



ORACLE

Oracle 19C Deep Dive —— 自治健康框架 Autonomous Health Framework (AHF)

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Safe Harbor Statement

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Program Agenda

- 1 概览
- 2 安装和配置
- 3 监测使用场景
- 4 预防使用场景

Oracle数据库的自治运行

实时预防和快速恢复

- 解决这些挑战需要一个全面的方法
 - 实时预防问题并优化解决方案
 - 从故障中恢复，以最小的干预快速识别根本原因
- 人工操作反应太迟，而且无法规模化
- 手动分类和通知泛滥无法扩展
- 应用机器学习技术可以有效地实时响应，不会对生产产生巨大影响

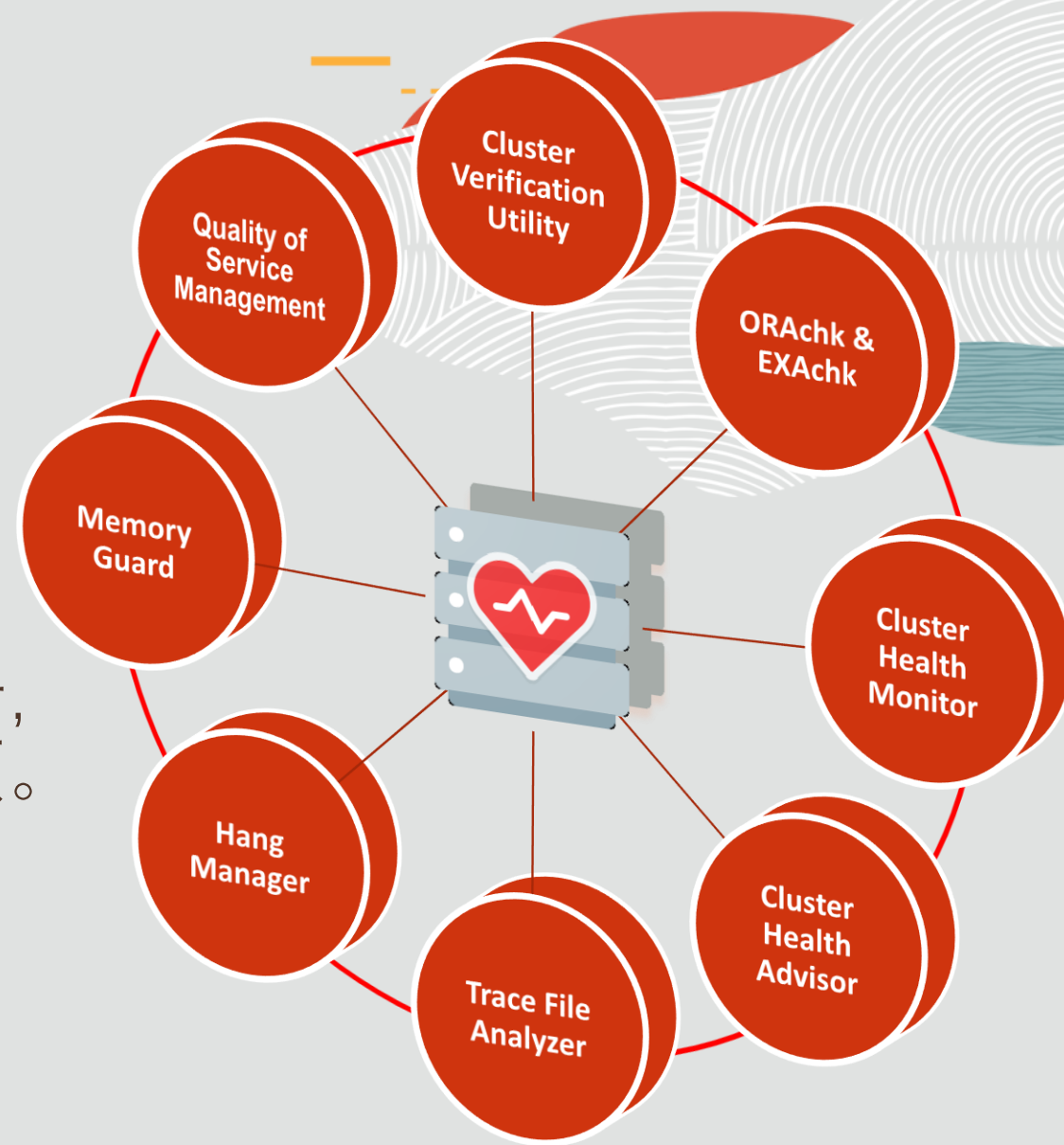
Oracle自治健康框架

设计目标

- 实现自主的24*7监控，管理性能和可用性
- 提供根本原因分析和有针对性的预防纠正措施
- 作为GI和DB安装的一部分自动配置部署
- 用于DB和GI补丁和升级
- 与现有的Oracle管理解决方案集成

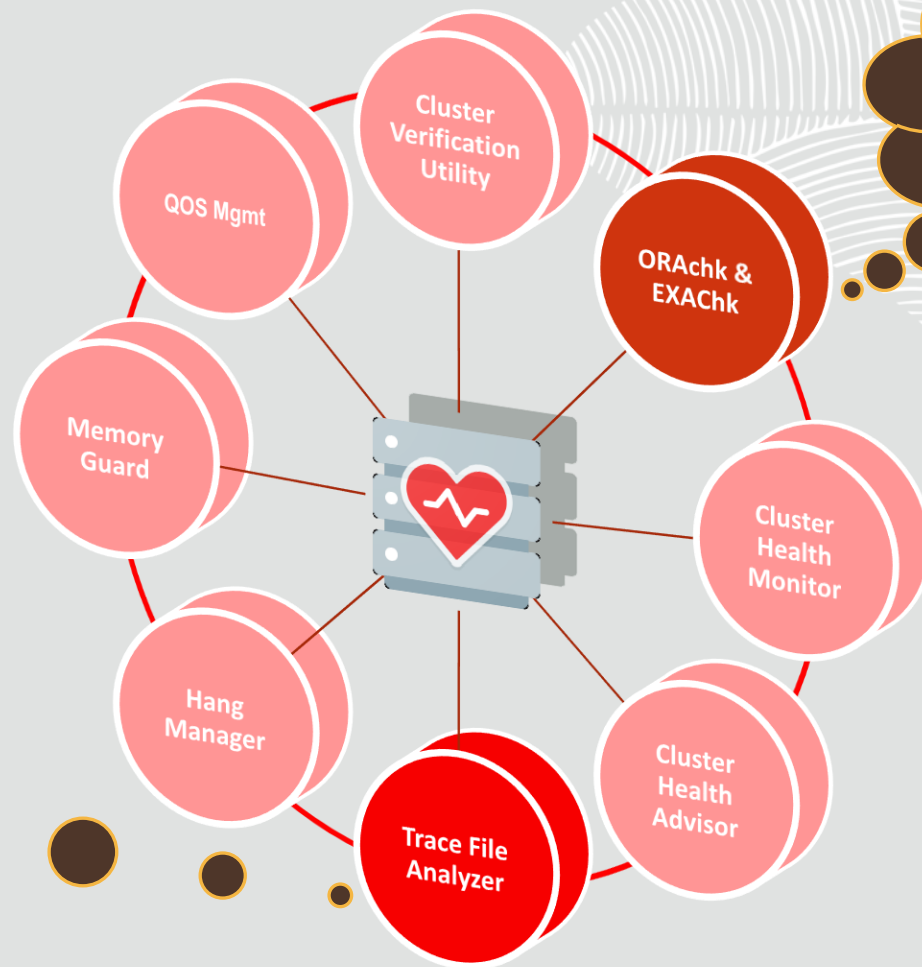
Introducing... Autonomous Health Framework

运维监控组件的**工具集合**，它们**全天候地自动协同工作**，以保持数据库系统的健康和运行，同时最大限度地减少人为干预。



Help Us Help You!

避免低效和不完整的
诊断信息收集



积极主动，避免遇到已
知的问题

什么是 TFA?



通过单一接口实时的故障检测，诊断收集和诊断



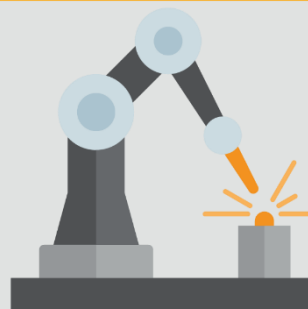
安全的日志收集

TFA使检测和诊断数据库问题变得更快更容易



持续的日志生命周期管理

Coming..



顶级问题检测和诊断

什么是 ORAchk/EXAchk?

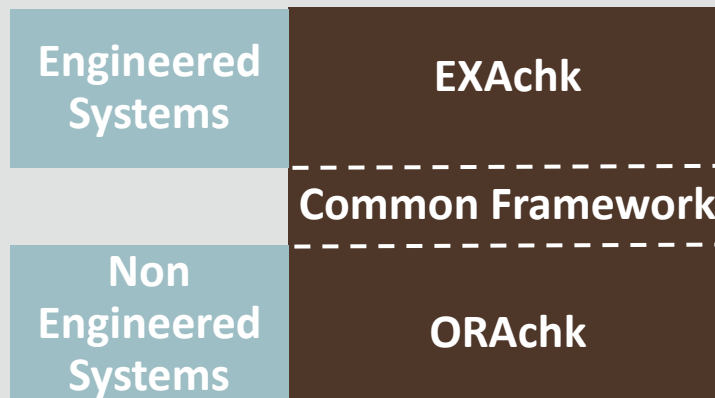
在问题出现之前自动主动告警



获取以电子邮件发送给您的预定运行状况报告



发现最具影响的反复出现的问题



在您的环境中运行，不需要向Oracle发送任何东西

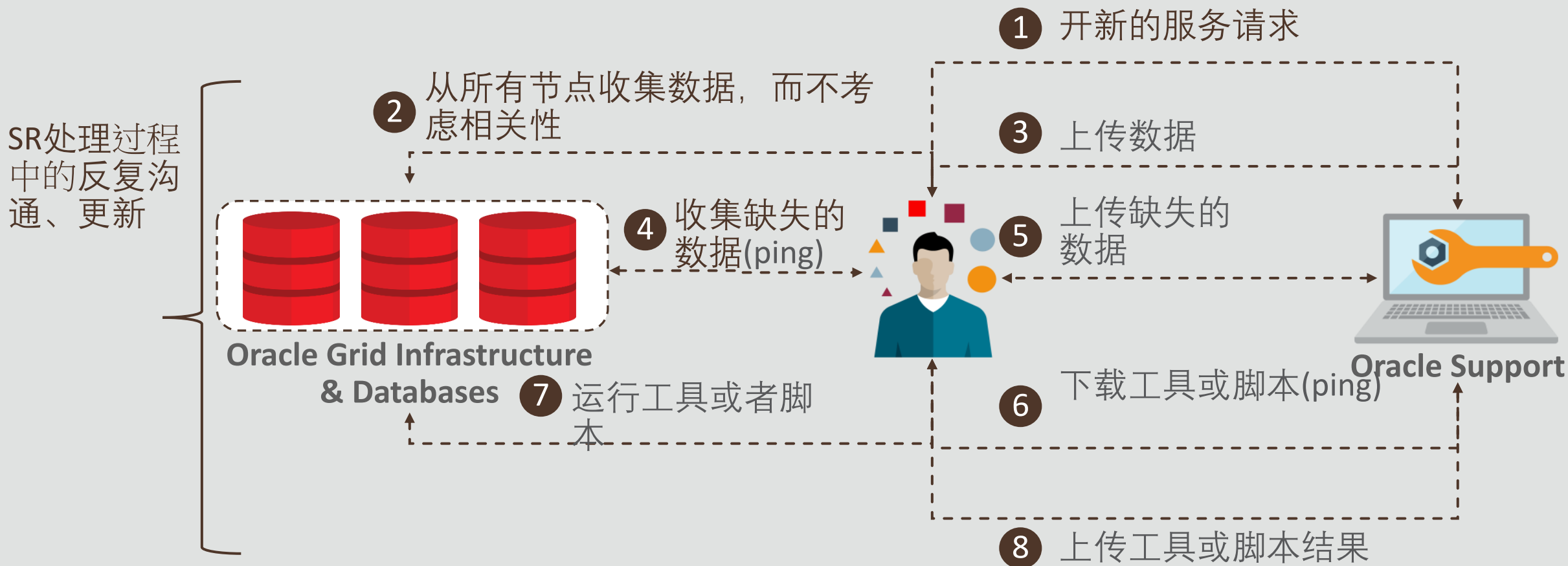


检测结果可以整合到其他可供选择的工具中



TFA之前的客户体验

Lots of Pings



使用TFA & ORAchk/EXAchk之后

@ Customer



ORACLE®
Enterprise Manager



Collection
Manager



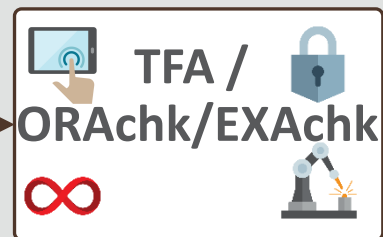
Others

3 检测问题

1 自动主动运行状况检查

2 集成和显示运行状况检查结果

4 集成AHF



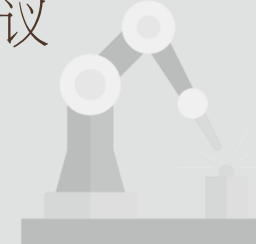
6 修剪，捕获，打包和上传诊断（可选）

5 问题通知

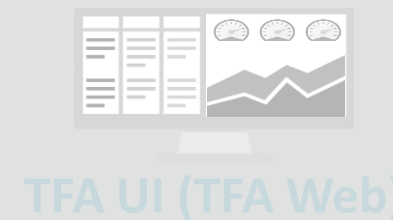


@ Oracle

1 向SR添加建议



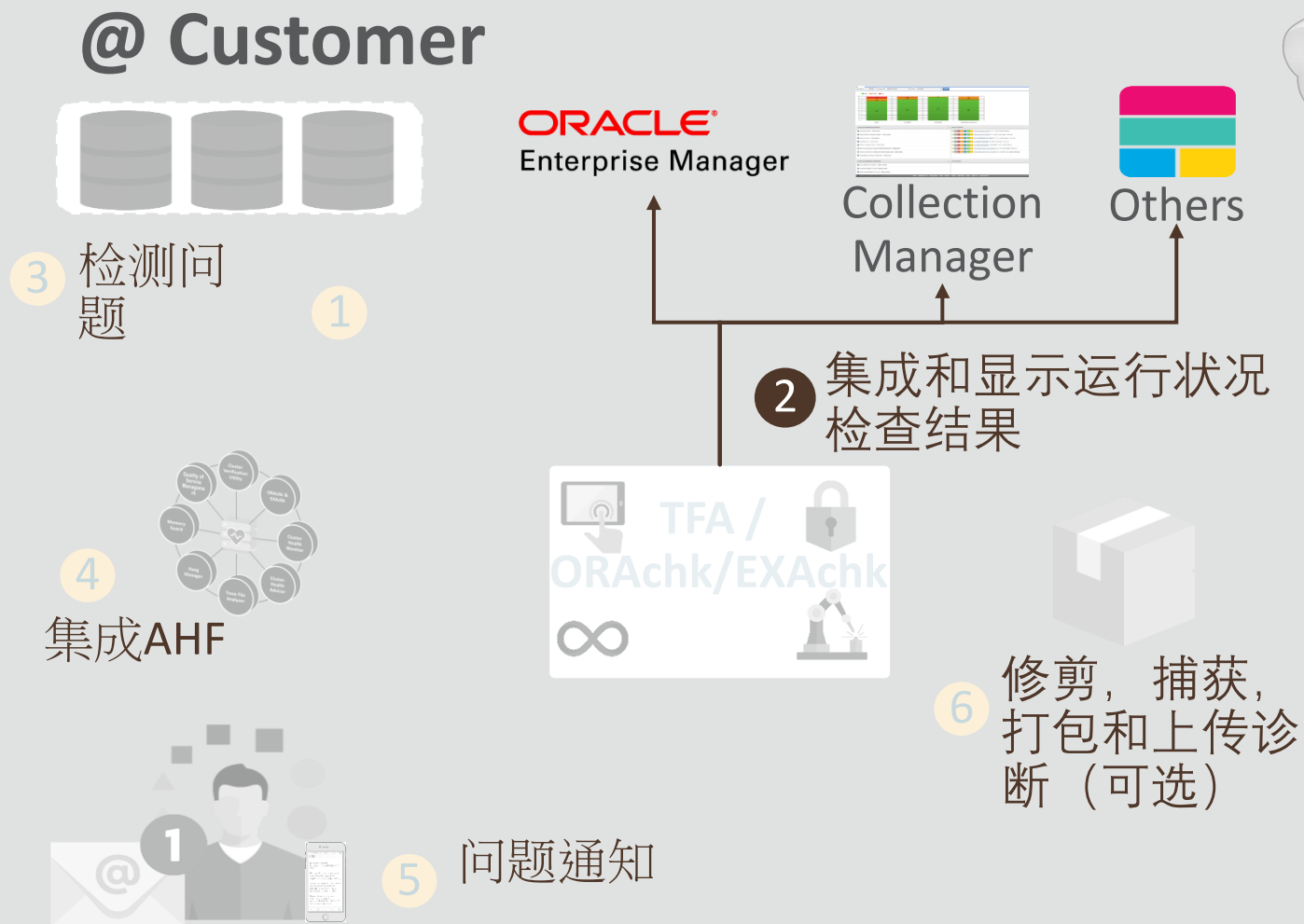
2 诊断SR并推荐解决方案



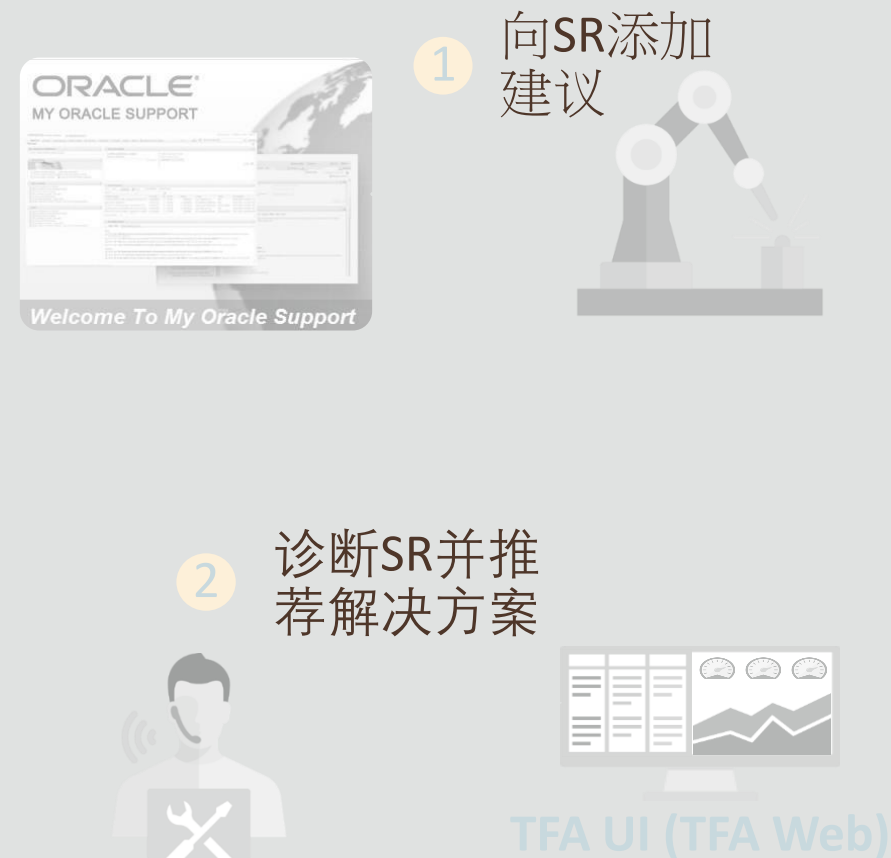
TFA UI (TFA Web)

使用TFA & ORAchk/EXAchk之后

@ Customer

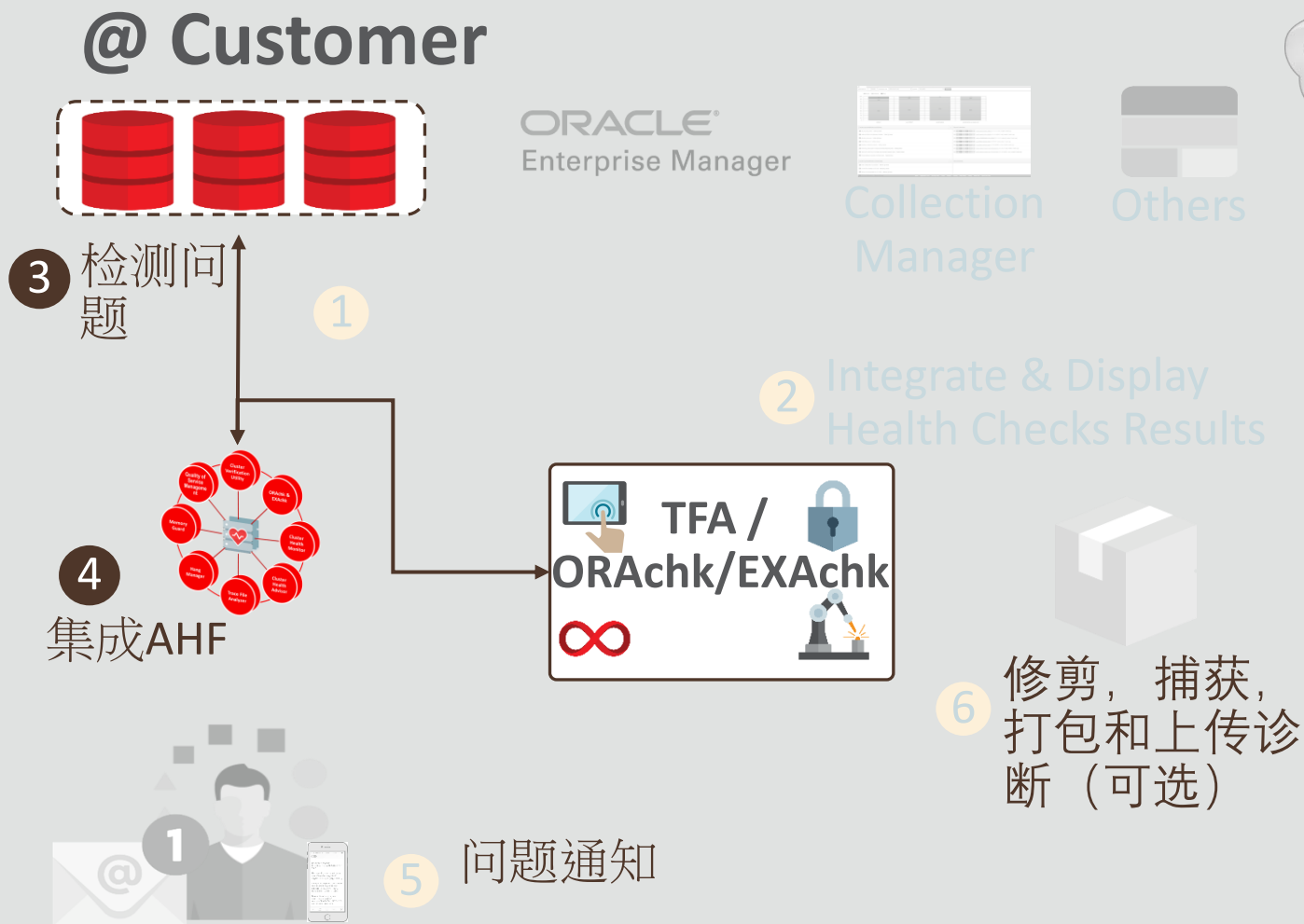


@ Oracle



使用TFA & ORAchk/EXAchk之后

@ Customer



@ Oracle



使用TFA & ORAchk/EXAchk之后

@ Customer



ORACLE®
Enterprise Manager



Collection
Manager

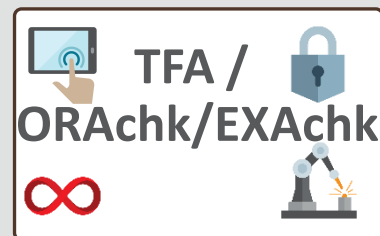


Others

3 检测问题

1

2 集成和显示运行状况检查结果



4 集成AHF



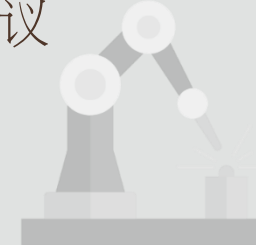
5 问题通知

6 修剪，捕获，打包和上传诊断（可选）



@ Oracle

1 向SR添加建议



2 诊断SR并推荐解决方案



TFA UI (TFA Web)

使用TFA & ORAchk/EXAchk之后

@ Customer



ORACLE®
Enterprise Manager

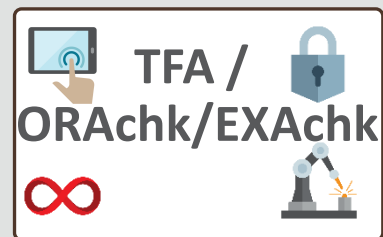
Collection
Manager

Others

3 检测问题

1

2 集成和显示运行状况
检查结果

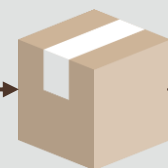


4 集成AHF



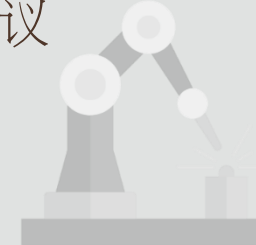
5 问题通知

6 修剪，捕获，
打包和上传诊断（可选）

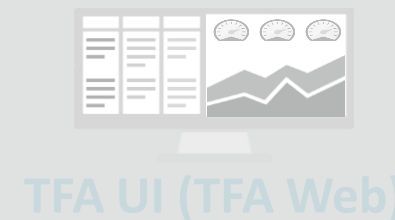


@ Oracle

1 向SR添加
建议



2 诊断SR并推
荐解决方案



TFA UI (TFA Web)

使用TFA & ORAchk/EXAchk之后

@ Customer



ORACLE®
Enterprise Manager



Collection
Manager



Others

3 检测问
题

1

2 集成和显示运行状况
检查结果



4 集成AHF



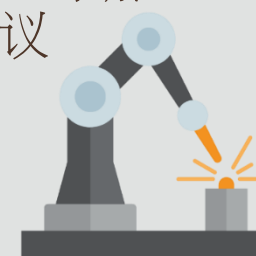
5 问题通知

@ Oracle



1

向SR添加
建议



2

诊断SR并推
荐解决方案



TFA UI (TFA Web)



使用TFA & ORAchk/EXAchk之后

@ Customer



ORACLE®
Enterprise Manager



Collection
Manager



Others

3 检测问
题

1

2 集成和显示运行状况
检查结果



4 集成AHF



5 问题通知

6 修剪，捕获，
打包和上传诊
断（可选）



@ Oracle



1

Add advice
to SR



2

诊断SR并推
荐解决方案



TFA UI (TFA Web)

Program Agenda

- 1 概览
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获取 AHF (包含ORAchk/EXAchk)

Quarterly release cycle

Follow similar release number formatting to DB

Current release 21.2

默认随GRID一起安装

Available for install from database homes

Updated via Release Updates

可以从My Oracle Support (MOS): [Doc 1513912.1](#) 下载

支持给 GI Homes打补丁



使用My Oracle Support 下载安装和升级

连续服务模式(Preferred)

1. 将zip传送到所需的机器上
2. Unzip
3. 用root用户执行 `./ahf_setup` 进行安装
 - 在all cluster nodes安装升级
 - 自动发现相关的Oracle软件和Exadata存储服务器
 - 开始监控所有发现的重大事件并在必要时收集诊断

使用My Oracle Support 下载安装和升级

独立模式安装

1. 将zip传送到所需的机器上
2. Unzip
3. 执行 `./ahf_setup -local` 进行安装

配置

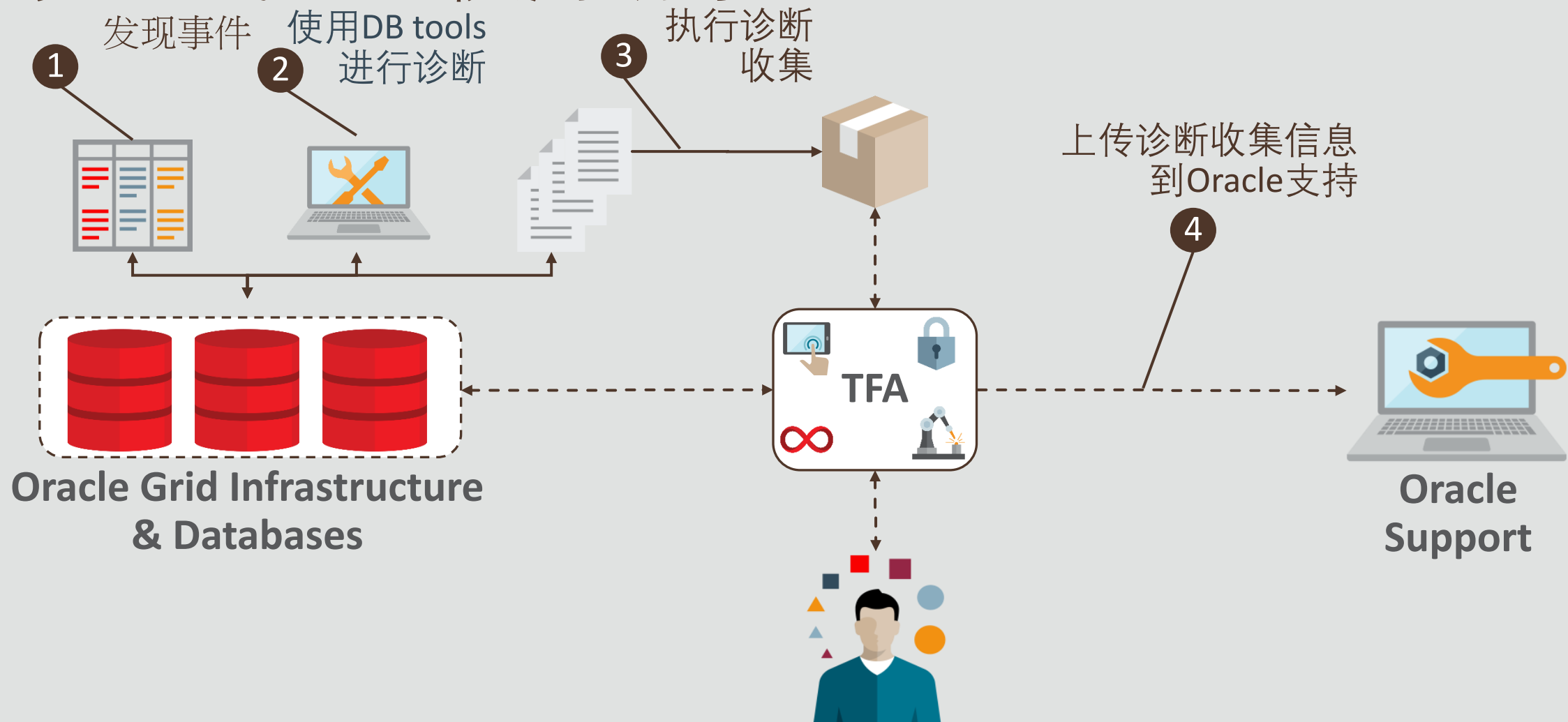
- 不需要配置
- However you can:-
 - 更改生成资料的位置
 - 更改分配给收集位置的空间大小.
 - 设置邮件通知
 - 配置日志保留和清除策略.
 - 更多的选项请参考用户指南文档。.

```
ahfctl set reposizeMB=20480
```


Program Agenda

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- 3 监测使用场景**
- 4 预防使用场景

交互式监测使用场景



TFA 命令行接口

Command line

在命令行指定所有命令选项

```
tfactl <command>
```

Menu

选择菜单导航选项，然后选择要运行的命令

```
tfactl menu
```

Shell

1. 设置和更改上下文
2. 从shell中运行命令

```
tfactl  
tfactl > database MyDB  
MyDB tfactl > oratop
```

REST

通过HTTPS调用命令

```
tfactl rest -start
```

```
https://host:port/ords/{api}
```

TFA 工具发现并分析问题

tfactl <tool>

Tool	Description
ORAchk or EXAchk	提供Oracle堆栈的运行状况检查. Oracle Trace File Analyzer will install: - • EXAchk for Engineered Systems, see document 1070954.1 for more details • ORAchk for all non-Engineered Systems, see document 1268927.2 for more details
OSWatcher	Oswatcher收集和归档操作系统指标。这些对于实例或节点驱逐和性能问题非常有用。 See document 301137.1 for more details
oratop	提供接近实时的数据库监视. See document 1500864.1 for more details.
alertsummary	提供来自所有节点的一个或多个数据库或ASM警报文件的事件摘要
ls	Lists all files TFA knows about for a given file name pattern across all nodes
pstack	Generate process stack for specified processes across all nodes
grep	Search alert or trace files with a given database and file name pattern, for a search string.
summary	Provides high level summary of the configuration

TFA 工具发现并分析问题

Tool	Description
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	显示与指定模式匹配的所有数据库和操作系统参数
dbglevel	Sets and unsets multiple CRS trace levels with one command
history	Shows the shell history for the tfactl shell
changes	报告在给定时间段内系统设置中的更改。这包括数据库参数、操作系统参数和应用的补丁
calog	Reports major events from the Cluster Event log
events	报告在日志中看到的警告和错误
managelogs	显示磁盘空间使用情况并清除ADR日志和跟踪文件
ps	Finds processes
triage	Summarize oswatcher/exawatcher data

使用TFA收集诊断信息

标准诊断信息收集

1. Run `tfactl diagcollect`

OR

Run `tfactl diagcollect -la`

OR

Run `tfactl diagcollect -fr`

2. Upload resulting zip file to SR

通过CDDC收集主机上的诊断信息

```
[root@rac19node1 rac19node1]#  
[root@rac19node1 rac19node1]# tfactl diagcollect -from "2021-10-19 09:00:00" -to "2021-10-19 09:50:00"  
WARNING - TFA Software is older than 180 days. Please consider upgrading TFA to the latest version.  
Collecting data for all nodes  
Scanning files from oct/19/2021 09:00:00 to oct/19/2021 09:50:00  
  
Collection Id : 20211019105049rac19node1  
  
Detailed Logging at : /u01/app/grid/tfa/repository/collection_Tue_Oct_19_10_50_49_CST_2021_node_all/dia  
gcollect_20211019105049_rac19node1.log  
2021/10/19 10:50:52 CST : NOTE : Any file or directory name containing the string .com will be renamed  
to replace .com with dotcom  
2021/10/19 10:50:52 CST : Collection Name : tfa_Tue_Oct_19_10_50_49_CST_2021.zip  
2021/10/19 10:50:52 CST : Collecting diagnostics from hosts : [rac19node2, rac19node1]  
2021/10/19 10:50:52 CST : Scanning of files for Collection in progress...  
2021/10/19 10:50:52 CST : Collecting additional diagnostic information...  
2021/10/19 10:50:57 CST : Getting list of files satisfying time range [10/19/2021 09:00:00 CST, 10/19/2  
021 09:50:00 CST]  
2021/10/19 10:51:09 CST : Collecting ADR incident files...  
2021/10/19 10:53:04 CST : Completed collection of additional diagnostic information...  
2021/10/19 10:53:05 CST : Completed Local Collection  
2021/10/19 10:53:05 CST : Remote Collection in Progress...  
  
-----  
|                               Collection Summary                               |  
+-----+-----+-----+-----+  
| Host      | Status           | Size  | Time |  
+-----+-----+-----+-----+  
| rac19node2 | Failed Collection |      |      |  
| rac19node1 | Completed        | 5.4MB | 133s |  
+-----+-----+-----+-----+  
  
Logs are being collected to: /u01/app/grid/tfa/repository/collection_Tue_Oct_19_10_50_49_CST_2021_node_  
all  
/u01/app/grid/tfa/repository/collection_Tue_Oct_19_10_50_49_CST_2021_node_all/rac19node1.tfa_Tue_Oct_19_  
10_50_49_CST_2021.zip  
[root@rac19node1 rac19node1]#
```


针对性收集诊断信息

— Service Request Data Collections (SRDCs)

手动收集

1. Generate ADDM reviewing [Document 1680075.1](#) (multiple steps)
2. Identify “good” and “problem” periods and gather AWR reviewing [Document 1903158.1](#) (multiple steps)
3. Generate AWR compare report (awrddrpt.sql) using “good” and “problem” periods
4. Generate ASH report for “good” and “problem” periods reviewing [Document 1903145.1](#) (multiple steps)
5. Collect OSWatcher data reviewing [Document 301137.1](#) (multiple steps)
6. Collect Hang Analyze output at Level 4
7. Generate SQL Healthcheck for problem SQL id using [Document 1366133.1](#) (multiple steps)
8. Run support provided sql scripts – Log File sync diagnostic output using [Document 1064487.1](#) (multiple steps)
9. Check alert.log if there are any errors during the “problem” period
10. Find any trace files generated during the “problem” period
11. Collate and upload all the above files/outputs to SR

一条TFA SRDC命令自动完成收集

1. Run

```
tfactl diagcollect -srdc dbperf  
[-sr <sr_number>]
```



发现和收集

使用tfactl events检查最近的错误

Events用于报告在日志中看到的警告和错误

bash-4.1# **tfactl events**

Output from host : myse

INFO :2

ERROR :2

WARNING :0

Event Timeline:

[Oct/18/2018 02:38:25.0
/scratch/app/oradb/diag
2702.trc

[Oct/18/2018 02:38:25.0
[ksprcvsp2], [159699358

[Oct/18/2018 02:38:37.0
/scratch/app/oradb/diag
2703.trc

[Oct/18/2018 02:38:37.0
[ktfbtgex-7], [1015817], [1

```
[root@rac19node2 ~]# tfactl events  
WARNING - TFA Software is older than 180 days. Please consider upgrading TFA to the latest version.
```

```
Output from host : rac19node1  
-----
```

```
Event Summary:
```

```
INFO :4
```

```
ERROR :0
```

```
WARNING :0
```

```
Event Timeline:
```

```
[Oct/19/2021 10:01:59.000]: [asm.+ASM1]: Starting ORACLE instance (normal) (OS id: 3091)
```

```
[Oct/19/2021 10:02:07.000]: [asm.+ASM1]: Reconfiguration started (old inc 0, new inc 2)
```

```
[Oct/19/2021 10:13:13.000]: [asm.+ASM1]: Starting ORACLE instance (normal) (OS id: 6636)
```

```
[Oct/19/2021 10:13:22.000]: [asm.+ASM1]: Reconfiguration started (old inc 0, new inc 2)
```

```
Output from host : rac19node2  
-----
```

```
Event Summary:
```

```
INFO :7
```

```
ERROR :5
```

```
WARNING :0
```

```
Event Timeline:
```

```
[Oct/18/2021 15:16:19.000]: [asm.+ASM2]: Starting ORACLE instance (normal) (OS id: 8916)
```

```
[Oct/18/2021 15:16:25.000]: [asm.+ASM2]: Reconfiguration started (old inc 0, new inc 2)
```

```
[Oct/18/2021 15:16:33.000]: [asm.+ASM2]: Incident details in: /u01/app/grid/diag/asm/+asm/+ASM2/incident/incdir_43480/+ASM2 ora_9032 i43480.trc
```

```
[Oct/18/2021 15:16:33.000]: [asm.+ASM2]: ORA-00600: internal error code, arguments: [kfrValA  
cd30], [DATA], [1], [4], [134], [5], [134], [], [], [], [], []
```

```
[Oct/18/2021 15:16:35.000]: [asm.+ASM2]: ORA-00600: internal error code, arguments: [kfrValA  
cd30], [DATA], [1], [4], [134], [5], [134], [], [], [], [], []
```

检查是否有更改导致了这个问题?

changes用于报告数据库的参数变化

-bash-4.1# tfactl changes

Output from host : m

[Oct/17/2018 04:54:15

[Oct/17/2018 05:12:13] Output from host : rac19node1

```
[root@rac19node1 rac19node1]# tfactl changes
WARNING - TFA Software is older than 180 days. Please consider upgrading TFA to the latest version.

[Oct/19/2021 10:13:16.346]: Parameter: fs.epoll.max_user_watches: Value: 734444 => 1140932
[Oct/19/2021 10:13:16.346]: Parameter: fs.inode-nr: Value: 37449\t1734 => 41885\t419
[Oct/19/2021 10:13:16.346]: Parameter: kernel.ns_last_pid: Value: 25854 => 7194
[Oct/19/2021 10:13:16.346]: Parameter: kernel.ptty.nr: Value: 3 => 1
[Oct/19/2021 10:13:16.346]: Parameter: kernel.random.boot_id: Value: 0160cb2c-cd3c-42d6-b8d4-0ec1e57962e1 => aaa4ce20-ccec-48dd-8dd1-e39650d8fb3f
[Oct/19/2021 10:13:16.346]: Parameter: kernel.random.entropy_avail: Value: 3126 => 3073
[Oct/19/2021 10:13:16.346]: Parameter: kernel.random.uuid: Value: 8627f9a9-e0f3-4ba6-857b-ee0c8cf97e63 => 3a793beb-b509-46f9-8f5e-d24ca996ecba
[Oct/19/2021 10:13:16.346]: Parameter: kernel.sched_domain.cpu0.domain0.max_interval: Value: 4 => 6
[Oct/19/2021 10:13:16.346]: Parameter: kernel.sched_domain.cpu0.domain0.max_newidle_lb_cost: Value: 66219 => 1178226
[Oct/19/2021 10:13:16.346]: Parameter: kernel.sched_domain.cpu0.domain0.min_interval: Value: 2 => 3
[Oct/19/2021 10:13:16.346]: Parameter: kernel.sched_domain.cpu1.domain0.max_interval: Value: 4 => 6
```


元数据搜索功能

- 列出所有事件：

```
tfactl search -json '{"data_type":"event"}
```

- 列出所有可用的数据类型：

```
tfactl search -showdatatypes
```

元数据搜索功能

- 所有存储在TFA索引中的元数据都是可搜索的：

```
tfactl search -showdatatypes | -json [json_details]
```

- 在特定日期之间搜索数据库中的所有事件：

```
tfactl search -json  
{  
  "data_type":"event",  
  "content":"oracle",  
  "database":"rac11g",  
  "from":"10/01/2018 00:00:00",  
  "to":"10/21/2018 00:00:00"  
}
```

收集 ORA-00600 SRDC

```
bash-4.1$ ./tfactl diagcollect -srdc ORA-00600
```

Enter the time of the ORA-00600 [YYYY-MM-DD HH24:MI:SS,=ALL] :

Enter the Database Name [=ALL] :

1. Oct/18/2018 02:38:37 : [ogg11204] ORA-00600: internal error code, arguments: [ktfbtgex-7], [1015817], [1024], [1015816], [], [], [], [], [], [], [], []
2. Oct/18/2018 02:38:25 : [ogg11204] ORA-00600: internal error code, arguments: [ksprcvsp2], [1596993584], [], [], [], [], [], [], [], [], [], []

Please choose the event : 1-2 [1]

收集 ORA-00600 SRDC

Selected value is : 1 (Oct/18/2018 02:38:37)

Scripts to be run by this srdc: ipspack rdahcve1210 rdahcve1120 rdahcve1110

Components included in this srdc: OS CRS DATABASE

Collecting data for local node(s)

Scanning files from Oct/17/2018 20:38:37 to Oct/18/2018 08:38:37

WARNING: End time entered is after the current system time.

Collection Id : 20181018032231myserver69

Detailed Logging at :

/scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Thu_Oct_18_03_22_31_PDT_2018_node_local/diagcollect_20181018032231_myserver69.log

2018/10/18 03:22:36 PDT : NOTE : Any file or directory name containing the string .com will be renamed to replace .com with dotcom

收集 ORA-00600 SRDC

Collection Summary			
Host	Status	Size	Time
myserver69	Completed	2MB	97s

Logs are being collected to:

/scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Thu_Oct_18_03_22_31_PDT_2018_node_local

/scratch/app/oragrid/tfa/repository/srdc_ora600_collection_Thu_Oct_18_03_22_31_PDT_2018_node_local/myserver69.tfa_srdc_ora600_Thu_Oct_18_03_22_31_PDT_2018.zip

Program Agenda

- 1 概览
- 2 安装和配置
- 3 监测使用场景
- 4 预防使用场景**

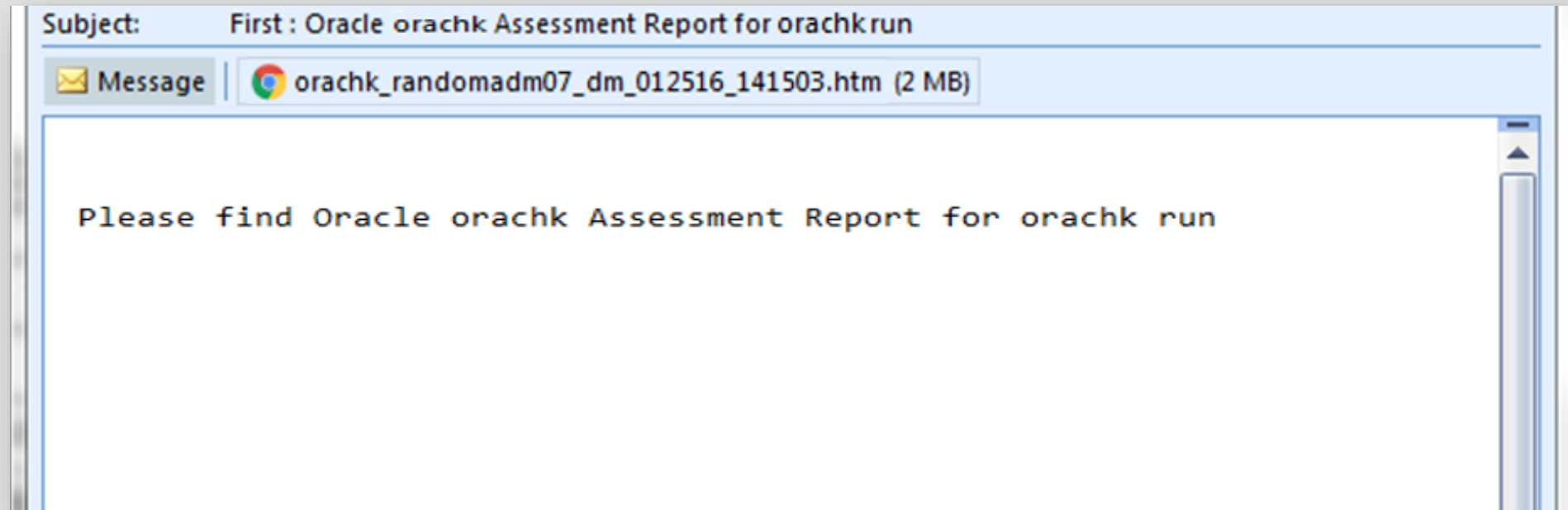


主动检测数据库问题

ORAchk/EXAchk 邮件通知

- 运行关键运行状况检查自动启动并配置
- 只需要配置您的邮件通知

```
tfactl orachk/exachk -set "NOTIFICATION_EMAIL=SOME.BODY@COMPANY.COM"
```



ORAchk/EXAchk 報告

- ☐ Show Critical checks only
- ☐ Show Failed checks only
- Show checks with the following status:
☒ Critical ☐ Fail ☐ Warning ☐ Info ☐ Pass ☐ All
- Show details of the following regions:
 - ☒ Maximum Availability Architecture (MAA) Scorecard
 - ☒ Enterprise Manager
 - ☒ Patch Recommendation
 - ☒ Skipped Checks
 - ☒ Component Elapsed Times
 - ☒ Clusterwide Linux Operating system health check(VMPScan)
 - ☒ Top 10 Time Consuming Checks
- Show details of the checks:
☐ Expand All ☒ Collapse All
- [Show Check Ids](#)
- [Remove finding from report](#)
- [Printable View](#)

Database Server

Status	Type	Message	Status On	Details
CRITICAL	OS Check	One or more network card used by clusterware do not have HOTPLUG=NO	All Database Servers	View
CRITICAL	Database Check	The RMAN snapshot control file location is not shared on all database nodes in the cluster	All Databases	View

Cluster Wide

Status	Type	Message	Status On	Details
--------	------	---------	-----------	---------

[Top](#)

Maximum Availability Architecture (MAA) Scorecard

Outage Type	Status	Type	Message	Status On	Details
CRITICAL	SQL Check	The data files should be recoverable	ogg11204	View	

配置诊断收集邮件通知

- 为检测到的任何问题设置通知邮件：

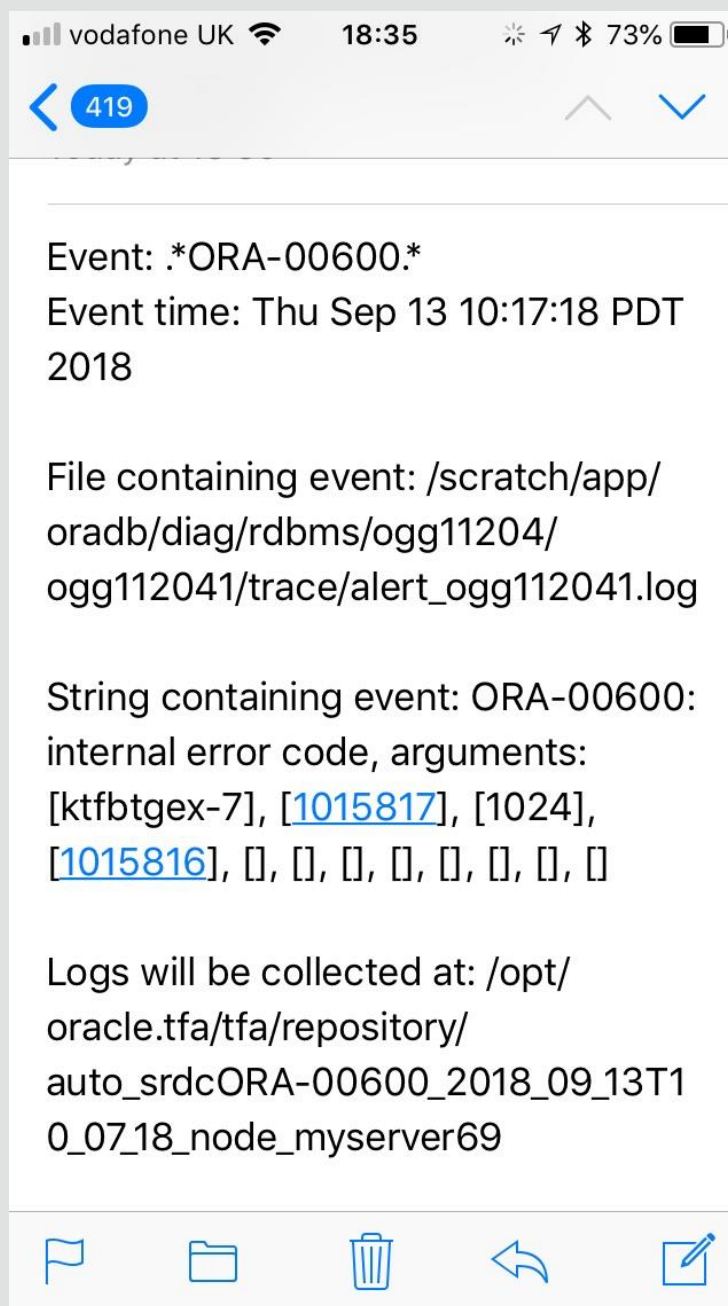
```
tfactl set notificationAddress=john.doe@oracle.com
```

- 为特定的ORACLE home设置通知电子邮件：

```
tfactl set notificationAddress=oracle:another.person@oracle.com
```



事件通知



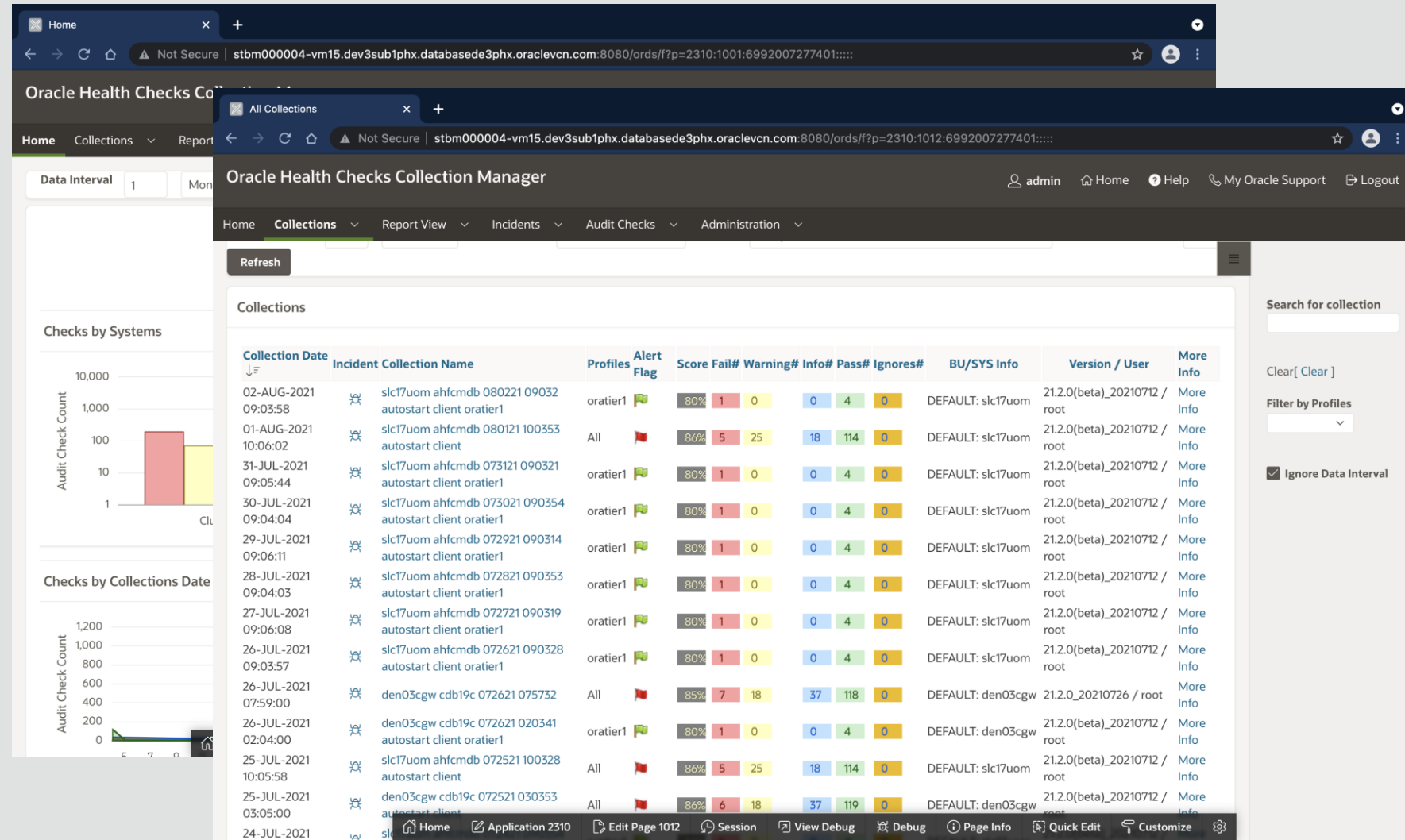
ORAchk & EXAchk 报告分析管理器 ——Collections Manager

AHF Collection Manager 21.2 requires:

=> APEX 20.2 or higher

=> ORDS 21.1 or higher

=> Oracle Database 11.2.0.4 or higher. Recommended Version: 19c.





在 MOS 分析

ORA-600自助诊断入口

ORACLE MY ORACLE SUPPORT PowerView is Off Last Login: October 8, 2021 3:13 AM UTC [Switch to Cloud Support](#)

[Dashboard](#) **Knowledge** [Service Requests](#) [Patches & Updates](#) [Community](#) [Certifications](#) [Managed Cloud](#) [CRM On Demand](#) [More...](#)  

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 **ORA-600 Troubleshooting Tool (Doc ID 1521912.1)**

ORA-600 Troubleshooting Tool

[Hide All](#) [Show All](#)

The ORA-600 Troubleshooting tool will provide recommendations to resolve ORA-600 errors by analyzing uploaded files. When a known solution is available, the tool will display the symptoms and causes which can lead to the issue and one or more suggestions for resolving the issue. If a known solution is not available, the tool will display the knowledge document which explains the ORA-600 error and provides a list of resolved bugs for the ORA-600 error.

Benefits of using the ORA-600 Troubleshooting tool:

- Analyzes uploaded files to provide recommendations when a known solution is available
- When a known solution is unavailable, points to knowledge document for the specified ORA-600 error
- Troubleshooting report can be saved for later use
- Create SR option available which will automatically populate many of the SR fields

Accessing the ORA-600 Troubleshooting Tool

Click [here](#) to access the Troubleshooting Tool (Standalone Version).

- **Note:** The Troubleshooting Tool can also be accessed during SR creation when the "ORA-600" error AND the arguments is entered in the "Error Codes" field. This is referred to as the "Create SR Version" below.
- **Note:** Some tool features are only available with the Standalone Version and are designated as "Standalone Version Only" below.

Using the Troubleshooting Tool

Dashboard

Knowledge

Service Requests

Patches & Updates

More... ▾



Give Feedback...

ORA-00600-Troubleshooting Tool



Describe Problem



Upload Files



Review Recommendations

Back

Step 1 of 3

Next

Cancel

What is the Problem?

What would you like to do ?

☒ Troubleshoot a new issue

☐ Review a troubleshooting report

 ▾

Tip

This tool will provide recommendations to resolve ORA-600 issues based on details found in the uploaded IPS or Trace/Incident files. Click [Document 1521912.1](#) to see why you should use this tool!

To fully benefit from this tool all requested files should be uploaded to this tool. For details regarding the requested files and how to obtain them, see [Document 1521912.1](#) (ORA-600 Troubleshooting Tool).

If you don't have a trace file please use the [Document 153788.1](#) (ORA-600 / ORA-7445 Error Look-up Tool).

Press the NEXT button to continue.

Guided Resolution is always available from



ORA-00600-Troubleshooting Tool

Describe Problem

Upload Files

Review Recommendations

[Back](#)

Step 2 of 3

[Next](#)[Cancel](#)

Upload Files

Choose the radio button for one of the below sets of requested files to use for troubleshooting

-Diagnostic files will be analyzed and a personalized solution will be provided if exists

-SR fields will be automatically populated if you choose to create an SR

Click the UPLOAD button after choosing files from your local file system to use for troubleshooting.

Refer to [Document 1521912.1](#) to see why you should use this tool.

Note: Do not submit any personal information of European residents, protected health information subject to HIPAA, or any other sensitive personal information (such as payment card data) that requires protections greater than those specified in the [Oracle GCS Security Practices](#).

Select File Group ☒ * TFA package (Recommended approach.) [?](#) [选择文件](#) 未选择任何文件

Select File Group ☐ * IPS Package [?](#) [选择文件](#) 未选择任何文件

Select File Group ☐ * tracefile [?](#) [选择文件](#) 未选择任何文件

Select File Group ☐ Alertlog(Optional) [?](#) [选择文件](#) 未选择任何文件

[Upload](#)

Tip

To obtain the most accurate diagnosis, upload the requested files.

Ensure you are uploading the correct files from the instance in which you are having issues. File upload combinations are:

- TFA is the recommended approach and will gather all relevant diagnostics for the problem using one command "**tfactl diagcollect -srdc ora600**". For more information refer to TFA Document [Document 2165632.1](#)

- Incident Packaging Service (IPS) package or any archive file containing trace files with the error
- Alert log AND Incident dump file (Release 11g or higher)/Trace file (Prior to Release 11g)

For details regarding the requested files and how to obtain them, see [Document 1521912.1](#) (ORA-600 Troubleshooting Tool).

If you don't have a trace file please use the [Document 153788.1](#) (ORA-600 / ORA-

Dashboard

Knowledge

Service Requests

Patches & Updates

More... ▾



Give Feedback...

ORA-00600-Troubleshooting Tool

☐ Describe Problem
 ☐ Upload Files
 ☒ **Review Recommendations**

Troubleshoot a new issue: ORA-00600

Enter a report name and click 'Save'

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ORA-600 [ktfbtgex-7] "Bitmap Managed Extent goes past end of file" (Doc ID 178643.1)

Modified: 04-Aug-2018 Type: REFERENCE



Note: For additional ORA-600 related information please read [Document:1092832.1](#)

This article represents a partially published OERI note.

It has been published because the ORA-600 error has been reported in at least one documented bug and/or confirmed Support Related Article.

Therefore, the SUGGESTIONS section of this article may help in terms of identifying the cause of the error.

Tip

Based on the data available, it was not possible to identify a known bug or solution. A knowledge document containing details for the error is provided when available. In most cases the knowledge document will contain a list of known bugs which have been resolved for the error.

For further assistance click on the 'Create SR' button below to log an SR with Oracle Support.

Help us improve this tool by providing feedback using the feedback form on this page.

AHF下载地址

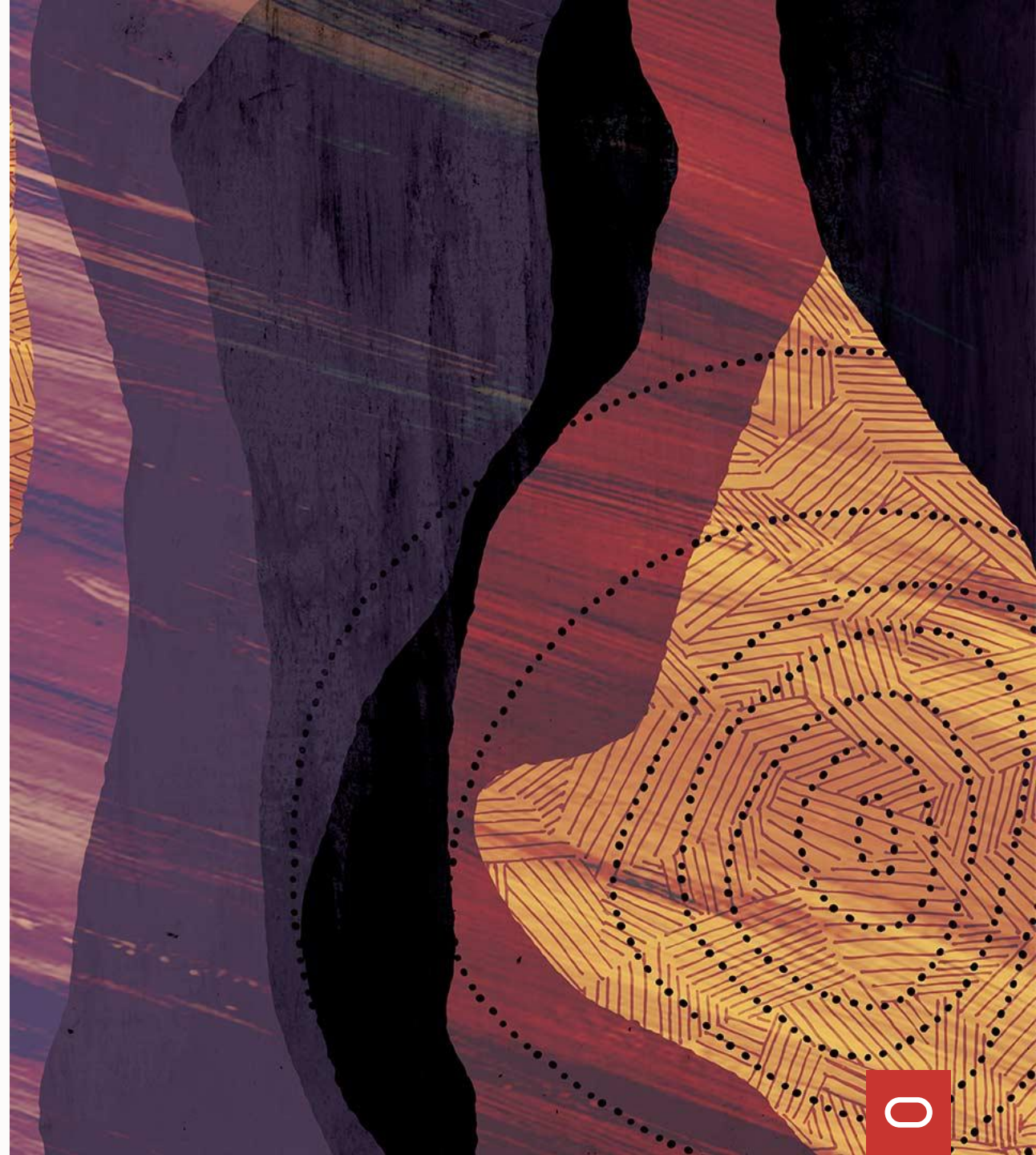
- [Autonomous Health Framework \(AHF\) - Including TFA and ORAchk/EXAchk \(Doc ID 2550798.1\)](#)

The screenshot shows the landing page for the Autonomous Health Framework (AHF). At the top is a dark navigation bar with links: START HERE, WHAT'S INCLUDED, WHAT'S NEW, USER GUIDE, FAQ, and SUPPORT. Below this is a large green banner with the text "Autonomous Health Framework (AHF) Trace File Analyzer (TFA) & ORAchk/EXAchk" and the tagline "The Diagnostic Framework Every Good DBA Needs". The main content area features four key benefits, each with an icon and a description:

- AUTOMATED RISK REDUCTION** (Warning icon): Automatic proactive compliance checks warn of the most impactful problems before they impact you.
- DIAGNOSTICS AT TIME OF FAILURE** (Checklist icon): Ensures you always get everything needed for resolution.
- SINGLE DIAGNOSTIC INTERFACE** (Hand cursor icon): No need to learn the commands for many different tools.
- ONE INTEGRATED FRAMEWORK** (Puzzle pieces icon): All the diagnostic tools you need in one bundle that works together.

In the center, there is a red "Download AHF" button and the text "Production version 21.2.3 now available".

谢谢!





ORACLE