Oracle Trace File Analyzer (TFA)

with Database Support Tools Bundle

What's New in 12.2.1.3.0

Safe Harbor Statement

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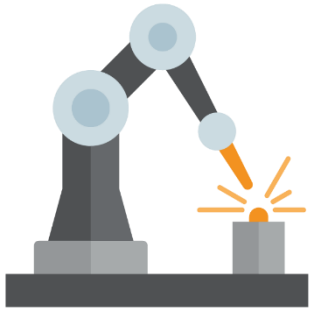
Why TFA?

Easy to use real-time health monitoring, fault detection & diagnosis via a single interface

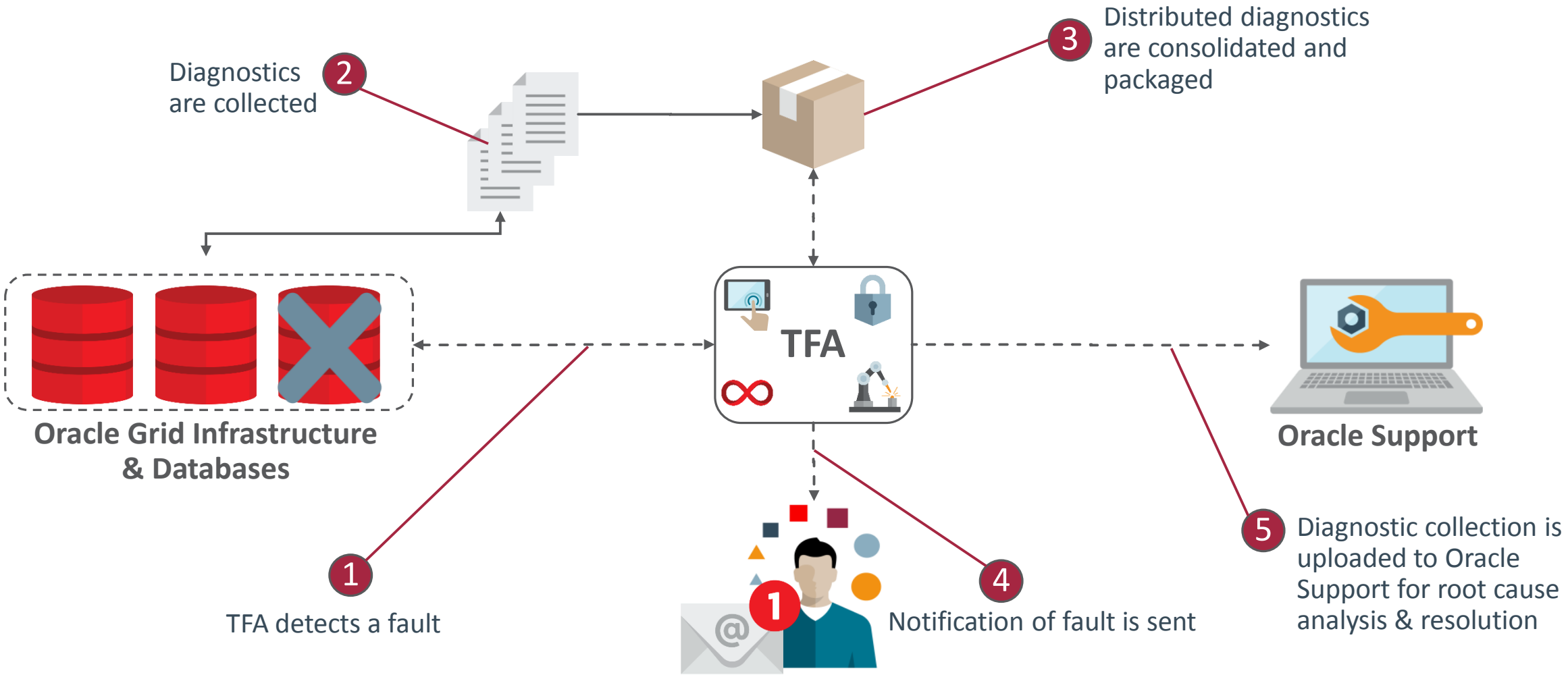
Secure consolidation of distributed diagnostic collections

Continuous availability so you always get what's needed for resolution

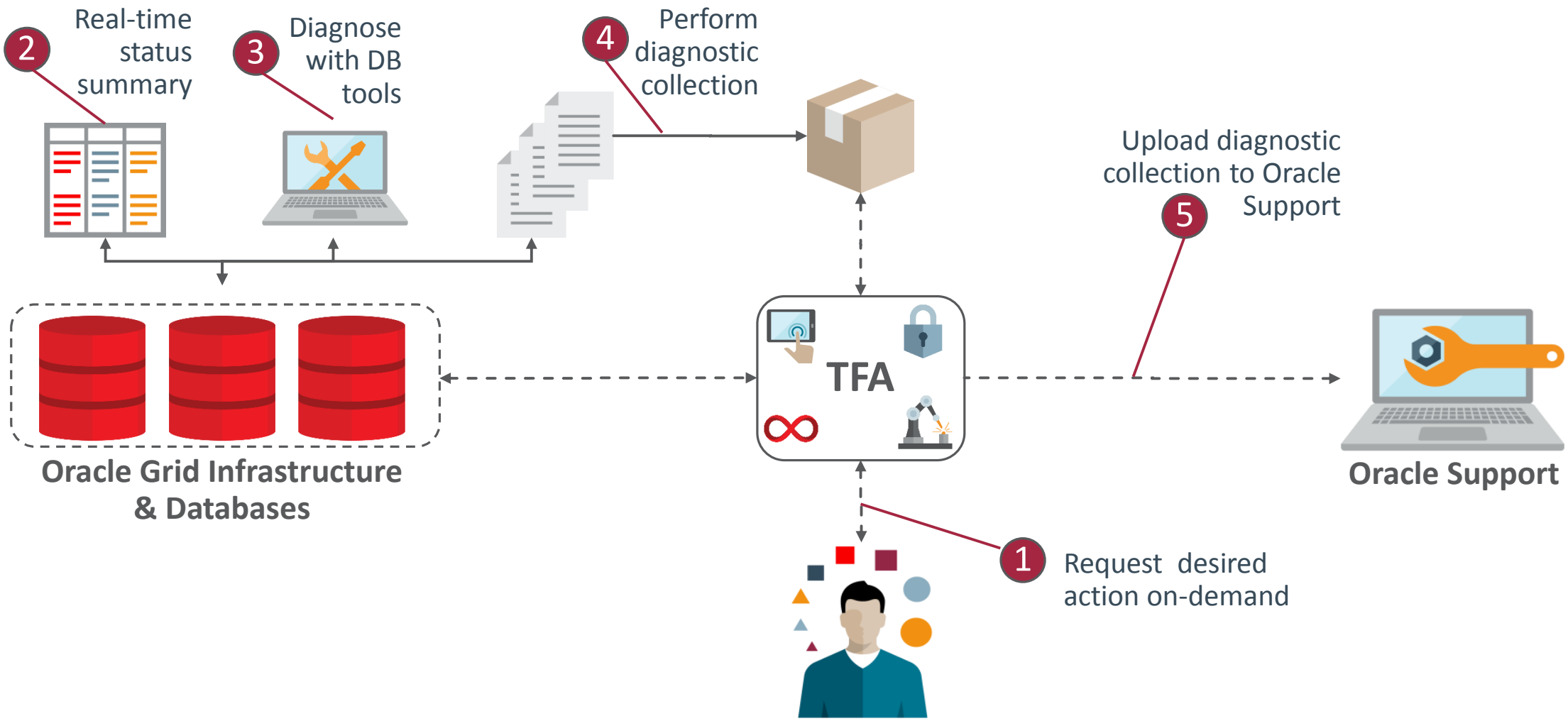


Machine learning driven, autonomous degradation detection, reduces your overheads

Autonomous Usage



On-Demand Usage



Program Agenda

1. Simplified Real-Time Summary Report
2. Automatic Collection Upload to SRs
3. Faster and Easier Service Request Data Collection

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Simplified Real-time Status Summary

```
# tfactl summary

  Executing Summary in Parallel on Following Nodes:
    Node : myserver01
    Node : myserver02

LOGFILE LOCATION :
/u01/app/grid/tfa/repository/suptools/myserver01/summary/root/20
log

  Component Specific Summary collection :
    - Collecting CRS details ... Done.
    - Collecting ASM details ... Done.
    - Collecting ACFS details ... Done.
    - Collecting DATABASE details ... Done.
    - Collecting EXADATA details ... Done.
    - Collecting PATCH details ... Done.
    - Collecting LISTENER details ... Done.
    - Collecting NETWORK details ... Done.
    - Collecting OS details ... Done.
    - Collecting TFA details ... Done.
    - Collecting SUMMARY details ... Done.

  Remote Summary Data Collection : In-Progress - Please wait ...
  - Data Collection From Node - myserver02 .. Done.

  Prepare Clusterwide Summary Overview ... Done
```

```
     cluster_status_summary

  COMPONENT   STATUS    DETAILS
+-----------+---------+-----------------------------------------------------------------------------------------------------------------+
  CRS         PROBLEM   .-----------------------------------------------.
                        | CRS_SERVER_STATUS   : ONLINE                  |
                        | CRS_STATE           : ONLINE                  |
                        | CRS_INTEGRITY_CHECK : FAIL                    |
                        | CRS_RESOURCE_STATUS : OFFLINE Resources Found |
                        '-----------------------------------------------'
  ASM         PROBLEM   .-------------------------------------------------------.
                        | ASM_DISK_SIZE_STATUS : WARNING - Available Size < 20% |
                        | ASM_BLOCK_STATUS     : PASS                           |
                        | ASM_CHAIN_STATUS     : PASS                           |
                        | ASM_INCIDENTS        : FAIL                           |
                        | ASM_PROBLEMS         : FAIL                           |
                        '-------------------------------------------------------'
  ACFS        OFFLINE   .------------------------.
                        | ACFS_STATUS : OFFLINE  |
                        '------------------------'
  DATABASE    PROBLEM   .-----------------------------------------------------------------------------------------------------.
                        | ORACLE_HOME_DETAILS                                                                | ORACLE_HOME_NAME |
                        +------------------------------------------------------------------------------------+------------------+
                        | .-------------------------------------------------------------------------------. | OraDB12Home1     |
                        | | PROBLEMS | INCIDENTS | DB_BLOCKS | DATABASE_NAME | STATUS  | DB_CHAINS | |                  |
                        | +----------+-----------+-----------+---------------+---------+-----------+ |                  |
                        | | PASS     | PASS      | PROBLEM   | rac1          | PROBLEM | PROBLEM   | |                  |
                        | '----------+-----------+-----------+---------------+---------+-----------' |                  |
                        '------------------------------------------------------------------------------------+------------------'
  EXADATA     PROBLEM   .---------------------------------.
                        | SWITCH_SSH_STATUS : CONFIGURED  |
                        | CELL_SSH_STATUS   : CONFIGURED  |
                        | ENVIRONMENT_TEST  : FAIL        |
                        | LINKUP            : FAIL        |
                        | LUN_STATUS        : NORMAL      |
                        | RS_STATUS         : RUNNING     |
                        | CELLSRV_STATUS    : RUNNING     |
                        | MS_STATUS         : RUNNING     |
                        '---------------------------------'
  PATCH       OK        .-----------------------------------------------.
                        | CRS_PATCH_CONSISTENCY_ACROSS_NODES      : OK |
                        | DATABASE_PATCH_CONSISTENCY_ACROSS_NODES : OK |
                        '-----------------------------------------------'
  LISTENER    OK        .------------------------.
                        | LISTNER_STATUS   : OK  |
                        '------------------------'
  NETWORK     PROBLEM   .--------------------------.
                        | USER_EQUIVALENCE : FAIL  |
                        '--------------------------'
  OS          OK        .------------------------.
                        | MEM_USAGE_STATUS : OK  |
                        '------------------------'
  TFA         OK        .-----------------------.
                        | TFA_STATUS : RUNNING  |
                        '-----------------------'
  SUMMARY     OK        .-----------------------------------.
                        | SUMMARY_EXECUTION_TIME : 0H:0M:53S |
                        '-----------------------------------'
+-----------+---------+-----------------------------------------------------------------------------------------------------------------+
```

High-level summary of all Database components

`tfactl summary`

```
        ### Entering in to SUMMARY Command-Line Interface ###

tfactl_summary>list

  Components : Select Component - select [component_number|component_name]
    1 => overview
    2 => crs_overview
    3 => asm_overview
    4 => acfs_overview
    5 => database_overview
    6 => exadata_overview
    7 => patch_overview
    8 => listener_overview
    9 => network_overview
    10 => os_overview
    11 => tfa_overview
    12 => summary_overview

tfactl_summary>
```

Choose an option to drill down

Simplified Real-time Status Summary – Drill Down

```
tfactl_summary_asm_overview>

  ASM_INSTANCE   HOSTNAME         ASM_DISK_SIZE_STATUS              ASM_BLOCK_STATUS   ASM_CHAIN_STATUS   ASM_INCIDENTS   ASM_PROBLEMS
+--------------+---------------+---------------------------------+------------------+------------------+---------------+--------------+
  +ASM1          myserver01      WARNING - Available Size < 20%    PASS               PASS               FAIL            FAIL
  +ASM2          myserver02      WARNING - Available Size < 20%    PASS               PASS               PASS            PASS
+--------------+---------------+---------------------------------+------------------+------------------+---------------+--------------+

  Status Type: Select Status Type - select [status_type_number|status_type_name]
    1 => asm_myserver01
    2 => asm_myserver02


tfactl_summary_asm_overview>1

    =====> asm_problems

  ADR_EVENTS
+-------------------------------------------------------------------------------------------------------------------------------------+
  .-------------------------------------------------------------------------------------------------------------------------------.
  | STATUS_TYPE          | DETAILS                                                                                                |
  +----------------------+--------------------------------------------------------------------------------------------------------+
  | ADR_HOME             | /u01/app/grid/diag/asm/+asm/+ASM1                                                                      |
  | ORACLE_HOME          | /u01/app/12.1.0.2/grid                                                                                 |
  | PROBLEM_STATUS_CHECK | ASM1:FAIL                                                                                              |
  | PROBLEMS             | .-------------------------------------------------------------------------------------------------.   |
  |                      | | LAST_INCIDENT | LASTINC_TIME                       | PROBLEM_ID | PROBLEM_KEY              |   |
  |                      | +---------------+------------------------------------+------------+--------------------------+   |
  |                      | |        140993 | 2017-07-26 10:33:59.207000 -07:00 |          1 | ORA 700 [kfzUserAuth_beq] |   |
  |                      | '---------------+------------------------------------+------------+--------------------------'   |
  '----------------------+--------------------------------------------------------------------------------------------------------'

+-------------------------------------------------------------------------------------------------------------------------------------+
```

```
    =====> asm_instancefiles

 file_number   compound_index   bytes          block_size   name              modification_date   creation_date   striped   incarnation   group_number
+-------------+---------------+--------------+------------+-----------------+-------------------+---------------+---------+-------------+--------------+
         256        16777472          7680          512   PASSWORD          28-APR-16           28-APR-16       COARSE      910378595              1
         257        16777473        167329792        16384   CONTROLFILE       28-APR-16           28-APR-16       FINE        910378603              1
         258        16777474       4294967808          512   ONLINELOG         28-APR-16           28-APR-16       COARSE      910378605              1
         259        16777475       4294967808          512   ONLINELOG         28-APR-16           28-APR-16       COARSE      910378607              1
         260        16777476      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378609              1
         261        16777477       5153972224         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378609              1
         262        16777478      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378613              1
         263        16777479       5153972224         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378613              1
         264        16777480      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378613              1
         265        16777481          7680          512   PASSWORD          28-APR-16           28-APR-16       COARSE      910378849              1
         266        16777482        167329792        16384   CONTROLFILE       28-APR-16           28-APR-16       FINE        910378855              1
         267        16777483       4294967808          512   ONLINELOG         28-APR-16           28-APR-16       COARSE      910378857              1
         268        16777484       4294967808          512   ONLINELOG         28-APR-16           28-APR-16       COARSE      910378859              1
         269        16777485      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378861              1
         270        16777486       5153972224         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378861              1
         271        16777487      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378863              1
         272        16777488       5153972224         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378865              1
         273        16777489      17179877376         8192   DATAFILE          28-APR-16           28-APR-16       COARSE      910378865              1
         274        16777490          7680          512   PASSWORD          28-APR-16           28-APR-16       COARSE      910384849              1
         275        16777491        167395328        16384   CONTROLFILE       28-OCT-17           28-APR-16       FINE        910384857              1
         276        16777492       4294967808          512   ONLINELOG         28-OCT-17           28-APR-16       COARSE      910384859              1
         277        16777493       4294967808          512   ONLINELOG         28-OCT-17           28-APR-16       COARSE      910384861              1
         278        16777494      17179877376         8192   DATAFILE          28-OCT-17           28-APR-16       COARSE      910384863              1
```

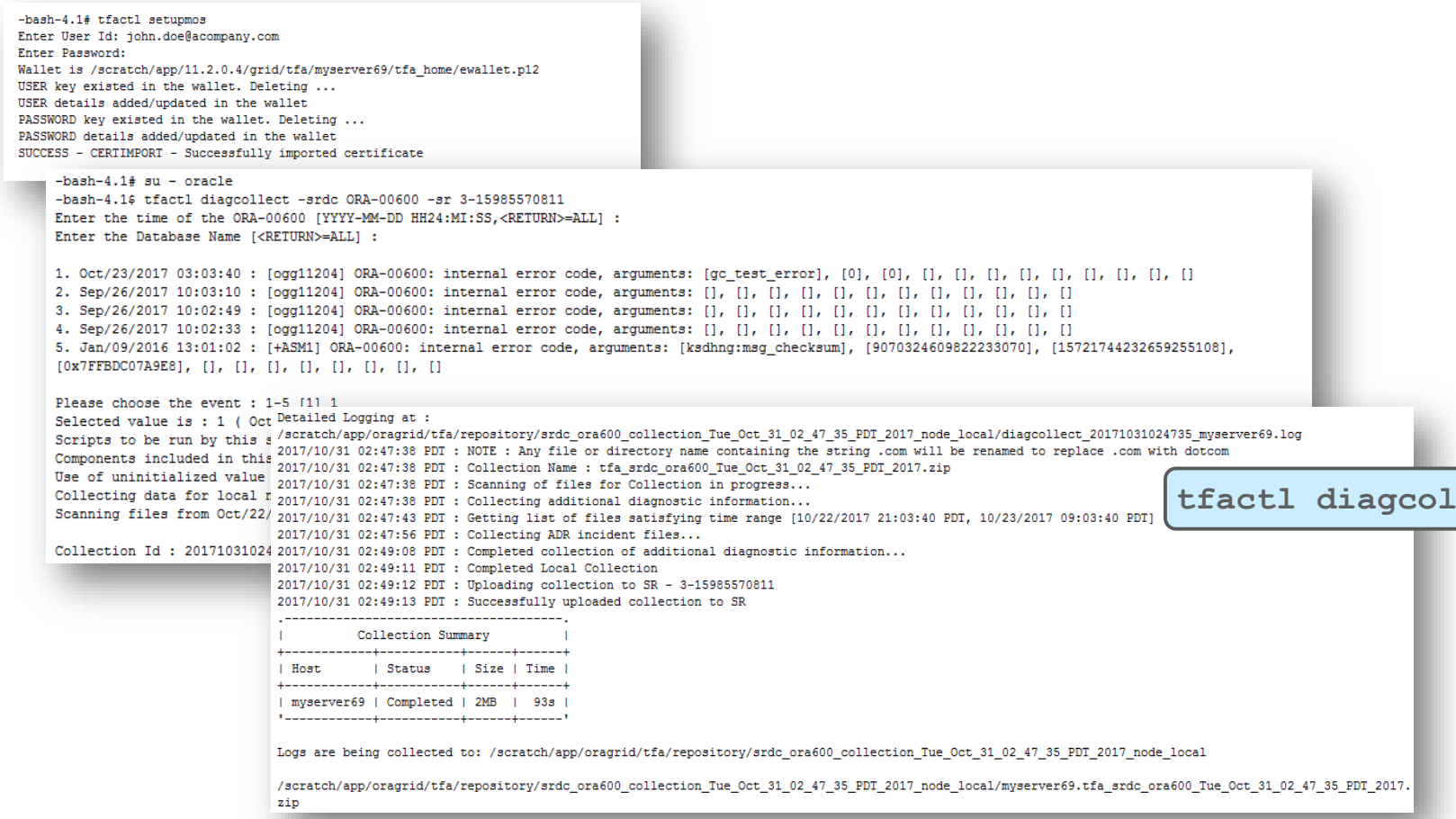
```
    =====> asm_status_summary

  STATUS_TYPE                  STATUS
+------------------------------+-------------------------------------------------------------------------------------------------+
  SYSTEM_DATE                  Wed Nov  1 02:26:44 PDT 2017
  ASM_HOME                     /u01/app/12.1.0.2/grid
  ASM_VERSION
  ASM_INSTANCE                 +ASM1
  ASM_DIAGNOSTICS_TRACE_FOLDER /u01/app/grid/diag/asm/+asm/+ASM1/trace
  ASM_CHAIN_STATUS             PASS
  ASM_BLOCK_STATUS             PASS
  ASM_DISK_SIZE_STATUS         WARNING - Available Size < 20%
  ASM_DISK_GROUP_SUMMARY       .--------------------------.
                               | name    | disk_size_alert |
                               +---------+-----------------+
                               | DATAC1  | Yellow : 25%    |
                               | RECOC2  | Yellow : 48%    |
                               | DBFS_DG | Yellow : 47%    |
                               | RECOC1  | Red : 1%        |
                               '---------+-----------------'
  ADR_EVENTS                   .-------------------------------------------------------------------.
                               | HOSTNAME       | INCIDENT_STATUS | INSTANCE_NAME | PROBLEM_STATUS |
                               +----------------+-----------------+---------------+----------------+
                               | myserver01     | FAIL            | ASM1          | FAIL           |
                               '----------------+-----------------+---------------+----------------'
+------------------------------+-------------------------------------------------------------------------------------------------+
```

Drill downs show real-time analytics & details of any problems found

Program Agenda

1. Simplified Real-Time Summary Report
2. Automatic Collection Upload to SRs
3. Faster and Easier Service Request Data Collection

One Command SRDCs



```
-bash-4.1# tfactl setupmos
Enter User Id: john.doe@acompany.com
Enter Password:
Wallet is /scratch/app/11.2.0.4/grid/tfa/myserver69/tfa_home/ewallet.p12
USER key existed in the wallet. Deleting ...
USER details added/updated in the wallet
PASSWORD key existed in the wallet. Deleting ...
PASSWORD details added/updated in the wallet
SUCCESS - CERTIMPORT - Successfully imported certificate
```

```
-bash-4.1# su - oracle
-bash-4.1$ tfactl diagcollect -srdc ORA-00600 -sr 3-15985570811
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, arguments: [gc_test_error], [0], [0], [], [], [], [], [], [], [], [], []
2. Sep/26/2017 10:03:10 : [ogg11204] ORA-00600: internal error code, arguments: [], [], [], [], [], [], [], [], [], [], [], []
3. Sep/26/2017 10:02:49 : [ogg11204] ORA-00600: internal error code, arguments: [], [], [], [], [], [], [], [], [], [], [], []
4. Sep/26/2017 10:02:33 : [ogg11204] ORA-00600: internal error code, arguments: [], [], [], [], [], [], [], [], [], [], [], []
5. Jan/09/2016 13:01:02 : [+ASM1] ORA-00600: internal error code, arguments: [ksdhng:msg_checksum], [9070324609822233070], [15721744232659255108],
[0x7FFBDC07A9E8], [], [], [], [], [], [], [], []

Please choose the event : 1-5 [1] 1
Selected value is : 1 ( Oct
Scripts to be run by this s
Components included in this
Use of uninitialized value
Collecting data for local n
Scanning files from Oct/22/

Collection Id : 20171031024
```

```
Detailed Logging at :
/scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Tue_Oct_31_02_47_35_PDT_2017_node_local/diagcollect_20171031024735_myserver69.log
2017/10/31 02:47:38 PDT : NOTE : Any file or directory name containing the string .com will be renamed to replace .com with dotcom
2017/10/31 02:47:38 PDT : Collection Name : tfa_srdc_ora600_Tue_Oct_31_02_47_35_PDT_2017.zip
2017/10/31 02:47:38 PDT : Scanning of files for Collection in progress...
2017/10/31 02:47:38 PDT : Collecting additional diagnostic information...
2017/10/31 02:47:43 PDT : Getting list of files satisfying time range [10/22/2017 21:03:40 PDT, 10/23/2017 09:03:40 PDT]
2017/10/31 02:47:56 PDT : Collecting ADR incident files...
2017/10/31 02:49:08 PDT : Completed collection of additional diagnostic information...
2017/10/31 02:49:11 PDT : Completed Local Collection
2017/10/31 02:49:12 PDT : Uploading collection to SR - 3-15985570811
2017/10/31 02:49:13 PDT : Successfully uploaded collection to SR
.----------------------------------------.
|          Collection Summary            |
+------------+-----------+------+--------+
| Host       | Status    | Size | Time   |
+------------+-----------+------+--------+
| myserver69 | Completed | 2MB  |  93s   |
'------------+-----------+------+--------'

Logs are being collected to: /scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Tue_Oct_31_02_47_35_PDT_2017_node_local

/scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Tue_Oct_31_02_47_35_PDT_2017_node_local/myserver69.tfa_srdc_ora600_Tue_Oct_31_02_47_35_PDT_2017.
zip
```

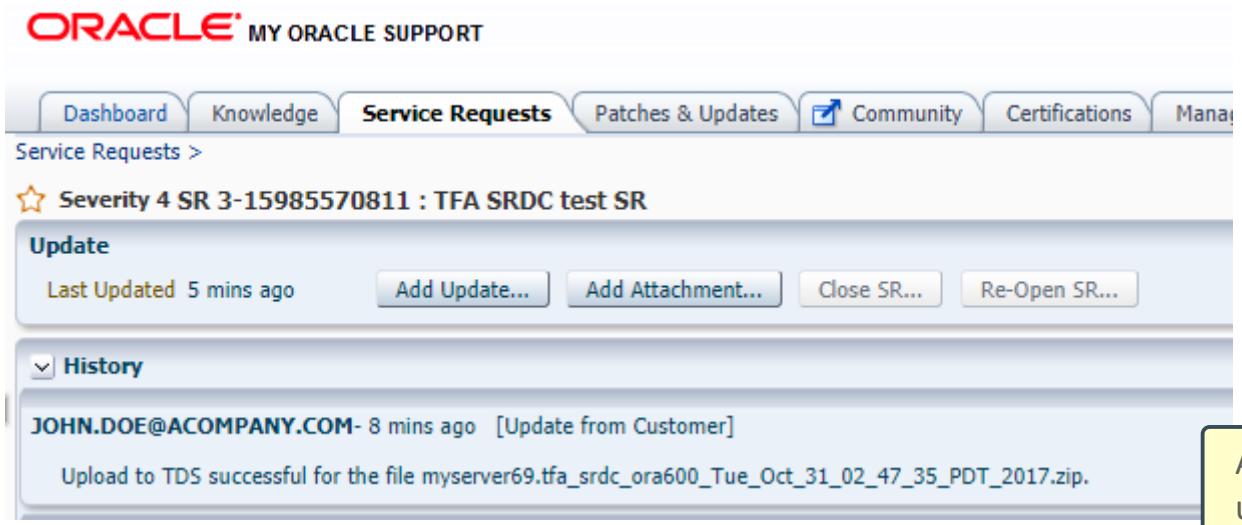
- Store My Oracle Support (MOS) credentials securely in wallet
  - Run this once as root:

```
tfactl setupmos
```

- Add –sr <sr_number> to any diagcollect command
  - Run this as oracle_home owner:

```
tfactl diagcollect -srdc <srdc_type> -sr <SR#>
```

Collection Uploaded to My Oracle Support



At the end of the collection the file is automatically uploaded to the SR

Upload any File

With Wallet:

```
tfactl upload -wallet -sr <sr_number> <file1 file2>
```

```
tfactl upload -wallet -sr 3-15963755541 /tmp/test_sr_file.txt

Started uploading files to SR - 3-15963755541

Sucessfully uploaded file - /tmp/test_sr_file.txt
```

Without wallet:

```
tfactl upload -user <user_id> -sr <sr_number> <file1 file2>
```

```
tfactl upload -user john.doe@oracle.com -sr 3-15963755541 /tmp/test_sr_file2.txt /tmp/test_sr_file3.txt

Password:
Started uploading files to SR - 3-15963755541
Uploading file - /tmp/test_sr_file2.txt
Uploading file - /tmp/test_sr_file3.txt
Files upload is done
```

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Faster & Easier SR Data Collection

```
tfactl diagcollect -srdc <srdc_type> -sr <SR#>
```

Type of Problem	SRDC	
ORA Errors	• **ORA-00020** • **ORA-00060** • ORA-00600 • ORA-00700 • **ORA-01555** • **ORA-01628** • ORA-04030	• ORA-04031 • ORA-07445 • ORA-27300 • ORA-27301 • ORA-27302 • **ORA-30036**
Other internal database errors	• internalerror	
Database performance	• dbperf	
Database patching	• dbpatchinstall • dbpatchconflict	
Database resource	• dbunixresources	
XDB installation or invalid object	• dbxdb	
Database install / upgrade	• dbinstall • dbupgrade • **dbpreupgrade**	

New SRDCs

Type of Problem	SRDC
Database storage	• **asm**
Excessive SYSAUX Space used by the Automatic Workload Repository (AWR)	• **dbawrspace**
Database startup / shutdown	• **dbshutdown** • **dbstartup**
Data Guard	• **dbdataguard**
Enterprise Manager tablespace usage metric	• emtbsmetrics
Enterprise Manager general metrics page or threshold problems - Run all three SRDCs	• emdebugon • emdebugoff • emmetricalert
Enterprise Manager target discovery / add	• **emcliadd** • **emclusdisc** • **emdbsys** • **emgendisc** • **emprocdisc**
Enterprise Manager OMS restart	• **emrestartoms**

For more info see Document: 1513912.1

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