Altibase 7.1.0.9.3 Patch Notes

- New Features
  - BUG-50713 Improve that the error message includes the header information when the Protocol header error occurs due to malformed packets.
- Fixed Bugs
  - BUG-48041 Fix an issue where triggers using %ROWTYPE or %TYPE did not automatically recompile when the table definition changed.
  - BUG-50694 Resolve a problem where the server would abnormally terminate when a group by column in a subquery within a disk table was referenced in the main query.
  - BUG-50710 Fix an issue where the server could abnormally terminate when creating a package that calls an external procedure.
  - BUG-50714 Fix a problem that Altibase does not work properly when directly modifying a variable with the constant or nocopy option within a package.
  - BUG-50729 Address an issue where the stack size of terminated threads continued to be output in V$MEMSTAT.
  - BUG-50758 Fix an escape processing omission for double quote characters in APRE.
  - BUG-50778 Add exception handling to the getColumnCount function.
  - BUG-50783 Resolve the issue where "ERR-3123B : Invalid use of host variables" occurred and a procedure was terminated when a DDL statement was executed on the table being referenced within the procedure.
  - BUG-50789 Fix a problem where media recovery failed when additional checkpoint image files were added during the process.
  - BUG-50792 Fix a logic error in calculating the maximum value of undo tablespace when SNAPSHOT is set up.
- Changes
  - Version Info
  - Compatibility
  - Altibase Server Properties
  - Performance Views

New Features

BUG-50713 Improve that the error message includes the header information when the Protocol header error occurs due to malformed packets.

- **module** : cm

- **Category** : Functionality

- **Reproducibility** : Rare

- **Description** : When the Protocol header error occurs due to malformed packets, the error message now displays the header information to assist in problem analysis.

  - Before : ERR-7101d(errno=0) Protocol header error.(TCP 127.0.0.1:41462)

  - After : ERR-710cc(errno=0) Protocol header error.(TCP 127.0.0.1:41462, 0, 31323334353637383930313233343536373839)

- **How to reproduce this bug**

  - **Reproduction conditions**

  - **Actual Results**

  - **Expected Results**

- **Workaround**

- **Changes**

  - Performance view

  - Property

  - Compile Option

  - Error Code

    - Before : ERR-7101d(errno=0) Protocol header error.(TCP 127.0.0.1:41462)

    - After : ERR-710cc(errno=0) Protocol header error.(TCP 127.0.0.1:41462, 0, 31323334353637383930313233343536373839)

Fixed Bugs

BUG-48041 Fix an issue where triggers using %ROWTYPE or %TYPE did not automatically recompile when the table definition changed.

- **module** : qp-ddl-dcl-execute

- **Category** : Functional Error

- **Reproducibility** : Always

- **Description** : Altibase fixed an issue where triggers using %ROWTYPE or %TYPE do not automatically recompile when the table definition was changed.

- **How to reproduce this bug**

    - **Reproduction conditions**

      ```
      CREATE TABLE T1(C1 INT, C2 INT);
      CREATE TABLE T2(C1 INT);
      CREATE TABLE T3(C1 INT, C2 INT);
      CREATE OR REPLACE TRIGGER TRIG_ON_T1
          BEFORE INSERT ON T1
          REFERENCING NEW AS NEW_ROW
          FOR EACH ROW
          BEGIN
          DECLARE
          VAR1 T3%ROWTYPE;
          BEGIN
            VAR1.C2 := NEW_ROW.C1;
            INSERT INTO T2 VALUES(VAR1.C2);
          END;
          END;
          /

      INSERT INTO T1 VALUES(1,1);
      SELECT * FROM T1;
      SELECT * FROM T2;
      ALTER TABLE T3 DROP C2;
      INSERT INTO T1 VALUES(1,2);
      ```

    - **Actual Results**

      ```
      iSQL> INSERT INTO T1 VALUES(1,2);
      1 row inserted.
      ```

    - **Expected Results**

```
iSQL> INSERT INTO T1 VALUES(1,2);
[ERR-311F9 : The attempt to recompile the trigger SYS.TRIG_ON_T1 was
aborted because the creation statement was invalid. :

 Column not found

In trigger SYS.TRIG_ON_T1
0009 :          VAR1.C2 := NEW_ROW.C1;
                     ^ ^
]
```

- **Workaround**

```
Recompile after modifying the trigger
```

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

BUG-50694 Resolve a problem where the server would abnormally terminate when a group by column in a subquery within a disk table was referenced in the main query.

- **module** : qp
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : This bug is reproduced in the disk table only. Altibase resolved a problem where the server would abnormally terminate when a group by column in a subquery is referenced in the main query.
- **How to reproduce this bug**
  - **Reproduction conditions**

```
CREATE TABLE T1( I1 INTEGER, I2 INTEGER, I3 INTEGER ) TABLESPACE
SYS_TBS_DISK_DATA;
INSERT INTO T1 VALUES (2, NULL, NULL);
SELECT * FROM T1 WHERE I1 > ALL ( SELECT MIN(I2) FROM DUAL WHERE I1 = '1'
GROUP BY I1);
```

  - **Actual Results**

```
[ERR-91015 : Communication failure.]
```

  - **Expected Results**

```
iSQL> SELECT * FROM T1 WHERE I1 > ALL ( SELECT MIN(I2) FROM DUAL WHERE I1
= '1' GROUP BY I1);
I1            I2            I3
--------------------------------------
2
1 row selected.
```

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

BUG-50710 Fix an issue where the server could abnormally terminate when creating a package that calls an external procedure.

- **module** : qp
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : Altibase fixed an issue where the server could abnormally terminate when creating a package that calls an external procedure.
- **How to reproduce this bug**
  - **Reproduction conditions**
  - **Actual Results**
  - **Expected Results**
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

BUG-50714 Fix a problem that Altibase does not work properly when directly modifying a variable with the constant or nocopy option within a package.

- **module** : qp-psm-trigger-execute
- **Category** : Functional Error
- **Reproducibility** : Always
- **Description** : Altibase fixed a problem when directly modifying a variable with the constant or nocopy option within a package.

1. In the case of directly modifying the value of a variable with the constant option within a package, there should be an error, but there was an issue that the value was changed. Now, when attempting to change the value of a variable with the constant option, an error message will be displayed, preventing the modification of the value.

2. In the case of directly modifying the value of a variable with the nocopy option, the issue, which "ERR-31439 : An array (element) is not initialized" occurs, has been fixed.

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

```
CREATE OR REPLACE PACKAGE PKG1 AS
VAR1 CONSTANT INTEGER := 1;
end;
/
EXEC PKG1.VAR1 := 100;
EXEC PRINTLN(PKG1.VAR1);

CREATE OR REPLACE PACKAGE PKG2 AS
TYPE ARR_TYPE IS TABLE OF CHAR(32000) INDEX BY INTEGER;
VAR1 NOCOPY ARR_TYPE;
VAR2 ARR_TYPE;
RET INTEGER;
END;
/
BEGIN
  FOR I IN 1 .. 10000 LOOP
    PKG2.VAR2(I) := I;
  END LOOP;
END;
/
EXEC PKG2.VAR1 := PKG2.VAR2;
```

  - **Actual Results**

```
iSQL> EXEC PKG1.VAR1 := 100;
Execute success.
iSQL> EXEC PRINTLN(PKG1.VAR1);
100
Execute success.
iSQL> EXEC PKG2.VAR1 := PKG2.VAR2;
[ERR-31439 : An array (element) is not initialized.
at line 1]
```

  - **Expected Results**

```
iSQL> EXEC PKG1.VAR1 := 100;
[ERR-3113F : The L-value of the ASSIGN statement is either a CONSTANT
variable or an IN parameter.
0001 : EXEC PKG1.VAR1 := 100
            ^         ^
]
iSQL> EXEC PRINTLN(PKG1.VAR1);
1
Execute success.
iSQL> EXEC PKG2.VAR1 := PKG2.VAR2;
Execute success.
```

- **Workaround**

```
BEGIN
  PKG1.VAR1 := 100;
END;
/
BEGIN
  PKG2.VAR1 := PKG2.VAR2;
END;
/
```

- **Changes**

    - Performance view

    - Property

    - Compile Option

    - Error Code

BUG-50729 Address an issue where the stack size of terminated threads continued to be output in V$MEMSTAT.

- **module** : id

- **Category** : Functional Error

- **Reproducibility** : Always

- **Description** : Altibase addressed an issue where the stack size of terminated threads continued to be ouptut in V$MEMSTAT. Through this patch, the issue where more memory usage was being reported than the actual memory usage has been resolved.

- **How to reproduce this bug**

    - **Reproduction conditions**

    - **Actual Results**

    - **Expected Results**

- **Workaround**

- **Changes**

    - Performance view

    - Property

    - Compile Option

○ Error Code

BUG-50758 Fix an escape processing omission for double quote characters in APRE.

- **module** : mm-apre

- **Category** : Functional Error

- **Reproducibility** : Always

- **Description** : Escape character is automatically added to .c and .cpp files generated after apre precompile when EXEC SQL statements include "(double quote) character.

  Example)

  .sc File : EXEC SQL SELECT ' " ' FROM DUAL;

  ==>

  .c File : ulpSqlstmt.stmt = (char *)"SELECT ' \" ' FROM DUAL";

- **How to reproduce this bug**

  ○ **Reproduction conditions**

  ```c
  int main()
  {
      EXEC SQL SELECT ' " ' FROM DUAL;
  }
  ```

  ○ **Actual Results**

  It is converted as follows in the .c file.

  ```c
  int main()
  {
      /*  SELECT ' " ' FROM DUAL; */
      {
      struct ulpSqlstmt ulpSqlstmt;
      memset(&ulpSqlstmt, 0, sizeof(ulpSqlstmt));
      ulpSqlstmt.stmttype = 4;
      ulpSqlstmt.stmtname = NULL;
      ulpSqlstmt.ismt = 0;
      ulpSqlstmt.numofhostvar = 0;
      ulpSqlstmt.statusptr = NULL;
      ulpSqlstmt.errcodeptr = NULL;
      ulpSqlstmt.isatomic = 0;
      ulpSqlstmt.stmt = (char *)"SELECT ' " ' FROM DUAL";
    ...
      }
  }
  ```

  ○ **Expected Results**

  In the .c file, users can find \ is added before " as follows.

  ```c
  int main()
  {
  ```

```
    /*  SELECT ' " ' FROM DUAL; */
{

    struct ulpSqlstmt ulpSqlstmt;
    memset(&ulpSqlstmt, 0, sizeof(ulpSqlstmt));
    ulpSqlstmt.stmttype = 4;
    ulpSqlstmt.stmtname = NULL;
    ulpSqlstmt.ismt = 0;
    ulpSqlstmt.numofhostvar = 0;
    ulpSqlstmt.statusptr = NULL;
    ulpSqlstmt.errcodeptr = NULL;
    ulpSqlstmt.isatomic = 0;
    ulpSqlstmt.stmt = (char *)"SELECT ' \" ' FROM DUAL";

...
}
}
```

- **Workaround**

- **Changes**

    - Performance view

    - Property

    - Compile Option

    - Error Code

BUG-50778 Add exception handling to the getColumnCount function.

- **module** : qp

- **Category** : Fatal

- **Reproducibility** : Rare

- **Description** : Altibase internally invokes the getColumnCount function to request column information during the Prepare process. There was an issue that the server was abnormally terminated because of an invalid data structure access in an exceptional situation. Altibase added exception handling to this situation.

- **How to reproduce this bug**

    - **Reproduction conditions**

    - **Actual Results**

    - **Expected Results**

- **Workaround**

- **Changes**

    - Performance view

    - Property

    - Compile Option

    - Error Code

BUG-50783 Resolve the issue where "ERR-3123B : Invalid use of host variables" occurred and a procedure was terminated when a DDL statement was executed on the table being referenced within the procedure.

- **module** : qp

- **Category** : Functional Error

- **Reproducibility** : Always

- **Description** : Altibase resolved the issue where "ERR-3123B : Invalid use of host variables" occurred and a procedure was terminated when a DDL statement was executed on the table being referenced within the procedure.

- **How to reproduce this bug**

  - **Reproduction conditions**

    ```
    -- session 1
    CREATE TABLE T1 (I1 INTEGER);
    INSERT INTO T1 VALUES(1);
    CREATE OR REPLACE PROCEDURE PROC1 AS
    VAR1 INTEGER;
    VAR2 INTEGER;
    BEGIN
      VAR1 := 1;
      FOR I IN 1 .. 10 LOOP
      SELECT VAR1 INTO VAR2 FROM T1;
      PRINTLN(VAR2);
      SLEEP(2);
      VAR1 := VAR1 + 1;
      END LOOP;
    END;
    /
    EXEC PROC1;

    -- session 2
    ALTER TABLE T1 ADD (I2 INTEGER);
    ```

  - **Actual Results**

    ```
    iSQL> EXEC PROC1;
    1
    2
    3
    4
    [ERR-3123B : Invalid use of host variables
    0001 : select :B0 from T1;
                 ^  ^

    at "SYS.PROC1", line 7]
    ```

  - **Expected Results**

```
iSQL> EXEC PROC1;
1
2
3
4
5
6
7
8
9
10
Execute success.
```

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

BUG-50789 Fix a problem where media recovery failed when additional checkpoint image files were added during the process.

- **module** : sm
- **Category** : Fatal
- **Reproducibility** : Always
- **Description** : When additional checkpoint image files were added during the MEDIA RECOVERY process, the media recovery failed because it could not find LSNs of the added checkpoint image files. To resolve this, now Altibase records CreateLSN on the file header that are added during the MEDIA RECOVERY process.
- **How to reproduce this bug**
  - **Reproduction conditions**
  - **Actual Results**
  - **Expected Results**
- **Workaround**
- **Changes**
  - Performance view
  - Property
  - Compile Option
  - Error Code

BUG-50792 Fix a logic error in calculating the maximum value of undo tablespace when SNAPSHOT is set up.

- **module** : sm

- **Category** : Functional Error

- **Reproducibility** : Always

- **Description** : Altibase fixed a logic error in calculating the maximum value of undo tablespace when SNAPSHOT is set up.

- **How to reproduce this bug**

  - **Reproduction conditions**

  - **Actual Results**

  - **Expected Results**

- **Workaround**

- **Changes**

  - Performance view

  - Property

  - Compile Option

  - Error Code

BUG-50792 Fix a logic error in calculating the maximum value of undo tablespace when SNAPSHOT is set up.

Changes

Version Info

altibase version	database binary version	meta version	cm protocol version	replication protocol version
7.1.0.9.3	6.5.1	8.11.1	7.1.7	7.4.7

> 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

Deleted Properties

Performance Views

Added Performance Views

Changed Performance Views

Deleted Performance Views