

## Daily Database Health Checks for DBAs

As a Database Administrator (DBA), performing daily health checks ensures the stability, performance, and availability of the database. Below are the key areas to monitor, along with essential commands and explanations.

---

### 1- Check Database Status

Ensuring the database is up and running is the first step in daily monitoring.

**Command:**

```
SELECT status FROM v$instance;
```

**Explanation:**

- Returns the current status of the database (e.g., OPEN, MOUNTED, SHUTDOWN, or RECOVERING).
  - If the status is anything other than **OPEN**, immediate investigation is required.
- 

### 2- Verify Alert Logs for Errors

Alert logs help in identifying potential issues such as ORA- errors, instance crashes, or performance issues.

**Command (Linux):**

```
tail -100f /u01/app/oracle/diag/rdbms/yourdb/trace/alert_yourdb.log
```

**Explanation:**

- Displays the last 100 lines of the alert log file.
  - Helps identify critical errors or warnings that need attention.
  - Adjust the log path according to your database setup.
-

### 3- Monitor Tablespace Usage

Ensuring adequate tablespace prevents application failures due to space constraints.

**Command:**

```
SELECT tablespace_name, used_percent FROM dba_tablespace_usage_metrics;
```

**Explanation:**

- Shows the percentage of used space for each tablespace.
  - A high usage percentage may indicate the need for tablespace extension.
- 

### 4- Check Blocking Sessions

Blocking sessions can cause performance degradation by preventing other transactions from proceeding.

**Command:**

```
SELECT blocking_session, sid, serial# FROM v$session WHERE  
blocking_session IS NOT NULL;
```

**Explanation:**

- Lists all blocking sessions along with their session IDs.
  - Further investigation is needed to determine the cause of blocking.
- 

### 5- Verify Database Performance Using AWR Reports

Automated Workload Repository (AWR) reports help analyze performance trends and issues.

**Command:**

```
SELECT * FROM dba_hist_snapshot ORDER BY begin_interval_time DESC;
```

**Explanation:**

- Lists snapshots of database performance metrics.
- Can be used to generate AWR reports for deeper analysis.

---

## 6- Check Invalid Objects

Invalid objects can cause application failures or degraded performance.

### Command:

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

### Explanation:

- Lists invalid objects that may require recompilation.
- Can be recompiled using `EXEC UTL_RECOMP.RECOMP_SERIAL();`.

---

## 7- Monitor Long-Running Queries

Long-running queries can impact overall database performance.

### Command:

```
SELECT sid, serial#, sql_id, elapsed_time/1000000 AS elapsed_seconds  
FROM v$sql_monitor WHERE status = 'EXECUTING';
```

### Explanation:

- Lists active long-running queries with their elapsed time.
- Helps identify inefficient queries that may need tuning.

---

## 8- Check Backup Status

Verifying the backup ensures that recovery is possible in case of failure.

### Command:

```
SELECT * FROM v$rman_backup_job_details WHERE start_time > SYSDATE - 1;
```

### Explanation:

- Shows the status of recent RMAN backups.
- Ensures the database is being backed up regularly.

---

## 9- Monitor Database Sessions

High session counts can indicate performance issues or application problems.

### Command:

```
SELECT COUNT(*) FROM v$session;
```

### Explanation:

- Provides the total number of active sessions.
- A sudden spike in sessions may indicate an issue with the application.

---

## 10- Check Disk Space Usage

Ensuring sufficient disk space prevents unexpected database failures.

### Command (Linux):

```
df -h
```

### Explanation:

- Shows available disk space on all mounted filesystems.
- Helps prevent storage-related outages.

---

## Conclusion

Performing these daily health checks ensures a well-functioning database, minimizes downtime, and prevents unexpected failures. By proactively monitoring these aspects, DBAs can ensure a smooth database operation.

Would you add any additional daily checks to this list? Let's discuss! 🚀

**Ahmed Salah**  
**Database Administrator**