

# **Oracle Tuxedo Application Runtime for CICS and Batch**

Release Notes

12c Release 1 (12.1.1)

September 2013

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# Oracle Tuxedo Application Runtime for CICS and Batch Release Notes

## Oracle Tuxedo Application Runtime for CICS and Batch 12c Release 1 (12.1.1) September 2013

**Table 1 Revision History**

<b>Revision Date</b>	<b>Summary of Change</b>
September, 2013	12c Release 1 (12.1.1) Rolling Patch 015
August, 2013	12c Release 1 (12.1.1) Rolling Patch 013
July, 2013	12c Release 1 (12.1.1) Rolling Patch 012
May, 2013	12c Release 1 (12.1.1) Rolling Patch 007
April, 2013	12c Release 1 (12.1.1) Rolling Patch 003
August, 2012	12c Release 1 (12.1.1) GA

This topic contains the following sections:

- [About This Release](#)
- [Software Components](#)
- [Installation Notes](#)
- [Platform Support](#)

- [Upgrade Considerations](#)
- [Behavior Changes](#)
- [Limitations and Known Issues](#)
- [See Also](#)

## About This Release

Oracle Tuxedo Application Runtime for CICS and Batch supports IBM mainframe applications to be rehosted to Oracle Tuxedo. It provides a combination of APIs and services that allows OLTP and Batch mainframe applications to run unchanged, preserving years of business logic and data investment. It protects application users from change by supporting standard 3270 terminal emulators. It also provides familiar APIs and functions that developers use in their mainframe applications.

The result is the ability to quickly (and with low risk), migrate legacy mainframe applications to open systems running COBOL and C/C++ application server. This provides substantial cost savings and greater flexibility.

Oracle Tuxedo Application Runtime for CICS and Batch major features are as follows:

- CICS Runtime
  - Preprocesses source code and translates EXEC CICS statements and CICS keywords into CICS Runtime interfaces.
  - A robust production environment based on Oracle Tuxedo that executes converted CICS applications.
- Batch Runtime
  - A robust execution engine that runs equivalent Korn-shell scripts converted from JCL.
  - A Job Enqueueing Service based on Oracle Tuxedo that emulates Mainframe JES2.

## What's New

This release includes the following new features and enhancements:

- CICS Runtime
  - Asynchronous CICS ECI Requests from Windows Clients
  - 3270 Terminal Interaction from Asynchronous CICS Transactions
  - Web UI Integration Framework Using BMS Maps Converted to JSP/HTML
  - Support for ATMI Client Interaction Using tpcall() with CICS Synchronous Transactions
  - Extended CICS Tracing Support and Trace Analysis Tools
  - CICS Trace Integrated in Call Path View in TSAM/OEM GUI

- ART CICS Server Build Tool for Supporting Specific COBOL Compilers and Database Environments
- Support for CICS Transaction Work Area in DPL Programs Running in ARTDPL Server
- Support for Configuring Shared CICS TS Queues Across Transactions
- Batch Runtime
  - Extended Support for GDG File Catalog Using Database Tables
  - Support for GDG File Catalog Queries and Operations in TSAM/OEM GUI
  - Extended Framework for Configurable Job Message Logging with User Exits
  - Extended GDG Commit/Rollback Scope Settings
  - Extended File Disposition Management with Exclusive Locking Support for Files Shared Using NFS
  - Batch Runtime Configuration for Use without COBOL Compiler Runtime
  - Extended Return Code Management for Running Non-COBOL Programs

Rolling Patch 001 includes the following new features and enhancements:

- Batch Runtime

Synchronous and Asynchronous Job Submitting and Result Notification

Rolling Patch 003 includes the following new features and enhancements:

- CICS Runtime

- Support for the following commands/options in COBOL programming:
  - ADDRESS COMMAREA
  - ASSIGN  
ABDUMP/ABPROGRAM/ASRAINTRPT/ASRAKEY/ASRAPSW/ASRAREGS/ASRASPC/ASRAS  
TG/INITPARM/INITPARMLEN/SOSI/USERNAME
  - CANCEL TRANSID REQID
  - HANDLE AID
  - HANDLE CONDITION NOAUTH
  - INQUIRE SYSTEM JOBNAME
  - START TRANSID NOCHECK/REQID
  - SUSPEND

- WRITE RBA
- Support for the following BMS Macros:
  - BMS DFHMDF GRPNAME

Rolling Patch 007 includes the following new features and enhancements:

- CICS Runtime
  - Support for the following commands/options in COBOL programming:
    - INQUIRE NETNAME ACQSTATUS/TERMINAL
    - INQUIRE TERMINAL ACQSTATUS/NETNAME
    - SEND STRFIELD
    - SET TERMINAL ACQUIRED/CREATE/RELEASED

Rolling Patch 012 includes the following new features and enhancements:

- CICS Runtime
  - Support for implementing and running CICS applications in C programming
  - Support for transferring CICS regions with ISSUE PASS
  - Provide `prepro-cics-C.pl` for CICS/COBOL APIs translation
  - Provide server `ARTLOGN` for CICS region (APPL) logon
  - Support for the following commands/options in COBOL programming:
    - ASSIGN KATAKANA/NETNAME
    - EXTRACT LOGONMSG INTO/LENGTH/SET
    - INQUIRE TERMINAL ALTSUFFIX
    - ISSUE PASS FROM/LENGTH/LUNAME
    - SEND DEFRESP/LAST
  - Support for the following commands/options in C programming:
    - ADDRESS COMMAREA/EIB
    - LINK COMMAREA/LENGTH/PROGRAM
    - RECEIVE INTO/LENGTH
    - RETRIEVE INTO/LENGTH
    - RETURN
    - WRITEQ TD FROM/LENGTH/QUEUE

– Support for the following BMS Macros:

- BMS DFHMDF CASE
- BMS DFHMSD SUFFIX

Rolling Patch 013 includes the following new features and enhancements:

• CICS Runtime

– Support for the following commands/options in COBOL programming:

- ALLOCATE (APPC) SYSID
- ALLOCATE (LUTYPE6.1) SYSID
- ASSIGN NETNAME
- CONNECT PROCESS CONVID/PROCLENGTH/PROCNAME/STATE/SYNCLEVEL
- CONVERSE (APPC)  
CONVID/FROM/FROMLENGTH/FROMFLENGTH/INTO/MAXFLENGTH/MAXLENGTH/NOTRUNCATE/SET/STATE/TOFLENGTH/TOLENGTH
- CONVERSE (LUTYPE6.1)  
FROM/FROMFLENGTH/FROMLENGTH/INTO/MAXFLENGTH/MAXLENGTH/NOTRUNCATE/SESSION/SET/TOFLENGTH/TOLENGTH
- DUMP TRANSACTION
- EXTRACT PROCESS CONVID/SYNCLEVEL
- FREE (APPC) CONVID/STATE
- FREE (LUTYPE6.1) SESSION
- HANDLE AID OPERID
- INQUIRE CONNECTION ACCESSMETHOD/CONNSTATUS/NETNAME
- ISSUE CONFIRMATION CONVID/STATE
- RECEIVE (APPC)  
CONVID/FLENGTH/INTO/LENGTH/MAXFLENGTH/MAXLENGTH/NOTRUNCATE/SET/STATE
- RECEIVE (LUTYPE6.1)  
FLENGTH/INTO/LENGTH/MAXFLENGTH/MAXLENGTH/NOTRUNCATE/SESSION/SET
- SEND (APPC)  
CONFIRM/CONVID/FLENGTH/FROM/INVITE/LAST/LENGTH/STATE/WAIT
- SEND (LUTYPE6.1) FLENGTH/FROM/INVITE/LAST/LENGTH/SESSION/WAIT
- SET CONNECTION CONNSTATUS
- WAIT CONVID (APPC) CONVID/STATE

Rolling Patch 015 includes the following new features and enhancements:

- **Batch Runtime**
  - Support for native JCL job with automatic and implicit migration by Oracle Tuxedo Application Rehosting Workbench.
  - Support for Network Job Entry (NJE).
  - Extended Support for file catalog using Database Table.
- **CICS Runtime**
  - Support for the following commands/options in COBOL programming:

### **BMS**

- SEND TEXT PRINT/NLEOM
- SEND CONTROL PRINT
- SEND MAP ERASEAUP/PRINT

### **Channel**

- DELETE CONTAINER
- GET CONTAINER
- GETNEXT CONTAINER
- ENDBROWSE CONTAINER
- MOVE CONTAINER
- PUT CONTAINER
- START CHANNEL
- STARTBOWSE CONTAINER

### **Diagnostic Services**

- ENTER TRACENUM/TRACEID

### **Environmental Service**

- ASSIGN CHANNEL

### **File Control Services**

- DELETE GENERIC/RBA
- READ GENERIC/RBA
- READNEXT RBA
- READPREV RBA

- RESETBR GENERIC/RBA
- STARTBR GENERIC/RBA
- WRITE RBA

### **Interval Control Services**

- CANCEL SYSID/TRANSID
- START SYSID

### **Program Control**

- LINK CHANNEL
- RETURN CHANNEL/INPUTMSG/INPUTMSGLEN
- XCTL CHANNEL

### **Spool Interface (JES)**

- SPOOLOPEN OUTPUT NOCC/NODE

### **System Commands**

- INQUIRE FILE  
ACCESSMETHOD/DSNAME/EMPTYSTATUS/ENABLESTATUS/LSRPOOLID/MAXNUMRECS/  
OPENSTATUS/TABLE/TYPE
- INQUIRE PROGRAM RESCOUNT
- INQUIRE TRANSACTION PROGRAM
- INQUIRE TERMINAL  
ACCESSMETHOD/CREATESESS/NEXTTRANSID/REMOTESYSTEM/SERVSTATUS/SIGNON  
STATUS/TRACING/TRANSACTION/USERID
- INQUIRE SYSTEM SHUTSTATUS
- SET FILE  
CLOSED/DISABLED/DSNAME/ENABLED/ENABLESTATUS/OPEN/OPENSTATUS
- SET TERMINAL ATI/ATISTATUS/INSERVICE/OUTSERVICE/TTI/TTISTATUS  
/SERVSTATUS/NOATI/NOTTI

### **Terminal Control**

- CONVERSE ASIS/ALTERNATE/CTLCHAR/ERASE/FROM/FROMLENGTH  
/FROMLENGTH/INTO/MAXLENGTH/MAXLENGTH/NOTRUNCATE/STRFIELD/SET/TOLE  
NGTH/TOLENGTH
- HANDLE CONDITION ERROR
- ISSUE DISCONNECT
- SEND ALTERNATE

- SEND DEFRESP

### **Web Service**

- INVOKE WEBSERVICE
- Integration with Oracle TMA for enabling DTP connections between the ART CICS region and Mainframe CICS region through APPC.
- Support for submitting JCL online.
- Support for printing applications data to a CICS 3270 printer.

## **Software Components**

Oracle Tuxedo Application Runtime for CICS and Batch software consists of the following components:

- **CICS Runtime**

CICS Runtime provides runtime environment for the CICS applications. It includes the following sub-components:

- Preprocessor
- CICS Runtime servers based on Oracle Tuxedo
- Tools and utilities

- **Batch Runtime**

Batch Runtime provides runtime environment for Batch JCL. It includes the following sub-components:

- Batch execution engine
- Oracle Tuxedo Job Enqueueing Service

## **Installation Notes**

- The installation of Oracle Tuxedo Application Runtime for CICS and Batch 12c Release 1 (12.1.1) does not require Oracle Tuxedo installation, but Oracle Tuxedo is a prerequisite at runtime.
- Oracle Tuxedo Application Runtime for CICS and Batch 12c Release 1 (12.1.1) supports Oracle Tuxedo 12c Release 1 (12.1.1) and Oracle Tuxedo Application Rehosting Workbench 12c Release 1 (12.1.1), Oracle TSAM 12c Release 1 (12.1.1), Oracle Tuxedo

JCA Adapter 12c Release 1 (12.1.1), Oracle SALT 12c Release 1 (12.1.1), Oracle Jolt, and Oracle Tuxedo Mainframe Adapters 12c Release 1 (12.1.1).

- In CICS Runtime, `CANCEL REQID`, `ISSUE PASS`, and `START TRANSID REQID` require Oracle Tuxedo 12c Release 1 (12.1.1) Rolling Patch 008 or above, and Oracle Tuxedo Application Rehosting Workbench 12c Release 1 (12.1.1) Rolling Patch 009 or above.
- In CICS Runtime, `DTP SYNCPOINT` support requires Oracle Tuxedo 12c Release 1 (12.1.1) Rolling Patch 019 or above, and requires to rebuild TMS.
- In CICS Runtime, Oracle Tuxedo Application Runtime for CICS and Batch 12c Release 1 (12.1.1) Rolling Patch 015 requires Oracle Tuxedo 12c Release 1 (12.1.1) Rolling Patch 019 or above.

For more information, see the [Oracle Tuxedo Application Runtime for CICS and Batch Installation Guide](#).

## Platform Support

Oracle Tuxedo Application Runtime for CICS and Batch 12c Release 1 (12.1.1) supported platforms are listed in the [Supported Platforms](#) in the [Oracle Tuxedo Application Runtime for CICS and Batch Installation Guide](#).

## Upgrade Considerations

When you upgrade Oracle Tuxedo Application Runtime for CICS and Batch from an older release to a newer release, you must rerun the CICS Preprocessor against the CICS COBOL programs, and then recompile the COBOL programs.

If upgrading from release 11.1.1.2 or before, you must ensure the `ARTADM` server is configured in CICS Runtime.

## Behavior Changes

- For CICS Runtime, since 12.1.1, the second FML base in `$KIXDIR/include/msgflds32` is changed from 30002700 to 30001100.
- For CICS Runtime, since 12.1.1 rolling patch 015, environment variable `ISC_ENABLE` and/or server `ARTSRM` are required for many enhancements which are introduced in previous 12.1.1 rolling patches. For more information, see [ISC\\_ENABLE](#) and [ARTSRM Configuration](#) in [Oracle Tuxedo Application Runtime for CICS Reference Guide](#).

# Limitations and Known Issues

The following sections describe the limitations and known issues with Oracle Tuxedo Application Runtime for CICS and Batch.

## Limitations

### Batch Runtime

- `IDCAMS LISTCAT` is not supported.
- `IEBGENER GENERATE` with `MEMBER` is not supported.
- system date (e.g. `DATE1`) comparison is not supported in `SORT` operation.
- Deleting a generation file in a GDG is not supported.
- Using `DISP=SHR` to add a new member in a PDS is not supported.

### CICS Runtime

- VSAM KSDS to ISAM conversion is limited to support Read Only mode.
- The following file related arguments are not supported or partially supported: `GENERIC`, `KEYLENGTH`, `UPDATE`, and `NUMREC`.
- BMS file name cannot be used as `MAPSET` name in `CICS SEND MAP` and `RECEIVE MAP` commands.
- All the `RBA` and `Generic` options for CICS commands are not supported in File-to-File scenarios when using COBOL-IT.
- When `ISC_ENABLE=YES` is set, ART CICS cannot validate `LUNAME` across multi-CICS regions.
- There are some restrictions when users implement and run CICS applications in C language. For more information, see [CICS Runtime C Program Support](#).
- When using COBOL-IT compiler, you must configure variable `COB_ENABLE_XA` before booting up `ARTSTRN`.
- When using COBOL-IT compiler, you must make sure `PROGRAM-ID` is the same as the COBOL program name and different COBOL programs must define different `PROGRAM-ID`.
- APPC session negotiation is not supported.

- Profile resource definition is not supported. Default profile `DFHCICSA` is assumed; there is no timeout mechanism in that profile.
- Applications communicating via DTP must run within the same Oracle Tuxedo domain.
- Communication between ART CICS and Mainframe CICS via TMA SNA inherits the following limitations from TMA:
  - LUTYPE6.1 protocol is not supported.
  - Only the following scenarios of the APPC conversational programming models are supported:
    - Scenario 1 - ATMI Conversational Client to CICS/ESA DTP (server gets control)
    - Scenario 2 - CICS/ESA DTP to ATMI Conversational Server (client relinquishes control)
    - Scenario 3 - Transactional ATMI Conversational Client to CICS/ESA DTP (server gets control)
    - Scenario 4 - Transactional CICS/ESA DTP to ATMI Conversational Server (host client relinquishes control)

For more information, see [Oracle Tuxedo Mainframe Adapter for SNA Reference Guide](#).

- Sending the data with state in one transmission using the `SEND` command is not supported.
- For scenarios 3 and 4, the `SEND CONFIRM/ISSUE CONFIRMATION` commands must be added to the server and client code respectively in a transactional conversation.
- Implementations of `SYNCPPOINT` in internal ART CICS and TMA-based ART CICS are different; these two kinds of sync level conversation cannot occur in the same transaction.
- TMA conversation server is terminated by `tpreturn()`, however, in scenario 2 and 4, TMA-based ART CICS can only map `SEND LAST` (or `FREE`) in sync level 0 and `SEND CONFIRM` in sync level 2 to `tpreturn()`, as a result, all subsequent operations in user's code are lost.
- Sync level 1 operation is not supported in Oracle TMA conversation. `SEND CONFIRM/ISSUE CONFIRMATION` is not supported except in scenarios 3 and 4.
- Oracle TMA copybook from Mainframe (via ART Workbench) must be aligned before it can be used in ART CICS applications.

## Known Issues

- CICS Runtime `READPREV` command does not work well after a `VSAM` file is converted to `ISAM` file.

## See Also

- [Oracle Tuxedo Application Runtime for CICS and Batch Installation Guide](#)
- [Oracle Tuxedo Application Runtime for CICS User Guide](#)
- [Oracle Tuxedo Application Runtime for CICS Reference Guide](#)
- [Oracle Tuxedo Application Runtime for Batch User Guide](#)