

OpenTURBO A.02.00.01 Release Notes:

HP e3000:

1) Version checking: you can use 'version' command to check OpenTURBO version and compilation time for libraries and programs, for example, VERSION OTXL.A.IMAXSOFT.

2) Run-time options:

OT_DBLOCK_CONTROL = 1 (Item Level Lock only)
OT_NETWORK_COMPRESS = ON/OFF
OT_PRERELEASE = A0201 (INSERT Caching)
OT_SERIALGET_ORDERBY = ON/OFF
OT_TRIM_WHITESPACE = ON/OFF (NULL column support)

Database level options:

- a. **OT_DBLOCK_CONTROL = numeric value**
 - 0: Default mode, a standard lock manager is used
 - 1: ITEM Level (Predicate Level or Row Level) lock manager is used; which uses DBLOCK2 table only and an UNIQUE CONSTRAINT of (DBASE, DSET, ITEM, VAL) must be created for DBLOCK2 table manually before running your applications with this option. This option is a very application specific, you must be sure that only ITEM LEVEL and EQUALE operator are used in your applications LOCK descriptor.
- b. **OT_NETWORK_COMPRESS = ON/OFF**
 - ON: For getting data from ORACLE back-end to your applications only, it has no impact for sending data to ORACLE back-end. It trims TRAILING BLANKS only for all X, U and Z types equivalent columns. In order to take full advantage of WHITE_SPACE from ORACLE as well as NETWORK Transmission, use dataset level OT_TRIM_WHITESPACE option.
 - OFF: Default mode.
- c. **OT_PRERELEASE = A0201 (INSERT Caching)**
 - A0201: The INSERT Caching is temporarily roll-in to A.02.00 version for performance testing only; it doesn't use our fully integrated A.02.01 MARS core, so the performance is close to but not truly reflect the actual number.
 - OFF: Default mode.

Dataset level options:

- a. Dataset level: **OT_SERIALGET_ORDERBY = ON/OFF**
 - ON: No 'ORDER BY' is created in the SELECT statement for serially DBGET, the impact is that the row order of the outcome is not guaranteed.
 - OFF: Default mode.
- b. Dataset level: **OT_TRIM_WHITESPACE = ON/OFF**
 - ON: The impact by using OT_TRIM_WHITESPACE is quite significant.
 - a) You must generate ORACLE schema with option -z (OTDRV ". . . -t2 . . . -z"), which generates NULL allowed VARCHAR2 columns.
 - b) You must generate ORACLE sqlldr CLT script with option -z (OTDRV ". . . -t20 . . . -z"), which generates load scripts that enable ORACLE sqlldr to load all BLANKS as NULL and to trim trailing BLANKS.

c) OT_TRIM_WHITESPACE must turn ON for NULL allowed and NON-TRAILING-BLANKS tables; major database integrity issue by not setting properly, but major performance and throughput improvements.

OFF: Default mode.

3) **DBFIND** mode88 support - for OMIDEX and SUPERDEX replacement

Rules:

- o Mode = 88 (Un-restricted condition clause syntax will be supported for Mode = 89, in A.02.01 official release)
- o ITEM = BLANKS (ignored)
- o ARGUMENT contains the WHERE condition clause, but 'WHERE' itself is not included.
 - All operators must be UPPER CASE and must be surrounded by BLANKS
 - Allowed operators are =, >, <, >=, <=, <>, LIKE, AND, OR
 - No special characters are allowed in the STRING literal
 - Use ORACLE column name, not TurboIMAGE field name; OpenTURBO doesn't parse nor translate them, simply attach it to the WHERE clause
 - Example: **FLIGHT_KEY LIKE '20030915%' OR FLIGHT_KEY LIKE '20030914%'** => FLIGHT_KEY is the column name, not the TurboIMAGE item name FILGHT-KEY, the FLIGHT_KEY must be an INDEX for table COUPON, using LIKE is much faster than SUBSTRING() aggregate function.

4) **DOOR** - SHOOTOT -o **TRIM_WHITESPACE** support.

5) **TIDRV** - REPEATBEGIN n and REPEATEND, you can repeat a block-of-statements.

6) **IMAGE Failover** on HP3000 - otLOG, otLOGR, otCHKPNT, UNDOSYNC, otRECOV, otSYNC and **OT_DUALMODE = LOG**.

otLOG: Set <log-file> name and reset OT.TXID sequence object to 1.
otLOGR: <log-file> reader.
otCHKPNT: Set last-used-sequence-number to OTDB.RECOVERY.IMAXSOFT dataset OT-CHK-POINT for all M and D datasets in all datasets.
UNDOSYNC: Deletes rollback/DBXUNDO records off <log-file> via <log-file>.UNDO.
otRECOV: Recovery TurboIMAGE databases from <log-file>.
otSYNC: Set ORACLE IMAXSOFT13_SEQ_NO to TurboIMAGE record number.

7) **IMAGE Failover** on HP3000, the <log-file> and <log-file>.UNDO must be in format of '**BUILD OTLOG;REC=1,,F,BINARY;disc=500000**'. Watch out for FS size limit.

8) **IMAGE Failover** on HP3000, on HP-UX, the <log-file> name, that you specify while running otLOG, must **not** qualify **group and account**, simply provide a name that is less than or equal to 8 characters long.

9) **IMAGE Failover** open issue, will be implemented in **A.03.00**, the DBXBEGIN and DBXEND transaction-id and its time stamp will be logged to <log-file>.**END** for OpenTURBO level roll-forward recovery.

HP-UX:

- 1) Version checking: /users/lee/bin/**VERSION** for libraries only.
- 2) **IMAGE Failover** - **otLOR**, otLOGR and UNDOSYNC and **OT_DUALMODE = LOG**.

Bugs Fixed since 09/15/2003:

- 1) OT_TRIM_WHITESPACE = ON and OT_PRELEASE = A0201, DBPUT aborts due to data memory corruption.
- 2) In the scenario of DBGET(Mode=2), DBCLOSE(Mode=3), DBGET(Mode=2) and no other DBCALL in between, and OT_BULKCHAINGET = OFF and OT_IGNORE_CHAINSTATUS = OFF: the first record from second DBGET(Mode=2) contains incorrect data.
- 3) INSERT Caching (3518) - INSERT into a table that contains more than 16 columns and OT_IGNORE_DBPUTSTATUS = ON, in the scenario of DBXBEGIN, DBPUT, DBXUNDO, DBXBEGIN, DBPUT, and no other DBCALL in between, the second DBPUT aborts with 3518 or core dump.
- 4) When internal break on the 100 FETCH boundary, for example 100 rows fill 30K buffer exactly, then DBGET mode2 or mode3 will try to perform a SQL FETCH instead of getting data from existing BLOCK-buffer, MARS db.c must get-ahead next 100 rows and stored in BLOCK-buffer to be able to decide whether the first row from BLOCK-buffer fits into 30K buffer or not.

Sample CONFIG file:

```
OT_TI_DBNAME = PNRDB.DATA.WNCO
PNRDB.DATA.WNCO {
PNRDB.DATA {
PNRDB {
    OT_IMAGEMODE          = OFF
    OT_ROOT_FILE          = pnrdbti.ti
    OT_RESERVE_WORD_FILE  = RESERVE.ORACLE
    OT_ERROR_FILE         = OTERROR.ORACLE
//
// If OT_IMAGEMODE = ON, then options below are ignored
//
// Setup for ORACLE database server machine
OT_HOST                  = 192.8.8.8
OT_SERVICE               = 32600
OT_OS_RDBMS              = 515
OT_RDB_LOGON             = pnrdb_data_wnco/kmiyw
// OT_RDB_SID             = v90
// OT_RDB_OWNER           = AMISYS
OT_SDK_SERVER_PGM       = /users/lee/lbin/dbsvrA02
//
// Setup for TurboIMAGE database HP3000 machine
OT_DUALMODE              = OFF
TI_DUALMODE_HOST        = 192.1.1.1
TI_DUALMODE_SERVICE     = 32602
TI_DUALMODE_PGM         = DMDRV.BIN.IMAXSOFT
//
OT_CIUUPDATE            = LOG
OT_LOCKWAIT_CYCLE       = 60
OT_TRX_THRESHOLD        = 1
OT_NETWORK_COMPRESS     = OFF
// For One-way NETWORK COMPRESS enter ON
OT_DBLOCK_CONTROL       = 0
// 1 - ITEM Level and = Operator only, Unique constraint for DBLOCK2
// (DBASE, DSET, ITEM, VAL)
OT_PRERELEASE           = A0200
// For INSERT and UPDATE Caching enter A0201
//
```

```
    OT_LOCKCOVERAGE          = OFF
// No LOCK COVERAGE Checking for DBUPDATE and DBDELETE
//
// For All Datasets
//
OT_DETAILSETNAME = @ [
    OT_IGNORE_CHAINSTATUS    = OFF
    OT_BULKCHAINGET          = OFF
    OT_IGNORE_DBPUTSTATUS    = ON
    OT_USE_IMAGERECNUM       = ON
    OT_CHRONOLOGICAL         = ON
    OT_SERIALGET_ORDERBY     = OFF
    OT_TRIM_WHITESPACE       = OFF
]
}
```