Hand Enterprise Solutions

舍得酒业SRM正式环境\_数据库备份手册

作者: 郑宇婷

建档日期: 2019/07/15

上次更新:

控制号:

版本:  1 .0

1. **Control Number** and **Version** are marked by a Word Bookmark so that they can be easily reproduced in the header and footer of documents. When you change either of these values, be careful not to accidentally delete the bookmark. You can make bookmarks visible by selecting Tools->Options匳iew and checking the Bookmarks option in the Show region

2019年07月

上海汉得信息技术股份有限公司



文档控制

**记录更改**

| 日期 | 作者 | 版本 | 文档状态 | 更改参考 |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| 2019/07/15 | 郑宇婷 | 1.0 | Draft | 创建 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**审阅人**

| 姓名 | 职位 |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**分发**

| 拷贝号 | 姓名 | 职位 |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. The copy numbers referenced above should be written into the **Copy Number** space on the cover of each distributed copy. If the document is not controlled, you can delete this table and the **Copy Number** label from the cover page.

(9-Dec-96)

文档目录

[文档控制 2](#_Toc2630950)

[文档目录 3](#_Toc2630951)

[版本声明 4](#_Toc2630952)

[1 概述 5](#_Toc2630953)

[1.1 备份内容 5](#_Toc2630954)

[1.2 备份分类 5](#_Toc2630955)

[2 备份策略 6](#_Toc2630956)

[3 备份方案 7](#_Toc2630957)

[3.1 编写备份脚本 7](#_Toc2630958)

[3.2 设置定时任务 11](#_Toc2630959)

(9-Dec-96)

版本声明

数据库服务器操作系统：（RAC第二节点）

CentOS release 6.9 (Final)

Linux SRM-DB 2.6.32-696.16.1.el6.x86\_64 #1 SMP Wed Nov 15 16:51:15 UTC 2017 x86\_64 x86\_64 x86\_64 GNU/Linux

数据库：

Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production

1. 概述

本备份策略只针对舍得酒业SRM正式环境数据库，不包括操作系统及其他系统的备份。

本备份策略主要是以磁盘作为备份介质。

* 1. 备份内容

本备份策略备份的数据，是指舍得酒业SRM正式环境数据库的全部数据。建议采用RMAN热备的方式，使用控制文件执行数据库的备份。

* 1. 备份分类

本备份策略所提到的备份是指数据库的增量备份，包括0级增量备份和1级增量备份两种。

1. 备份策略

针对舍得酒业正式环境系统运行情况及特点 ，我们做出如下基本的备份策略，本策略基于如下原则：

1. 保证系统可恢复性，数据完整性。
2. 尽量减少日常工作量。
3. 尽量减少误操作的可能

将来,随着舍得酒业正式环境应用的发展和变化，可能需要更新此备份策略。

备份策略如下：

1. 所有备份，都应作备份记录，形成备份历史文档；备份操作员应定期提交此文档给相关上级领导做检查；每隔一段时间，还应由其他人员检查实际的备份结果是否与备份记录相一致。
2. 备份的操作应采用script执行方式，减少人为操作的失误。
3. 备份的操作均采用备份到磁盘的方式进行。
4. 舍得酒业正式环境进行增量备份，包括0级增量备份和1级增量备份两种。
5. 0级增量备份遵循如下规则：
   1. 备份周期为每周一次，时间点安排在每周六的凌晨00:00。
   2. 备份内容为数据库的所有数据。
   3. 备份方法：运行RMAN脚本，进行0级备份。
   4. 磁盘保留30天的所有备份。
6. 1级增量备份遵循如下规则：
   1. 备份周期为每天一次，时间点安排在除周六外每天的凌晨00:00。
   2. 备份内容为数据库的增量数据。
   3. 备份方法：运行RMAN脚本，进行1级备份。
   4. 磁盘保留30天的所有备份。
7. 备份方案
   1. 编写备份脚本

在/backup/ora\_data\_backup/script/ 下创建如下脚本: oracle\_srm\_backup.sh

参数说明：

* oracle\_sid=SRM 这是数据库的实例名称
* BACKUP\_HOME=/backup/ora\_data\_backup这是数据库rman备份文件位置（包括控制文件、数据文件）

注意：这个备份目录需要手动创建，并且赋权给oracle用户

* LOG\_PATH=/u01/ora\_backup/logs 这是备份日志路径
* recoveryWindow=30 这是备份文件的保留天数

脚本说明：

**该脚本根据定义的备份路劲，自动运行rman备份，将控制文件和数据文件都用sid和日期时间进行格式化命名，备份时指定3个通道，备份完自动释放，设置定时任务后自动运行根据系统时间判定是否为周6，是的话进行0级全备，否则进行1级增量备份。**

|  |
| --- |
| #!/bin/bash  #create by Shijie@Hand 2017/06/19 16:50  # ---------------------------------------------------------------------------  # source profile.  # ---------------------------------------------------------------------------  source ~/.bash\_profile  # ---------------------------------------------------------------------------  # When the variable is assigned a value, all upper-case characters are converted to lower-case.  # ---------------------------------------------------------------------------  declare -l oracle\_sid  oracle\_sid=SRM  # ---------------------------------------------------------------------------  # Determine the time executing this script.  # ---------------------------------------------------------------------------  TIMESTAMP=`date +'%Y\_%m\_%d\_%H:%M'`  # ---------------------------------------------------------------------------  # the backupFiles directory.  # ---------------------------------------------------------------------------  BACKUP\_HOME=**/backup/ora\_data\_backup**  # ---------------------------------------------------------------------------  # the logFile directory.  # ---------------------------------------------------------------------------  LOG\_PATH=/backup/ora\_data\_backup/logs  # ---------------------------------------------------------------------------  # test log directiry . If not, run the following lines.  # ---------------------------------------------------------------------------  if [ ! -d "$LOG\_PATH" ]  then  mkdir -p $LOG\_PATH  fi  # ---------------------------------------------------------------------------  # rman image output directory.  # ---------------------------------------------------------------------------  RMAN\_IMAGE\_DIR=$BACKUP\_HOME  # ---------------------------------------------------------------------------  # test rman image output directory . If not, run the following lines.  # ---------------------------------------------------------------------------  #if [ ! -d "$RMAN\_IMAGE\_DIR" ]  #then  # mkdir -p $RMAN\_IMAGE\_DIR  #fi  # ---------------------------------------------------------------------------  # Set the target connect string.  # Replace "sys/manager", below, with the target connect string.  # ---------------------------------------------------------------------------  TARGET\_CONNECT\_STR=/  # ---------------------------------------------------------------------------  # Set the Oracle Recovery Manager name.  # ---------------------------------------------------------------------------  RMAN=$ORACLE\_HOME/bin/rman  # ---------------------------------------------------------------------------  # Set the recoveryWindow.  # ---------------------------------------------------------------------------  recoveryWindow=30  # ---------------------------------------------------------------------------  # Set the L0\_RMAN\_BK day(1-7) of week.  # ---------------------------------------------------------------------------  DAY=6  # ---------------------------------------------------------------------------  # If this script is executed from a NetBackup schedule, NetBackup  # sets an NB\_ORA environment variable based on the schedule type.  # The NB\_ORA variable is then used to dynamically set BACKUP\_TYPE  # For example, when:  # schedule type is BACKUP\_TYPE is  # ---------------- --------------  # Automatic Full INCREMENTAL LEVEL 0  # Automatic Differential Incremental INCREMENTAL LEVEL 1  # Automatic Cumulative Incremental INCREMENTAL LEVEL 1 CUMULATIVE  #  # For user initiated backups, BACKUP\_TYPE defaults to incremental  # level 0 (full). To change the default for a user initiated  # backup to incremental or incremental cumulative, uncomment  # one of the following two lines.  # BACKUP\_TYPE="INCREMENTAL LEVEL 1"  # BACKUP\_TYPE="INCREMENTAL LEVEL 1 CUMULATIVE"  #  # Note that we use incremental level 0 to specify full backups.  # That is because, although they are identical in content, only  # the incremental level 0 backup can have incremental backups of  # level > 0 applied to it.  # ---------------------------------------------------------------------------  INCR\_DATA=`date '+%u'`  LEVEL=0  if [ "$INCR\_DATA"x = "$DAY"x ]  then  LEVEL=0  else  LEVEL=1  fi  BACKUP\_TYPE="incremental level ${LEVEL}"  TAG="lev\_${LEVEL}"  LOG\_FILE="${LOG\_PATH}/${oracle\_sid}\_l${LEVEL}\_diff\_incr\_rman\_bkp\_${TIMESTAMP}.log"  BACKUP\_FILES\_NAME="d\_%d\_%T\_lev${LEVEL}\_%s.bak"  $RMAN target $TARGET\_CONNECT\_STR nocatalog log=$LOG\_FILE <<EOF  run {  configure retention policy to recovery window of ${recoveryWindow} days;  configure controlfile autobackup on;  configure controlfile autobackup format for device type disk to '${RMAN\_IMAGE\_DIR}/%F.bak';  configure device type disk backup type to compressed backupset;  crosscheck archivelog all;  delete noprompt expired archivelog all;  allocate channel c1 type disk;  allocate channel c2 type disk;  allocate channel c3 type disk;  backup  format '${RMAN\_IMAGE\_DIR}/${BACKUP\_FILES\_NAME}'  ${BACKUP\_TYPE}  tag '${TAG}'  database plus archivelog delete all input;  crosscheck backup;  delete noprompt expired backup;  report obsolete;  delete noprompt obsolete;  release channel c1;  release channel c2;  release channel c3;  }  EOF |

编辑完成之后授予执行权限。

|  |
| --- |
| [oracle@oradb scripts]$ chmod +x oracle\_srm\_backup.sh |

* 1. 设置定时任务

使用oracle用户执行如下命令，在crontab中配置定时任务。

|  |
| --- |
| [oracle@oradb ~]$ crontab -e |

添加如下

|  |
| --- |
| 0 0 \* \* \* sh /backup/ora\_data\_backup/script/oracle\_srm\_backup.sh |

上面参数说明：每天0点0分执行/backup/ora\_data\_backup/script/oracle\_srm\_backup.sh脚本文件