SRDC

```
$ tfactl diagcollect -srdc ora600
                                               Copy
Enter value for EVENT TIME [YYYY-MM-DD HH24:MI:SS, < RETURN
Enter value for DATABASE NAME [<RETURN>=ALL] :
1. Jun/09/2016 09:56:47 : [rdb11204] ORA-00600: internal error code,
arguments: [], [], [], [], [], [], [], [], []
Please choose the event : 1-4 [1] 1
Selected value is: 1 ( Jun/09/2016 09:56:47 ) Collecting data for 1c
from Jun/09/2016 03:56:47 to Jun/09/2016 15:56:47
Collection Id: 20160616115820myserver69
Detailed Logging at :
/u01/app/tfa/repository/srdc ora600 collection Thu Jun 16 11 58 20 PI
2016/06/16 11:58:23 PDT : Collection Name :
tfa srdc ora600 Thu Jun 16 11 58 20 PDT 2016.zip
2016/06/16 11:58:23 PDT : Scanning of files for Collection in progres
2016/06/16 11:58:23 PDT : Collecting additional diagnostic informatic
2016/06/16 11:58:28 PDT : Getting list of files satisfying time range
[06/09/2016 03:56:47 PDT, 06/09/2016 15:56:47 PDT]
2016/06/16 11:58:30 PDT : Collecting ADR incident files...
2016/06/16 11:59:02 PDT : Completed collection of additional diagnost
2016/06/16 11:59:06 PDT : Completed Local Collection
         Collection Summary
+----+
        | Status | Size | Time |
+----+
| myserver69 | Completed | 7.9MB | 43s |
```



Note: For more information about how to diagnose and resolve ORA-00600 errors using Oracle Trace File Analyzer diagnostics, see ORA-600 (ORA-00600 Internal Error) Detection, Diagnosis & Resolution.

Related Topics

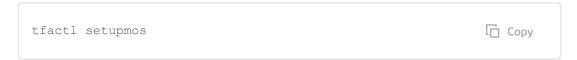
• ORA-600 (ORA-00600 Internal Error) Detection, Diagnosis & Resolution

Parent topic: On-demand Analysis and Diagnostic Collection

3.7 Uploading Collections to Oracle Support

To enable collection uploads, configure Oracle Trace File Analyzer with your My Oracle Support user name and password.

For example:



Oracle Trace File Analyzer stores your login details securely within an encrypted wallet. You can store only a single user's login details.

1. Run a diagnostic collection using the -sr sr number option.

```
tfactl diagcollect diagcollect options -sr sr_numb Copy
```

At the end of collection, Oracle Trace File Analyzer automatically uploads all collections to your Service Request.

Oracle Trace File Analyzer can also upload any other file to your Service Request.

You can upload using the wallet, which was setup previously by root using tfactl setupmos.

```
tfactl upload -sr sr_number -wallet space-separated list copy o
```

You can also upload without the wallet. When uploading without the wallet tfactl prompts for the password.

```
-bash-4.1# tfactl setupmos
                                                                        Copy
            Enter User Id: john.doe@oracle.com
© Oracle About Oracle Contact Us Products A-Z Terms of Use & Privacy Cookie Preferences Ad Choices
            Wallet created successfully
            USER details added/updated in the wallet
            PASSWORD details added/updated in the wallet
            SUCCESS - CERTIMPORT - Successfully imported certificate
            -bash-4.1# su - oradb
            -bash-4.1$ /opt/oracle.tfa/tfa/myserver69/tfa home/bin/tfactl diagcol
            Enter the time of the ORA-00600 [YYYY-MM-DD HH24:MI:SS, RETURN=ALL] :
            Enter the Database Name [RETURN=ALL] :
            1. Oct/23/2017 03:03:40 : [ogg11204] ORA-00600: internal error code,
            2. Sep/26/2017 10:03:10 : [ogg11204] ORA-00600: internal error code,
            3. Sep/26/2017 10:02:49 : [ogg11204] ORA-00600: internal error code,
            4. Sep/26/2017 10:02:33 : [ogg11204] ORA-00600: internal error code,
            5. Jan/09/2016 13:01:02 : [+ASM1] ORA-00600: internal error code, ard
            Please choose the event : 1-5 [1] 1
            Selected value is: 1 (Oct/23/2017 03:03:40)
            Scripts to be run by this srdc: ipspack rdahcvel210 rdahcvel120 rdahc
            Components included in this srdc: OS CRS DATABASE NOCHMOS
            Use of uninitialized value $db home in length at /opt/oracle.tfa/tfa/
            Collecting data for local node(s)
            Scanning files from Oct/22/2017 21:03:40 to Oct/23/2017 09:03:40
            Collection Id: 20180430080045myserver69
            Detailed Logging at : /opt/oracle.tfa/tfa/repository/srdc ora600 coll
            2018/04/30 08:00:50 PDT : NOTE : Any file or directory name containing
            2018/04/30 08:00:50 PDT : Collection Name : tfa srdc ora600 Mon Apr 3
            2018/04/30 08:00:50 PDT : Scanning of files for Collection in progres
            2018/04/30 08:00:50 PDT : Collecting additional diagnostic informatic
            2018/04/30 08:01:15 PDT : Getting list of files satisfying time range
            2018/04/30 08:01:34 PDT : Collecting ADR incident files...
            2018/04/30 08:02:21 PDT : Completed collection of additional diagnost
            2018/04/30 08:02:24 PDT : Completed Local Collection
            2018/04/30 08:02:24 PDT: Uploading collection to SR - 3-15985570811
            2018/04/30 08:02:27 PDT : Successfully uploaded collection to SR
                        Collection Summary
```

On-demand Analysis and Diagnostic Collection

Parent topic: On-demand Analysis and Diagnostic Collection

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