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RDA 8.x 数据收集使用总结

Parnassus
诗 檀

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目录

文档控制	2
变更记录	2
审阅人	2
审批人	2
文档分发	2
目录	3
简介	4
本文目的	4
相关参考	4
RDA 数据收集	5
RDA 下载	5
RDA 安装	5
RDA 使用	7
巡检数据收集 Workaround	15
AWR 抽取	15
其他问题	17
未解决的问题	17
已解决的问题	17
更多资源	18
最后	18

简介

本文由 Parnassusdata 工作人员编写及使用,如有问题或更新汇报,请访问内部库查找对应文档号。

本文目的

本文主要是对 RDA 8.x 版本的使用步骤及遇到的问题进行总结,也会对巡检数据收集时所需用到的查询进行附录收集。

相关参考

1. Remote Diagnostic Agent (RDA) - Getting Started (Doc ID 314422.1)
2. Remote Diagnostic Agent (RDA) - RAC Cluster Guide (Doc ID 359395.1)
3. Remote Diagnostic Agent (RDA) - Main Man Page (Doc ID 330364.1)
4. Remote Diagnostic Agent (RDA) - FAQ (Doc ID 330363.1)
5.
<http://www.askmaclean.com/archives/setup-oracle-rda-remote-diagnostic-agent.html>

RDA 数据收集

RDA 下载

可通过 MOS 查询 Remote Diagnostic Agent (RDA) 相关信息。
通过相关文档中提供的下载链接下载最新版本：

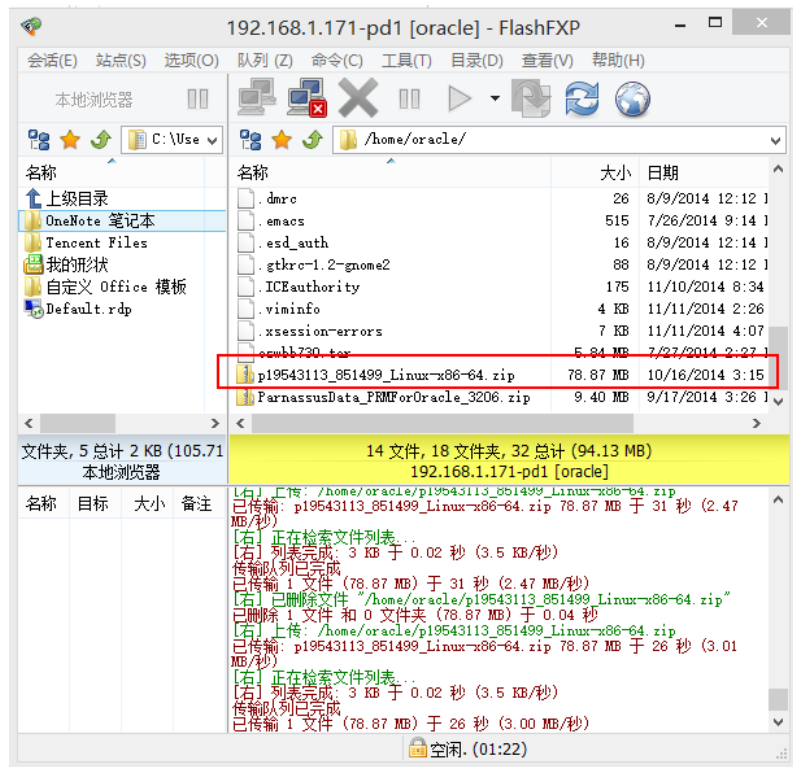
Remote Diagnostic Agent (RDA) - Getting Started (Doc ID 314422.1)

RDA Bundle (Released September, 9 2014)	
Platform	Download File
Apple Mac OS X	Download Zip File
HP OpenVMS	Download Zip File
HP Tru64	Download Zip File
HP-UX Itanium	Download Zip File
HP-UX PA-RISC (32-bit)	Download Zip File
HP-UX PA-RISC (64-bit)	Download Zip File
IBM AIX on POWER Systems (32-bit)	Download Zip File
IBM AIX on POWER Systems (64-bit)	Download Zip File
IBM Dynix/Ptx	Download Zip File
IBM Linux on POWER	Download Zip File
IBM zSeries Based Linux	Download Zip File
Linux Itanium	Download Zip File
Linux x86 (32-bit)	Download Zip File
Linux x86 (64-bit)	Download Zip File
Microsoft Windows (32-bit)	Download Zip File
Microsoft Windows (64-bit)	Download Zip File
Sun Solaris Intel (32-bit)	Download Zip File
Sun Solaris Intel (64-bit)	Download Zip File
Sun Solaris SPARC (32-bit)	Download Zip File
Sun Solaris SPARC (64-bit)	Download Zip File

请确认所要使用的数据库对应服务器操作系统平台，以下载正确版本。

RDA 安装

1. ftp 上传 RDA 安装文件至临时目录(节点 1)。
(这里是 p19543113_851499_Linux-x86-64.zip)



2. 检查用户组权限

使用 RDA 的用户最好为软件拥有者

\$ id oracle

```
[oracle@pd1 ~]$ id oracle
uid=501(oracle) gid=6000(oinstall) groups=6000(oinstall),5001(asmdba),6001(dba)
```

3. 以用户 oracle 登陆，解压文件目录并增加执行权限

\$ cd ~

\$ mkdir rda

\$ cd rda

\$ unzip p19543113_851499_Linux-x86-64.zip

\$ cd ~/rda/rda

\$ chmod +x rda.*

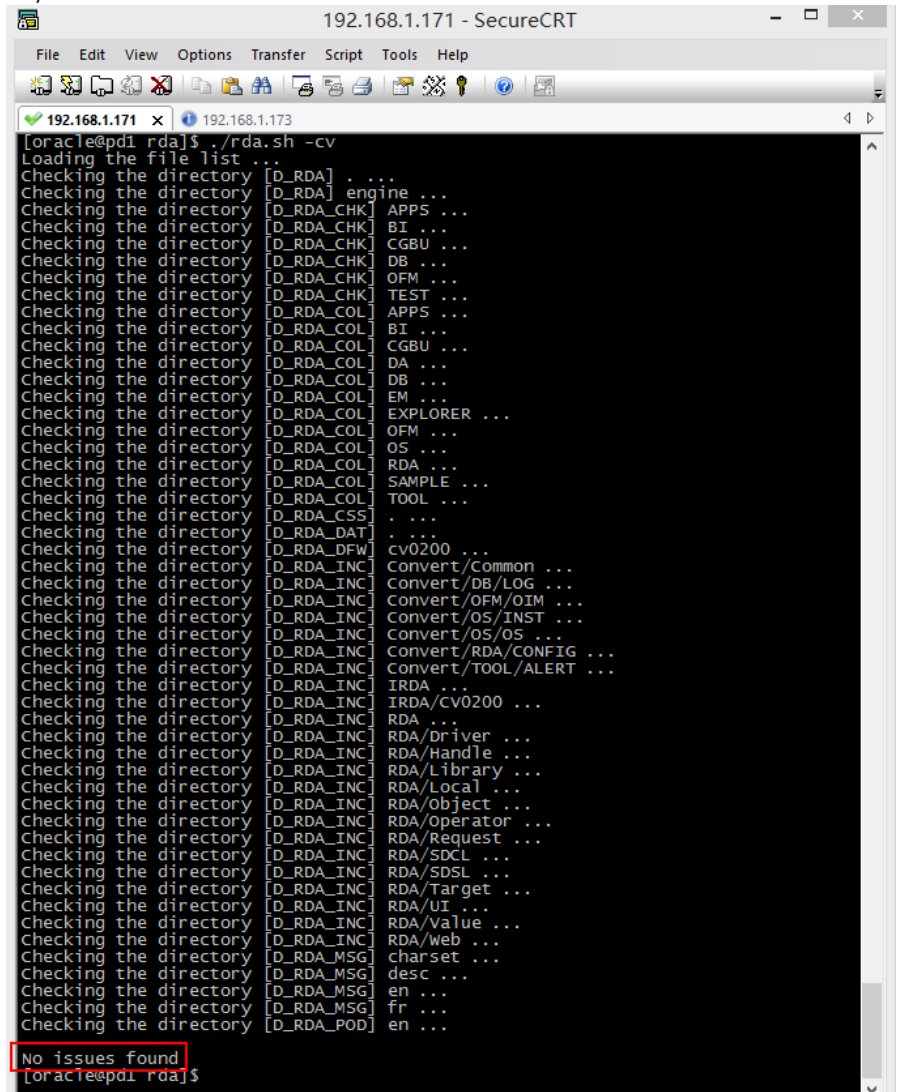
```
[oracle@pd1 rda]$ pwd
/home/oracle/rda/rda
[oracle@pd1 rda]$ ls
admin      dfw          irda.pl     rda.cmd     README_Unix.txt  sdci.pl
ccr        DISCLAIM.txt  msg         rda.com     README_upgrade.txt  sdci.sh
collect   engine       modules     rda.pl     README_VMS.txt    tools
convert   hcve         Pod         rda.sh     README_windows.txt
da         IRDA         RDA         README_irda.txt  sdci.cmd
[oracle@pd1 rda]$ chmod +x rda.*
[oracle@pd1 rda]$
```

\$ ls -l rda.*

```
[oracle@pd1 rda]$ ls -l rda.*
-r-xr-xr-x 1 oracle oinstall 9099 Aug 29 10:49 rda.cmd
-r-xr-xr-x 1 oracle oinstall 7768 Aug 29 10:49 rda.com
-r-xr-xr-x 1 oracle oinstall 39260 Aug 29 10:49 rda.pl
-r-xr-xr-x 1 oracle oinstall 10490 Aug 29 10:49 rda.sh
[oracle@pd1 rda]$
```

4. 检查所解压 RDA 文件完整性

\$./rda.sh -cv



RDA 使用

使用前节点检查

1. 查看节点设置

\$ cat /etc/hosts

```
[oracle@pd1 rda]$ cat /etc/hosts
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1        localhost.localdomain localhost
::1             localhost6.localdomain6 localhost6

192.168.1.171   pd1           pd1.oracle.com
192.168.1.172   pd1-vip       pd1.oracle.com

192.168.1.173   pd2           pd2.oracle.com
192.168.1.174   pd2-vip       pd2.oracle.com

192.168.1.176   pd-cluster    pd-cluster-scan

172.168.1.191   pd1-priv      pd1.oracle.com
172.168.1.192   pd2-priv      pd2.oracle.com

[oracle@pd1 rda]$
```

2. ssh oracle@<node> env 检查节点连接

\$ ssh oracle@pd2 env

```
[oracle@pd1 rda]$ ssh oracle@pd2 env
SHELL=/bin/bash
SSH_CLIENT=192.168.1.171 11720 22
USER=oracle
LS_COLORS=
MAIL=/var/mail/oracle
PATH=/usr/kerberos/bin:/usr/local/bin:/bin:/usr/bin
PWD=/home/oracle
LANG=en_US.UTF-8
SSH_ASKPASS=/usr/libexec/openssh/gnome-ssh-askpass
SHLVL=1
HOME=/home/oracle
LOGNAME=oracle
SSH_CONNECTION=192.168.1.171 11720 192.168.1.173 22
LESSOPEN=|/usr/bin/lesspipe.sh %s
G_BROKEN_FILENAMES=1
_=/bin/env
[oracle@pd1 rda]$
```

RDA DOMAIN 检查

运行 RDA 会对当前 DOMAIN 进行检查，一般先从 hostname 上找。如果找不到，RDA 在之后配置和运行时会 Hang 住。

```
[root@pd1 ~]# hostname
pd1.oracle.com
[root@pd1 ~]#
```

为了以防万一，可以提前对 RDA_DOMAIN 环境变量设置值，如果不知道 domain 应该是什么，或者根本就没有。那么随便设置即可：

```
$ export RDA_DOMAIN=dummydomain
只要此环境变量有值，就可以过检查了。
```

建立信息收集配置文件

由于 RDA 可以支持 Oracle 的许多产品，不仅仅对于 Oracle

Database 产品。因此，对应不同的产品，所需收集的信息范围也有所不同。因此，在真正运行 rda 进行收集前，需要进行设置以生成 output.cfg 文件，之后以此文件限定的范围进行收集。

可以使用以下命令查看 RDA 可支持的模块：

```
$. /rda.sh -L module
```

纯手工建立配置文件

如果对 rda 信息收集的范围希望进行全手工初始化配置，可以使用如下命令：

```
$. /rda.sh -S
```

命令会产生很多交互式问题，你需要回答问题后才能生成配置文件。

使用 profile 建立配置文件

为了大量简化此步骤，RDA 预置了很多 profile。对应的 profile 已经帮你选定了一些对应场景所需的收集 module。

1) 首先查看 RDA 可支持的 profile：

```
$. /rda.sh -L profile
```

```
[oracle@pd1 rda]$ ./rda.sh -L profile
Available profiles:
AS10g Oracle Application Server 10g problems
AS10g_Identity Oracle Identity Management 10g problems
AS10g_IdentityFed Oracle Identity Federation 10g problems
AS10g_MidTier Oracle Application Server 10g Middle Tier
problems
AS10g_Repository Oracle Application Server 10g metadata
repository problems
AS10g_WebTier Oracle Application Server 10g WebTier
problems
AS_BackupRecovery Oracle Application Server backup/recovery
problems
Act Oracle Application Overview
AppsCheck Equivalent to Apps Check
Apps_DB_Assessment Oracle Applications Database assessment
collections
AsmFileSystem Oracle ASM Cluster File System problems
Asm_Assessment Oracle ASM assessment collections
Bam Business Activity Monitoring problems
Beehive Oracle Beehive problems
CloudControl12c Cloud Control 12c problems
ClusterFileSystem Oracle Cluster File System problems
Com_ASAP Oracle Communications ASAP problems
Com_CM Oracle Communications Configuration Manager
problems
Com_IPSA Oracle Communications IPSA Software
problems
Com_NCC Oracle Communications Network charging and
Control problems
Com_ND Oracle Communications Network Discovery
problems
Com_NI Oracle Communications Network Integrity
problems
Com_NM Oracle Communications Network Mediation
problems
Com_OCSG Oracle Communications Service Gatekeeper
problems
Com_OSM Oracle Communications Order and Service
Management problems
Com_PS Oracle Communications Policy Services
problems
Com_SC Oracle Communications Service controller
problems
Com_SC_Db Oracle Communications Service controller
with database problems
Com_UIM Oracle Communications Unified Inventory
Management problems
DB10g Oracle Database 10g problems
DB11g Oracle Database 11g problems
DB12c Oracle Database 12c problems
DB8i Oracle Database 8i problems
DB9i Oracle Database 9i problems
DB_Assessment Oracle Database assessment collections
```

2) 如果不知道对应 profile 所选定的数据收集 module, 使用以下命令查看:

\$./rda.sh -M -p DB11g

```
[oracle@pd1 rda]$ ./rda.sh -M -p DB11g
NAME
Profile DB11g - Oracle Database 11g problems

MODULES
The DB11g profile uses the following modules:
DB:DCdb Controls Oracle RDBMS Data Collection
DB:DCdba Collects Oracle RDBMS Information
DB:DCdbm Collects Oracle RDBMS Memory Information
DB:DCdnfs Collects Direct NFS Information
DB:DClog Collects Oracle Database Trace and Log Files
DB:DCsp Collects SQL*Plus/iSQL*Plus Information
EM:DCagt Collects Enterprise Manager Agent Information
EM:DCdbc Collects Database Control Information
EM:DCgrid Controls Grid Control Data Collection
OS:DCinst Collects the Oracle Installation Information
OS:DCnet Collects Network Information
OS:DCnet Collects Oracle Net Information
OS:DCos Collects the Operating System Information
OS:DCperf Collects Performance Information
OS:DCprof Collects the user Profile

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reserved.

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Other names may be trademarks of their respective owners.
[oracle@pd1 rda]$
```

这里我们选用 profile DB11g 来设置配置文件。

3) 运行以下命令生成配置文件

\$./rda.sh -vX Rda start CLOUD -p DB11g

```
Select the mode that you want to install Oracle Configuration Manager in
Default home /s01/oracle/app/oracle/product/11.2.0/dbhome_1
  C Connected Mode
  D Disconnected Mode
Enter the letter corresponding to your choice
Hit "Return" to accept the default (C)
> D

Do you want to install OCM Database collection scripts (Y/N)?
Hit "Return" to accept the default (Y)
> N

Do you want RDA to configure OCM now (Y/N)?
Hit "Return" to accept the default (Y)
> N
```

需要您耐心回答一些问题，大多数默认即可(其中关于 OCM 方面的设置都不需要)，有些也需要你回答，如 pd2 的 SID:

```
oracle@pd1:~/rda/rda

Enter the Oracle SID to be analyzed on the node pd1
Hit "Return" to accept the default (PROD1)
>

-----
Requesting information for node pd2
-----

Enter the Oracle home to be analyzed on the node pd2
Hit "Return" to accept the default
(/s01/oracle/app/oracle/product/11.2.0/dbhome_1)
>

Enter the Oracle SID to be analyzed on the node pd2
> PROD2

- RDA:DCremote ...

RAC Setup Summary
-----
Nodes:
. NOD001 pd1/PROD1
. NOD002 pd2/PROD2
2 nodes found
[oracle@pd1 rda]$
```

这样 output.cfg 就生成好了。

```
oracle@pd1:~/rda/rda

[oracle@pd1 rda]$ ls
admin      engine  output.cfg  README_irda.txt  sdci.sh
ccr        hcve    Pod         README_Unix.txt  temp
collect    IRDA    RDA         README_upgrade.txt  tools
Convert    irda.pl rda.cmd     README_VMS.txt
da         msg     rda.com     README_Windows.txt
dfw        modules rda.pl      sdci.cmd
DISCLAIM.txt  output  rda.sh      sdci.pl
[oracle@pd1 rda]$ ls -l output.cfg
-rw-r----- 1 oracle oinstall 13335 Nov 10 20:28 output.cfg
[oracle@pd1 rda]$
```

启动 RDA 数据收集

使用以下命令启动 RDA 数据收集：

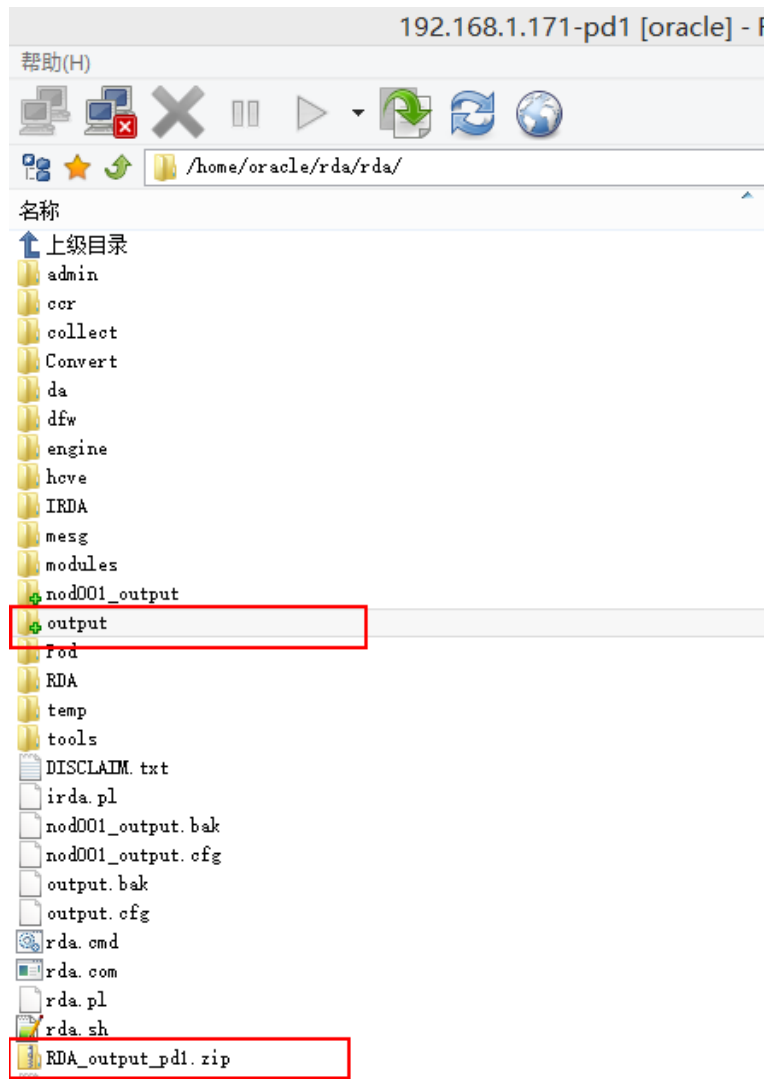
```
./rda.sh -v -e TRC/TRACE=1
```

对多个节点数据收集完后会有如下信息,收集后的文件压缩包会被传到命令执行的节点(这里是节点 1).

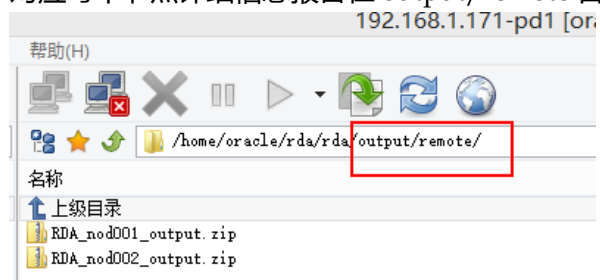
```
[oracle@pd1 rda]$ ./rda.sh -v -e TRC/TRACE=1
Collecting diagnostic data ...
-----
RDA Data Collection Started 10-Nov-2014 21:28:09
-----
Processing RDA.BEGIN module ...
  Inside BEGIN module, testing the RDA engine code build
  Inside BEGIN module, testing the report directory
  Inside BEGIN module, testing the module targets
  Inside BEGIN module, launching parallel executions
Processing RDA.CONFIG module ...
  Inside CONFIG module, listing oracle homes
  Inside CONFIG module, getting oracle home inventory (can take time)
Processing RDA.REMOTE module ...
NOD001: Detecting storage type
NOD001: Running RDA command
NOD002: Detecting storage type
NOD002: Installing RDA software
NOD002: Running RDA command
NOD002: Transferring report package
NOD001: Transferring report package
Processing RDA.END module ...
  Inside END module, gathering system information
  Inside END module, getting CPU information (linux)
  Inside END module, getting memory information (linux)
  Inside END module, producing the file catalog
  Inside END module, producing target overview
  Inside END module, waiting for parallel execution completion
  Inside END module, producing setting overview
-----
RDA Data Collection Ended 10-Nov-2014 21:30:56
-----
```

相关文件会被放在 output 文件夹下。

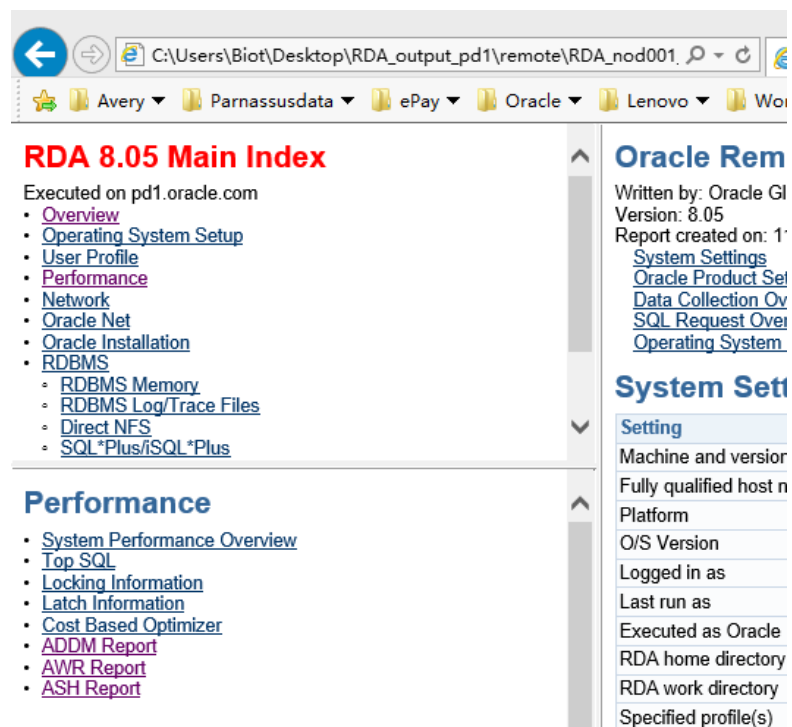
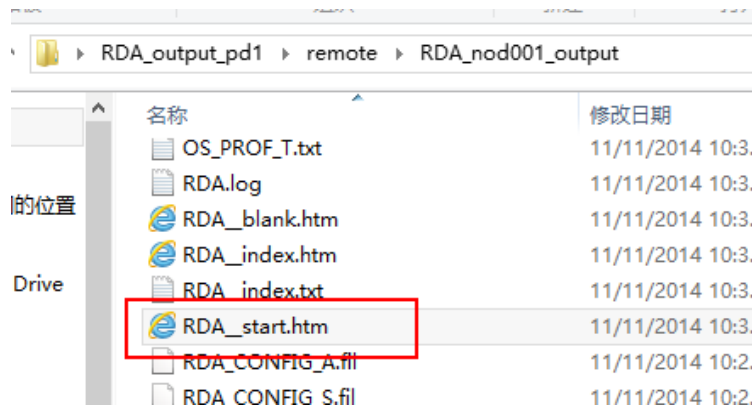
整个 output 会被 zip 成 RDA_output_<host>.zip.



对应每个节点详细信息报告在 output/remote 目录中。



解压后，可以访问 RDA_start.htm 来查看。



注意: 如果节点正常工作但 ssh 访问延时很长, 这可能会导致远程数据收集失败, 这时候则可以尝试使用以下命令来避免 ssh timeout 并进行数据收集:

```
$. /rda.sh -vC RDA.REMOTE set
```

巡检数据收集 Workaround

AWR 抽取

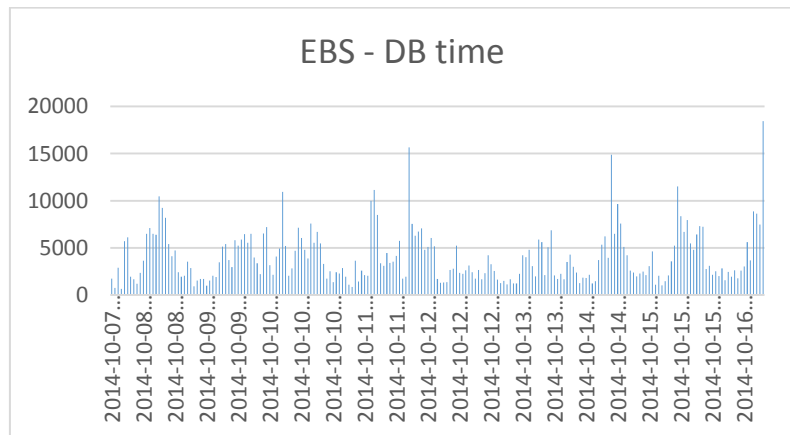
由于RDA 仅仅收取当时的AWR报告。因此对于性能检查来说，这些数据还远远不够。

因此我们需要使用以下命令来统计时间间隔内的指标值：

```
alter session set nls_date_format='dd-mon-yy';
set lines 160 pages 1000
col date_time heading 'Date time' for a40
col stat_name heading 'Statistics Name' for a25
col time heading 'Time (s)' for 99,999,999,999
prompt "Enter the date in DD-Mon-YY Format and Stats you
want to trend like 'DBtime', 'DB CPU', 'sql execute elapsed
time', 'PL/SQL execution elapsed time','parse time
elapsed', 'background elapsed time'"
WITH systimemodel AS
  (select sn.begin_interval_time begin_interval_time,
         sn.end_interval_time end_interval_time,
         st.stat_name stat_name,
         st.value e_value,
         lag(st.value, 1) over(order by st.snap_id)
         b_value
   from DBA_HIST_SYS_TIME_MODEL st, dba_hist_snapshot
   sn
  where trunc(sn.begin_interval_time) > sysdate -10
     and st.snap_id = sn.snap_id
     and st.dbid = sn.dbid
     and st.instance_number = sn.instance_number
     and st.dbid = (select dbid from v$database)
     and st.instance_number = (select instance_number
                                from v$instance)
     and st.stat_name = 'DB time')
SELECT      to_char(BEGIN_INTERVAL_TIME, 'yyyy-mm-dd
hh24:mi:ss') ||
           to_char(END_INTERVAL_TIME, '~ hh24:mi:ss')
```

```
date_time,  
    stat_name,  
    round((e_value - nvl(b_value, 0)) / 1000000) TIME  
FROM systimemodel  
WHERE (e_value - nvl(b_value, 0)) > 0  
AND nvl(b_value, 0) > 0  
/
```

然后可以使用工具制图，通过直观的方式，找到数据库高峰时段。
抓取对应的 AWR 报告进行有针对性的分析检查。



其他问题

未解决的问题

问题号	问题描述	解决方案	日期

已解决的问题

问题号	问题描述	解决方案	解决日期

更多资源

技术资源: <http://www.parnassusdata.com/resources/>
技术支持: service@parnassusdata.com
销售: sales@parnassusdata.com
下载 PRM FOR ORACLE 灾难恢复软件: <http://www.parnassusdata.com/>
联系诗檀软件: <http://www.parnassusdata.com/zh-hans/contact>

最后

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