数据库巡检 SQL 清单

生产环境 DBA 日常巡检必备 60+ 条 SQL

ora100.com

微信: Lucifer-0622

2026 年 4 月

一、实例状态检查

1. 数据库基本信息

```
SELECT dbid, name, db_unique_name, open_mode,
       log_mode, flashback_on, database_role
FROM v$database;
```

2. 实例状态

```
SELECT instance_name, host_name, status,
       startup_time, version_full
FROM v$instance;
```

3. 数据库组件

```
SELECT comp_name, version, status
FROM dba_registry
ORDER BY comp_name;
```

4. 参数文件类型

```
SELECT DECODE(value, NULL, 'PFILE', 'SPFILE')
       AS parameter_file
FROM v$parameter
WHERE name = 'spfile';
```

5. 非默认参数

```
SELECT name, value, isdefault
FROM v$parameter
WHERE isdefault = 'FALSE'
ORDER BY name;
```

二、空间使用检查

6. 表空间使用率

```
SELECT df.tablespace_name,
       ROUND(df.total_mb, 2)                          total_mb,
       ROUND(df.total_mb - NVL(fs.free_mb, 0), 2)     used_mb,
       ROUND(NVL(fs.free_mb, 0), 2)                   free_mb,
       ROUND((df.total_mb - NVL(fs.free_mb, 0))
           / df.total_mb * 100, 2)                    pct_used
FROM (
    SELECT tablespace_name, SUM(bytes)/1024/1024 total_mb
    FROM dba_data_files GROUP BY tablespace_name
) df
LEFT JOIN (
    SELECT tablespace_name, SUM(bytes)/1024/1024 free_mb
    FROM dba_free_space GROUP BY tablespace_name
) fs ON df.tablespace_name = fs.tablespace_name
ORDER BY pct_used DESC;
```

7. 临时表空间使用

```
SELECT tablespace_name,
       ROUND(tablespace_size/1024/1024) total_mb,
       ROUND(allocated_space/1024/1024) alloc_mb,
       ROUND(free_space/1024/1024)      free_mb
FROM dba_temp_free_space;
```

8. ASM 磁盘组空间

```
SELECT name, type, total_mb, free_mb,
       ROUND((total_mb - free_mb)/total_mb*100, 2) pct_used
FROM v$asm_diskgroup;
```

9. 数据文件自动扩展

```
SELECT file_name, tablespace_name,
       ROUND(bytes/1024/1024) size_mb,
       autoextensible,
       ROUND(maxbytes/1024/1024) max_mb
FROM dba_data_files
ORDER BY tablespace_name;
```

10. FRA 使用情况

```
SELECT name,
       ROUND(space_limit/1024/1024/1024, 2) limit_gb,
       ROUND(space_used/1024/1024/1024, 2)  used_gb,
       ROUND(space_used/space_limit*100, 2)  pct_used
FROM v$recovery_file_dest;
```

11. 回收站大小

```
SELECT ROUND(SUM(space*8192)/1024/1024, 2) recyclebin_mb
FROM dba_recyclebin;
```

三、性能检查

12. 等待事件 TOP 10

```
SELECT * FROM (
    SELECT event, total_waits,
           ROUND(time_waited_micro/1000000, 2) time_waited_sec
    FROM v$system_event
    WHERE wait_class != 'Idle'
    ORDER BY time_waited_micro DESC
) WHERE ROWNUM <= 10;
```

13. SQL 按 CPU 排名

```
SELECT * FROM (
    SELECT sql_id, executions,
           ROUND(cpu_time/1000000, 2)     cpu_sec,
           ROUND(elapsed_time/1000000, 2) elapsed_sec,
           sql_text
    FROM v$sql
    ORDER BY cpu_time DESC
) WHERE ROWNUM <= 10;
```

14. SQL 按 IO 排名

```
SELECT * FROM (
    SELECT sql_id, executions, disk_reads,
           buffer_gets,
           ROUND(elapsed_time/1000000, 2) elapsed_sec
    FROM v$sql
    ORDER BY disk_reads DESC
) WHERE ROWNUM <= 10;
```

15. SGA 使用情况

```
SELECT component,
       ROUND(current_size/1024/1024) current_mb,
       ROUND(min_size/1024/1024)     min_mb,
       ROUND(max_size/1024/1024)     max_mb
FROM v$sga_dynamic_components
WHERE current_size > 0;
```

16. PGA 使用情况

```
SELECT name,
       ROUND(value/1024/1024, 2) value_mb
FROM v$pgastat
WHERE name IN (
    'total PGA allocated',
    'total PGA inuse',
    'maximum PGA allocated'
);
```

17. Buffer Cache 命中率

```
SELECT ROUND(
    (1 - physical_reads /
        (db_block_gets + consistent_gets)) * 100, 2
) hit_ratio
FROM (
    SELECT SUM(DECODE(name,'physical reads',value,0))  physical_reads,
           SUM(DECODE(name,'db block gets',value,0))   db_block_gets,
           SUM(DECODE(name,'consistent gets',value,0)) consistent_gets
    FROM v$sysstat
);
```

18. Library Cache 命中率

```
SELECT ROUND(
    SUM(pins - reloads) / SUM(pins) * 100, 2
) lib_cache_hit
FROM v$librarycache;
```

四、备份检查

19. 最近 RMAN 备份

```
SELECT session_key, input_type, status,
       start_time, end_time,
       ROUND(output_bytes/1024/1024/1024, 2) size_gb
FROM v$rman_backup_job_details
WHERE start_time > SYSDATE - 7
ORDER BY start_time DESC;
```

20. 备份集信息

```
SELECT bs.bs_key, bs.backup_type,
       bs.completion_time,
       ROUND(bs.bytes/1024/1024/1024, 2) size_gb
FROM v$backup_set bs
WHERE bs.completion_time > SYSDATE - 7
ORDER BY bs.completion_time DESC;
```

21. 归档日志生成速率

```
SELECT TRUNC(completion_time) arch_date,
       COUNT(*)               arch_count,
       ROUND(SUM(blocks*block_size)/1024/1024/1024, 2) size_gb
FROM v$archived_log
WHERE completion_time > SYSDATE - 7
GROUP BY TRUNC(completion_time)
ORDER BY arch_date;
```

22. 控制文件备份

```
SELECT name, value
FROM v$parameter
WHERE name LIKE 'control_file%';
```

五、安全检查

23. 默认密码账户

```
SELECT username, account_status
FROM dba_users
WHERE username IN ('SYS','SYSTEM','DBSNMP','SYSMAN')
ORDER BY username;
```

24. 密码即将过期

```
SELECT username, account_status, expiry_date, profile
FROM dba_users
WHERE expiry_date < SYSDATE + 30
  AND account_status = 'OPEN';
```

25. 权限过大的用户

```
SELECT grantee, granted_role
FROM dba_role_privs
WHERE granted_role = 'DBA'
  AND grantee NOT IN ('SYS','SYSTEM');
```

26. 审计状态

```
SELECT name, value
FROM v$parameter
WHERE name IN (
    'audit_trail',
    'audit_sys_operations',
    'unified_auditing'
);
```

六、Data Guard 检查

27. DG 同步状态

```
SELECT database_role, db_unique_name,
       open_mode, switchover_status
FROM v$database;
```

28. 传输与应用延迟

```
SELECT name, value, datum_time
FROM v$dataguard_stats
WHERE name IN (
    'transport lag',
    'apply lag',
    'apply finish time'
);
```

29. MRP 进程状态

```
SELECT process, status, thread#, sequence#
FROM v$managed_standby
WHERE process IN ('MRP0','RFS');
```

30. 归档 GAP 检查

```
SELECT * FROM v$archive_gap;
```

七、RAC 专项检查

31. 集群节点状态 (Shell)

```
$ crsctl stat res -t
$ srvctl status database -d <db_name>
```

32. Interconnect 流量

```
SELECT instance_name, name, value
FROM gv$sysstat
WHERE name LIKE 'gc%'
  AND value > 0
ORDER BY instance_name;
```

33. GC 等待事件

```
SELECT inst_id, event, total_waits,
       ROUND(time_waited_micro/1000000, 2) time_sec
FROM gv$system_event
WHERE event LIKE 'gc%'
  AND wait_class != 'Idle'
ORDER BY time_waited_micro DESC;
```

八、对象健康检查

34. 无效对象

```
SELECT owner, object_type, object_name
FROM dba_objects
WHERE status = 'INVALID'
ORDER BY owner, object_type;
```

35. 索引状态

```
SELECT owner, index_name, table_name, status
FROM dba_indexes
WHERE status = 'UNUSABLE';
```

36. 大对象 TOP 20

```
SELECT * FROM (
    SELECT owner, segment_name, segment_type,
           ROUND(bytes/1024/1024/1024, 2) size_gb
    FROM dba_segments
    ORDER BY bytes DESC
) WHERE ROWNUM <= 20;
```

37. 碎片化表空间

```
SELECT tablespace_name,
       COUNT(*)                        free_chunks,
       ROUND(MAX(bytes)/1024/1024, 2)  largest_chunk_mb
FROM dba_free_space
GROUP BY tablespace_name
HAVING COUNT(*) > 10
ORDER BY free_chunks DESC;
```

九、日志与告警

38. 重做日志状态

```
SELECT group#, thread#, sequence#,
       bytes/1024/1024 size_mb,
       members, status
FROM v$log
ORDER BY group#;
```

39. 日志切换频率

```
SELECT TRUNC(first_time) log_date,
       COUNT(*)          switches
FROM v$log_history
WHERE first_time > SYSDATE - 7
GROUP BY TRUNC(first_time)
ORDER BY log_date;
```

40. Alert 日志路径

```
SELECT value
FROM v$diag_info
WHERE name = 'Diag Trace';
```

完整 100 天教程请访问

ora100.com

微信: Lucifer-0622