**ORA-1555: Snapshot Too Old**

The **ORA-1555 "Snapshot Too Old"** error in Oracle happens when a query tries to access old data from the **UNDO tablespace**, but that data has already been overwritten.

**Why Does ORA-1555 Happen?**

1. **Long-running queries** – If a query runs for a long time, the undo data it needs might be overwritten.
2. **Small UNDO tablespace** – If the UNDO tablespace is too small, Oracle will remove old undo data quickly.
3. **Frequent DML operations** – Heavy updates, deletes, and inserts generate a lot of undo data, leading to overwrites.
4. **Automatic UNDO Retention is too low** – If Oracle is not keeping undo data long enough, queries can fail.

**How to Resolve ORA-1555?**

**Short-Term Fixes**

✅ **Restart the Query** – Sometimes, running it again might work if there's less activity.  
✅ **Break the Query into Smaller Parts** – Instead of running one long query, try using batch processing.  
✅ **Use COMMIT Wisely** – Avoid frequent commits in long transactions, as they release undo data too soon.

**Long-Term Fixes**

🔹 **Increase UNDO Tablespace Size** – Ensure your UNDO tablespace is large enough to hold undo data for long-running queries.  
🔹 **Check UNDO Retention Settings**

SHOW PARAMETER UNDO\_RETENTION;

If it's too low, increase it:

ALTER SYSTEM SET UNDO\_RETENTION = 900; -- (or a suitable value)

🔹 **Use Automatic Undo Management (AUM)**

ALTER DATABASE SET UNDO\_MANAGEMENT = AUTO;

🔹 **Create a Bigger Undo Tablespace (If Needed)**

CREATE UNDO TABLESPACE UNDO\_TBS2 DATAFILE 'undo02.dbf' SIZE 2G AUTOEXTEND ON;

ALTER SYSTEM SET UNDO\_TABLESPACE = UNDO\_TBS2;

By following these steps, you can prevent **ORA-1555** from happening in the future. Let me know if you need more details! 🚀