

# **Altibase 7.1.0.5.7 Patch Notes**

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# Table of Contents

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- [New Features](#)
  - [BUG-48431 Improved JDBC driver performance by optimizing unnecessary communication protocols when using deferred prepare.](#)
  - [BUG-48515 Provides a function to limit the number of sessions from the same IP.](#)
  - [BUG-48618 Add iSQL command line option -KEEP\\_SYSDBA.](#)
  - [BUG-49028 Add replication syntax related to offline option in APRE C/C++ Precompiler and aexport.](#)
  - [BUG-49032 In the Altibase replication environment, performance views have been added that allow you to check replication-related meta table information of remote servers.](#)
- [Fixed Bugs](#)
  - [BUG-48460 Altibase server startup fails at the undo stage during restart recovery due to tablespaces in the DISCARD state.](#)
  - [BUG-48523 If the statement object is not closed when the session ends, the Altibase server may terminate abnormally.](#)
  - [BUG-49029 If the OVER clause is omitted when using the COUNT KEEP function, the Altibase server may terminate abnormally.](#)
  - [BUG-49031 Altibase server abnormally terminates when querying V\\$SNAPSHOT if there is a memory tablespace in the OFFLINE state.](#)
  - [BUG-49060 Change the permissions of the altibase ipc.log file to -rw-r--r--.](#)
  - [BUG-49061 Change the permissions of the syspassword file to -rw-r--r--.](#)
  - [BUG-49062 When using sequences in a lookup transaction, a timeout error occurs and the session is terminated.](#)
  - [BUG-49071 When adding a replication target to a replication object, an incorrect error message occurs if the object owner name is incorrect.](#)
  - [BUG-49077 If the SELECT COUNT\(\\*\) statement is executed when the isolation level is REPEATABLE READ, an error\(ERR-0109E: Internal server error.\) occurs.](#)
  - [BUG-49082 Roll back BUG-48523.](#)
  - [BUG-49087 If an exception occurs when closing the JDBC connection object, the socket fd \(file descriptor\) is not cleaned up.](#)
  - [BUG-49095 Altibase server abnormally terminates when the reserved word PROWID is used for a materialized view.](#)
  - [BUG-49106 Altibase server abnormally terminates when deleting a view table created using the UNION clause.](#)
  - [BUG-49107 Altibase server abnormally terminates under certain circumstances when performing HASH operation on DISK TEMP TABLE.](#)
  - [BUG-49109 A trace log is added to analyze the cause of the Altibase server abnormal termination that occurred during the operation of the garbage collection thread in the volatile table.](#)
- [Changes](#)
  - [Version Info](#)
  - [Compatibility](#)
  - [Altibase Server Properties](#)
  - [Performance Views](#)

# New Features

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## BUG-48431 Improved JDBC driver performance by optimizing unnecessary communication protocols when using deferred prepare.

- **module** : mm-jdbc
- **Category** : Enhancement
- **Reproducibility** : Always
- **Description** : Improved JDBC driver performance by optimizing unnecessary communication protocols when using deferred prepare. Altibase JDBC Driver needs to be patched to apply this bug.
- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results
  - Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-48515 Provides a function to limit the number of sessions from the same IP.

- **module** : mm
- **Category** : Functionality
- **Reproducibility** : Always
- **Description** : Provides a function to limit the number of sessions of the same IP. This feature can be enabled by adding a "limit" entry to the ACCESS\_LIST property.

```
ACCESS_LIST = operation, address, mask, [limit]
```

If the number of sessions accessed from *address* exceeds the *limit*, new connections are not allowed. At this time, on the Altibase client side, ERR-91015: Communication failure. An error occurs and connection to the Altibase server fails. And on the Altibase server side, the following message is left in the altibase\_boot.log.

```
ERR-410f0(errno=0) New connection try exceeds ACL limit: ( IP
:192.168.1.203, ACL: 192.168.1.203, Limit : 2, Connected : 2 )
Dispatcher callback failed
```

- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results

- Expected Results
  - **Workaround**
  - **Changes**
    - Performance view
      - Changes in V\$ACCESS\_LIST
 

Added LIMIT and CONNECTED columns.

        - LIMIT
 

The maximum number of sessions that can access the Altibase server from the accessible IP address range specified in The maximum number of connected sessions.
        - CONNECTED
 

Number of currently connected sessions corresponding to ACCESS\_LIST.
    - Property
      - Changes in ACCESS\_LIST
 

Added limit items.

`ACCESS_LIST = operation, address, mask, [limit]`

limit is an optional item. Specifies the maximum number of sessions allowed to access the Altibase server from the accessible IP address range specified in ACCESS\_LIST.
    - Compile Option
    - Error Code
- If you try to connect to the Altibase server by exceeding the set number of sessions, the following error message appears in the Altibase client.

```
0x410FD ( 266493) mmERR_ABORT_IP_ACL_CONNECT_OVER New connection try
exceeds ACL limit: ( IP : <0%s>, ACL: <1%s>, Limit : <2%d>, Connected :
<3%d> )
# *Cause: New connection try aborted because it exceeds access control
list (ACL) limit.
# *Action: Change the limit value of the ACCESS_LIST.
```

## BUG-48618 Add iSQL command line option -KEEP\_SYSDBA.

- **module** : ux-isql
- **Category** : Usability
- **Reproducibility** : Always
- **Description** : Add -KEEP\_SYSDBA option to maintain administrator mode when connecting to Altibase server in sysdba mode in iSQL. When executing the startup service command in sysdba mode, if the -KEEP\_SYSDBA option is not used, the administrator mode is changed to normal user mode, and if the -KEEP\_SYSDBA option is used, the administrator mode is maintained. The iSQL binary files need to be patched to reflect this bug.
- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## **BUG-49028 Add replication syntax related to offline option in APRE C/C++ Precompiler and aexport.**

- **module** : rp
- **Category** : Other
- **Reproducibility** : Always
- **Description** : Add replication syntax related to offline option in APRE C/C++ Precompiler and aexport. If you want to fix this bug, you need to patch apre and aexport .

```
CREATE REPLICATION ala_replication_name FOR ANALYSIS OPTIONS META_LOGGING
    WITH 'remote_host_ip', remote_host_port_no
    FROM user_name.table_name TO user_name.table_name;

ALTER REPLICATION ala_replication_name BUILD OFFLINE META [AT SN(sn)];

ALTER REPLICATION ala_replication_name RESET OFFLINE META;
```

- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results
  - Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## **BUG-49032 In the Altibase replication environment, performance views have been added that allow you to check replication-related meta table information of remote servers.**

- **module** : rp
- **Category** : Usability
- **Reproducibility** : Always

- **Description** : In the Altibase replication environment, 6 performance views have been added that allow you to check replication-related meta table information of remote servers. When replication does not operate normally, meta information errors can be checked. These performance views can only be queried from the server where the Receiver thread is running.

- V\$REPL\_REMOTE\_META\_REPLICATIONS
- V\$REPL\_REMOTE\_META\_ITEMS
- V\$REPL\_REMOTE\_META\_COLUMNS
- V\$REPL\_REMOTE\_META\_INDEX\_COLUMNS
- V\$REPL\_REMOTE\_META\_INDICES
- V\$REPL\_REMOTE\_META\_CHECKS

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view

Six performance views have been added to check replication-related meta table information of remote servers.

- V\$REPL\_REMOTE\_META\_REPLICATIONS

Shows the information of the SYS\_REPLICATIONS\_ meta table, which records the replication-related information of the remote server.

- V\$REPL\_REMOTE\_META\_ITEMS

Shows the SYS\_REPL\_ITEMS\_ meta table information that contains information related to the replication target table of the remote server.

- V\$REPL\_REMOTE\_META\_COLUMNS

Shows the SYS\_REPL\_OLD\_COLUMNS\_ meta table information that contains the information of the replication target column being replicated by the replication sender thread of the remote server.

- V\$REPL\_REMOTE\_META\_INDEX\_COLUMNS

Shows the SYS\_REPL\_OLD\_INDEX\_COLUMNS\_ meta table information, which contains the information of the replication target index column currently being used by the replication sender thread of the remote server.

- V\$REPL\_REMOTE\_META\_INDICES

Shows the information of the SYS\_REPL\_OLD\_INDICES\_ meta table that contains the information of the replication target index being replicated by the replication sender thread of the remote server.

- V\$REPL\_REMOTE\_META\_CHECKS

Shows information on the constraints of the replication table currently being replicated by the replication sender thread of the remote server.

- Property
- Compile Option
- Error Code

# Fixed Bugs

---

## **BUG-48460 Altibase server startup fails at the undo stage during restart recovery due to tablespaces in the DISCARD state.**

- **module** : sm
- **Category** : Fatal
- **Reproducibility** : Rare
- **Description** : Fixes a phenomenon in which the Altibase server fails to start at the undo stage during restart recovery due to a tablespace in DISCARD state.
- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results
  - Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## **BUG-48523 If the statement object is not closed when the session ends, the Altibase server may terminate abnormally.**

- **module** : sm\_transaction
- **Category** : Fatal
- **Reproducibility** : Rare
- **Description** : Fixes a phenomenon in which the Altibase server abnormally terminates when the statement object is not terminated when the session is closed.
- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results
  - Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-49029 If the OVER clause is omitted when using the COUNT KEEP function, the Altibase server may terminate abnormally.

- **module** : qp-select-pvo
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : Fixes a phenomenon in which the Altibase server abnormally terminates when the OVER clause is omitted when using the COUNT KEEP function.
- **How to reproduce this bug**
  - Reproduction conditions

```
DROP TABLE BUG_49029;  
CREATE TABLE BUG_49029 ( I1 VARCHAR(1000), I2 VARCHAR(1000), I3  
    VARCHAR(2000), PRIMARY KEY(I1));  
  
SELECT COUNT(I1) KEEP ( DENSE_RANK FIRST ORDER BY I2, I3 NULLS FIRST)  
    FROM BUG_49029;
```

- Actual Results

The error below occurs or the Altibase server abnormally terminates.

```
ERR-31455 : Failed to work because an internal exception occurred from  
an OS.[Contact Altibase's Support Center]
```

- Expected Results

```
COUNT(I1)KEEP(DENSE_RANKFIRSTORDERBYI2,I3N  
-----  
0  
1 row selected.
```

- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-49031 Altibase server abnormally terminates when querying V\$SNAPSHOT if there is a memory tablespace in the OFFLINE state.

- **module** : sm
- **Category** : Fatal
- **Reproducibility** : Always



- **Description** : Fixes a phenomenon in which the ALTIBASE HDB server abnormally terminates when querying V\$SNAPSHOT when there is a memory tablespace in the OFFLINE state.
- **How to reproduce this bug**
  - Reproduction conditions
  - Actual Results
  - Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-49060 Change the permissions of the altibase\_ipc.log file to -rw-r--r--.

- **module** : cm-ipc
- **Category** : Maintainability
- **Reproducibility** : Always
- **Description**: Change the permissions of the \$ALTIBASE\_HOME/trc/altibase\_ipc.log file to enhance database security.
  - Current : rw-rw-rw-
  - Change : -rw-r--r--
- **How to reproduce this bug**
- Reproduction conditions
- Actual Results
- Expected Results
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-49061 Change the permissions of the syspassword file to -rw-r--r--.

- **module** : ux-isql
- **Category** : Maintainability
- **Reproducibility** : Always
- **Description** : Change the permissions of the \$ALTIBASE\_HOME/conf/syspassword file to enhance database security.
  - Current : rw-rw-rw-
  - Change : -rw-r--r--

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

## **BUG-49062 When using sequences in a lookup transaction, a timeout error occurs and the session is terminated.**

- **module** : sm

- **Category** : Functional Error

- **Reproducibility** : Rare

- **Description** : If the CACHE clause is used in creating/altering a sequence object, an UPDATE statement is executed internally when using a sequence. As a result, the lookup transaction performed by the user is changed to a change transaction, and the session is terminated due to UTRANS\_TIMEOUT setting. Private properties must be applied to apply the fixed bug. If necessary, contact the Altibase Technical Support Center.

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

## **BUG-49071 When adding a replication target to a replication object, an incorrect error message occurs if the object owner name is incorrect.**

- **module** : rp

- **Category** : Message Error

- **Reproducibility** : Always

- **Description** : When adding a replication target to a replication object, the error message "The primary key column count of the replicated table does not match" occurs if the object owner name is incorrect. Modify the "The user name of the replicated table's owner does not match" error message appropriate for the situation.

- **How to reproduce this bug**

- **Reproduction conditions**

```
CREATE TABLE T1 (I1 INTEGER PRIMARY KEY, I2 INTEGER);
CREATE TABLE T2 (I1 INTEGER, I2 INTEGER);
ALTER TABLE T2 ADD CONSTRAINT PK_T2 PRIMARY KEY (I1, I2);
CREATE REPLICATION REP1 WITH '127.0.0.1', 27172 FROM SYS.T1 TO SYS.T1;
ALTER REPLICATION REP1 ADD TABLE FROM SYS.T2 TO SCOTT.T2;
ALTER REPLICATION REP1 START;
```

- **Actual Results**

```
ERR-6100D : [Sender] Failed to handshake with the peer server (The
primary key column count of the replicated table does not match
[T1(1):T2(2)].)
```

- **Expected Results**

```
ERR-6100D : [Sender] Failed to handshake with the peer server (The user
name of the replicated table's owner does not match
[T2(SYS):T2(SCOTT)].)
```

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

**BUG-49077 If the SELECT COUNT(\*) statement is executed when the isolation level is REPEATABLE READ, an error(ERR-0109E: Internal server error.) occurs.**

- **module** : qp
- **Category** : Functional Error
- **Reproducibility** : Always
- **Description** : Fixes a bug where an error (ERR-0109E: Internal server error.) occurs when a SELECT COUNT(\*) statement is executed while the isolation level is REPEATABLE READ.
- **How to reproduce this bug**
  - **Reproduction conditions**

```
CREATE TABLE BUG_49077 ( IDX INTEGER , PARENT_IDX INTEGER ) TABLESPACE
SYS_TBS_DISK_DATA;
INSERT INTO BUG_49077 VALUES( 1, 0 );
INSERT INTO BUG_49077 VALUES( 1, 0 );
INSERT INTO BUG_49077 VALUES( 1, 0 );
INSERT INTO BUG_49077 VALUES( 1, 0 );
INSERT INTO BUG_49077 VALUES( 1, 0 );
AUTOCOMMIT OFF;
SET TRANSACTION ISOLATION LEVEL REPEATABLE READ;
SELECT COUNT ( * ) FROM BUG_49077 WHERE IDX = 1;
COMMIT;
AUTOCOMMIT ON;
```

#### ◦ Actual Results

```
iSQL> SELECT COUNT ( * ) FROM BUG_49077 WHERE IDX = 1;
[ERR-0109E : Internal server error.]
```

#### ◦ Expected Results

```
iSQL> SELECT COUNT ( * ) FROM BUG_49077 WHERE IDX = 1;
COUNT
-----
5
1 row selected.
```

#### • Workaround

#### • Changes

- Performance view
- Property
- Compile Option
- Error Code

## BUG-49082 Roll back BUG-48523.

- **module** : sm\_transaction

- **Category** : Fatal

- **Reproducibility** : Rare

- **Description** : A bug was found that caused the Altibase server to abnormally terminate due to BUG-48523, so BUG-48523 is rolled back.

This bug has been exposed in the versions below.

- Altibase 7.1.0.5.2 ~ 7.1.0.5.6

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

## BUG-49087 If an exception occurs when closing the JDBC connection object, the socket fd (file descriptor) is not cleaned up.

- **module** : mm-jdbc
- **Category** : Functional Error
- **Reproducibility** : Always
- **Description** : Fixed a bug where the socket fd (file descriptor) was not cleaned up when an exception occurred when closing the JDBC connection object. If you want to reflect this bug, you need to patch the Altibase JDBC Driver.
- **How to reproduce this bug**
  - **Reproduction conditions**

```
AltibaseConnection sConn = (AltibaseConnection)getConnection("21165");
// First connection successful

try
{
    sConn.close(); // Exception thrown during close
}
catch (SQLException aEx)
{
    System.out.println(aEx.getMessage());
}

CmChannel sChannel = sConn.channel();
System.out.println("Socket FD ==>" + sChannel.getSocketFD());
// socket is not cleaned up, socket fd remains
```

- **Actual Results**

```
Communication link failure: There was no response from the server, and
the channel has reached end-of-stream.
Socket FD ==>42
```

- **Expected Results**

```
Communication link failure: There was no response from the server, and
the channel has reached end-of-stream.
Exception in thread "main" java.sql.SQLException: Connection already
closed.
```

- **Workaround**
- **Changes**

- Performance view
- Property

- Compile Option
- Error Code

## BUG-49095 Altibase server abnormally terminates when the reserved word `_PROWID` is used for a materialized view.

- **module** : qp-dml-pvo
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : You cannot use the reserved word `_PROWID` in a materialized view, so Fixed an error message to occur.
  - Error message : ERR-31385: `_PROWID` is not supported.
- **How to reproduce this bug**
  - Reproduction conditions

```
CREATE TABLE T1 (I1 INT, I2 INT);
WITH w3
AS ( SELECT /*+ */ _PROWID AS i2 FROM T1 )
SELECT E.I2, F.I2 FROM w3 E, w3 F;
```

- Actual Results

ERR-91015 : Communication failure. occurs and the Altibase server abnormally terminates or ERR-31455 : Failed to work because an internal exception occurred from an OS.[Contact Altibase's Support Center] error message occurs.

- Expected Results

Since the `_PROWID` reserved word cannot be used, an error message must be displayed.

```
ERR-31385 : _PROWID is not supported.
```

- **Workaround**

You can avoid this bug by using the `NO_MATERIALIZE` hint.

```
WITH w3
AS ( SELECT /*+ NO_MATERIALIZE */ _PROWID AS i2 FROM T1 )
SELECT E.I2, F.I2 FROM w3 E, w3 F;
I2                I2
-----
592710729729      592710729729
1 row selected.
```

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

## BUG-49106 Altibase server abnormally terminates when deleting a view table created using the UNION clause.

- **module** : qp
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : Fixed a bug so that the error message 'ERR-313A4: Cannot modify a column for a non key-preserved table' occurs because view tables using the UNION clause cannot be DELETE.
- **How to reproduce this bug**
  - Reproduction conditions

```
CREATE TABLE M2 ( I1 INTEGER, I2 INTEGER );
CREATE OR REPLACE VIEW V1
AS
SELECT * FROM M2 UNION SELECT * FROM M2;

DELETE FROM V1 WHERE T2_I2=4;
```

- Actual Results

ERR-91015 : Communication failure. occurs and the Altibase server abnormally terminates or ERR-31455 : Failed to work because an internal exception occurred from an OS.[Contact Altibase's Support Center] error message occurs.
- Expected Results

```
ERR-313A4 : Cannot modify a column for a non key-preserved table
```

- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

## BUG-49107 Altibase server abnormally terminates under certain circumstances when performing HASH operation on DISK TEMP TABLE.

- **module** : sm
- **Category** : Fatal
- **Reproducibility** : Unknown
- **Description** : Avoid abnormal termination of the Altibase server under certain circumstances when performing HASH operation in DISK TEMP TABLE, and add a log to analyze the cause. When this bug occurs, the following log is left in altibase\_dump.log. You need to apply private properties to leave logs. If necessary, contact the Altibase Technical Support Center.

```

DUMP HASH WASEGMENT:
WASegPtr           : 0x7fb19e2031d8
SpaceID            : 4
Type               : 1 HASH
HashSlotCount      : 65536
InMemory           : OutMemory
Unique             : 0
OpenCursorType     : 0
EndWPID            : 384
InsertGroup BeginWPID : 128
InsertGroup EndWPID  : 320
InsertGroup ReuseWPID : 131
FetchGroup BeginWPID : 384
FetchGroup EndWPID   : 384
FetchGroup ReuseWPID : 384
SubHashGroup BeginWPID : 320
SubHashGroup EndWPID  : 384
SubHashGroup ReuseWPID : 352
WAExtentListCount   : 8
MaxWAExtentCount     : 6
AllocWAPageCount     : 384
NPageHashBucketCnt   : 384
NPageCount           : 386
SubHashPageCount     : 64
SubHashBuildCount    : 3
HashSlotPageCount    : 128

```

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

**BUG-49109 A trace log is added to analyze the cause of the Altibase server abnormal termination that occurred during the operation of the garbage collection thread in the volatile table.**

- **module** : sm
- **Category** : Fatal
- **Reproducibility** : Rare
- **Description** : A trace log is added to analyze the cause of the Altibase server abnormal termination that occurred during the operation of the garbage collection thread in the volatile table.



When an abnormal termination of the Altibase server due to this bug occurs, the following log is output to altibase\_error.log.

```
smpFixedPageList::setFreeSlot  
CreateSCN      : ...  
LimitSCN       : ...  
NextOIDIsNull  : ...
```

- **How to reproduce this bug**

- Reproduction conditions
- Actual Results
- Expected Results

- **Workaround**

- **Changes**

- Performance view
- Property
- Compile Option
- Error Code

# Changes

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## Version Info

| altibase<br>version | database binary<br>version | meta<br>version | cm protocol<br>version | replication protocol<br>version |
|---------------------|----------------------------|-----------------|------------------------|---------------------------------|
| 7.1.0.5.7           | 6.5.1                      | 8.9.1           | 7.1.7                  | 7.4.6                           |

You can check the module version change history in [Version Histories](#).

## Compatibility

### Database binary version

The database binary version has not changed.

The database binary version indicates the compatibility of database image files and log files.  
If this version needs to be patched to a different version, the database must be reorganized.

### Meta Version

The meta version has not changed.

If you want to roll back the patch after patching to a version with a changed meta version,  
see [Meta Downgrade](#).

### CM protocol Version

The cm protocol version has not changed.

### Replication protocol Version

The replication protocol version has not changed.

## Altibase Server Properties

### Added properties

### Changed properties

- ACCESS\_LIST

### Deleted properties

## Performance Views

### Added performance views

- V\$REPL\_REMOTE\_META\_REPLICATIONS
- V\$REPL\_REMOTE\_META\_ITEMS
- V\$REPL\_REMOTE\_META\_COLUMNS
- V\$REPL\_REMOTE\_META\_INDEX\_COLUMNS
- V\$REPL\_REMOTE\_META\_INDICES

- V\$REPL\_REMOTE\_META\_CHECKS

### **Changed performance views**

- V\$ACCESS\_LIST

### **Deleted performance views**