

Adabas Transaction Manager

Adabas Transaction Manager Version 8.2.2 Release Notes

Version 8.2.2

March 2013

Adabas Transaction Manager

This document applies to Adabas Transaction Manager Version 8.2.2.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1 Adabas Transaction Manager Version 8.2.2 Release Notes

This document describes the changes and enhancements provided with Adabas Transaction Manager Version 8.2.2

Prerequisites

New Features

Enhancements

Discontinued Support

Installation Changes

Required Maintenance

Upgrading From Previous Releases

Inter-operating with Previous Releases

2 Prerequisites

See Adabas Transaction Manager Install documentation, section Prerequisites.

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New Features

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This section provides an overview of the new features provided with this release.

Transaction Management Service Runs within the Adabas System Coordinator Daemon

With Version 8.2, the transaction management service now runs within the Adabas System Coordinator daemon, no longer as an `ADARUN DTP=TM`. This allows (for example) Transaction Manager to acquire many COR-based features such as allowing observation of client activities through the system, participation in systems-wide newcopy, etc. This also allows ATM to improve recovery and fail-over transaction management in multi-systems. It also means ATM has improved its internal recovery file processing allowing more throughput to be achieved.

Recovery File

The transaction manager uses a recovery file to store vital recovery information. With previous versions this recovery information was maintained in a number of Adabas files residing in a special Adabas database running as `DTP=TM`. With Version 8.2 all recovery information is maintained in a single direct access file defined to the Adabas System Coordinator daemon where the transaction manager service runs. The recovery file is shared by all transaction managers operating in the same Adabas System Coordinator group.



Note: It is very important that all transaction managers operating within the same Adabas System Coordinator group **share the same recovery file**.

Improved Feedback During Normal Termination of the Transaction Management Service

Normal termination of the transaction management service demands that existing transactions are completed. This can delay shutdown. In the past the transactions blocking termination were not easily visible. Now normal termination shows basic details of up to 5 of the transactions presently blocking termination as messages in the daemon. These messages will appear every sixty seconds until termination can take place. In normal situations, once termination has commenced there are very few transactions that will block termination for long but if there is a situation where some transactions are not completing for some reason these messages will be invaluable in allowing you to determine the cause of the blockage.

Alternate Console

Console messages may be issued by Adabas Transaction Manager in client jobs, in databases and in System Coordinator daemons. Until now the console has been the only place where you can see them but now you can direct them to an alternate destination. You can accumulate messages as they have been in the past or you can now accumulate them in a file associated with individual client jobs or collect messages for all client jobs into a file in the Coordinator daemon.

- Transaction Manager Client Message Alternates
- Transaction Manager Database Message Alternates
- Transaction Manager Service Message Alternates

Transaction Manager Client Message Alternates

The new Adabas System Coordinator Runtime messages client runtime control allows client messages to be routed to:

- The console.

This is compatible with previous releases.

- A local DDMSG file in the client job.

The JCL for the job must be altered to accommodate this option.

- Both the console and a local DDMSG file.
- A DDMSG defined by the System Coordinator daemon.

The daemon JCL must be altered.

Transaction Manager Database Message Alternates

The new Adabas System Coordinator daemon group setting Runtime messages – databases allows messages to be routed to:

- The console.

This is compatible with previous releases.

- A local DDMSG file in the database job.

The JCL for the job must be altered to accommodate this option.

- Both the console and a local DDMSG file.

Transaction Manager Service Message Alternates

The new Adabas System Coordinator daemon group setting Runtime messages – daemon allows messages to be routed to:

- The console.

This is compatible with previous releases.

- A local DDMSG file in the daemon job.

The JCL for the job must be altered to accommodate this option.

- Both the console and a local DDMSG file.

Transaction Manager failover

Transaction Managers now collaborate in multi-systems to provide failover capabilities, refer to Transaction Manager failover for more information.

Single-System Crash Recovery (DTP) Support

With Version 8.2, Adabas Transaction Manager (in conjunction with the Adabas System Coordinator) provides support for single-system crash recovery in a DTP environment.

Stop inactive Adabas sessions

Adabas Transaction Manager now provides a function to stop inactive Adabas sessions. This feature is provided as part of the *tasks* in the System Coordinator *network discovery* function.

Stop Adabas sessions

Adabas Transaction Manager now provides a facility to stop a selected Adabas session in all the databases where it is active. This feature is provided as part of the *tasks* in the System Coordinator *current activity/session display* function. This is a large productivity gain because it avoids the administrator having to seek out manually those databases where this session is active, it is far quicker to have it performed by Transaction Manager automatically.

Support for the Adabas shared hold status

Adabas Transaction Manager supports the use of the Adabas competitive updating control called Shared Hold Status. Refer to the Shared Hold Status section in Termination Commands: ET and BT for more information.

Dynamic modification of TM Distribution transaction timeout

You can now adjust the TM's Distribution transaction timeout setting. This feature is provided as part of the *tasks* in the System Coordinator *network discovery* function.

Activity Display for jobs

You can now display all Transaction Manager activities for every job in the system whether running local, pulsing or daemon mode. This allows you to see exactly what is happening in each job in the system. Please refer to the Transaction Manager Activity display for jobs.

Activity Display for client sessions

You can now display all Transaction Manager activities for every Adabas client session in the system whether running local, pulsing or daemon mode. This allows you to see exactly what is happening in each Adabas client session in the system. Please refer to the Transaction Manager Activity display for client sessions.

Allow new memory management options, including CICS crash recovery

Transaction Manager is fully compliant with the new memory management options introduced with Adabas System Coordinator. These options reduce the amount of memory consumed and also allow advanced crash-recovery capabilities for compliant TP systems such as CICS. Refer to the Adabas System Coordinator for more information on the types of options you can choose.

XML EXPORT for configuration objects

Configuration objects can now be exported in XML form. For more information please refer to the Adabas System Coordinator documentation.

Security protection for online administration

Adabas SAF Security sites who also use Transaction Manager can now secure the use of Transaction Manager online administration. Refer to the section SAF Security Settings for more information on how to implement this.

Support for Natural zIIP

Compliance for running in z/OS zIIP mode is introduced. This also requires the use of the base Adabas maintenance ADA824.LX08 (or equivalent for other releases of Adabas).

Transaction Manager controls are now online

You can now define and maintain Transaction Manager controls using the daemon maintenance (within group) function in System Coordinator administration.

For more information refer to How to maintain TM controls.

The table below shows the old TM parameter input and the corresponding new online configuration (including any corresponding client runtime controls):

| Old TM Parameter | Values | Online configuration | Values |
|------------------|---------------------------|---|---------------------------|
| TMETDATA | ATM / TARGETS | TM Control: ET data storage location | TM / RM |
| | | Client runtime control: ET data storage location | TM / Adabas / RM / NONE |
| TMGTT | 1 to 16777215 | TM Control: Distributed transaction timeout | 1 to 16777215 |
| | | Client runtime control: Distributed transaction timeout | 0 to 16777215 |
| TMRESTART | Normal / Force / Forceall | TM Control: Transaction recovery | Normal / Force / Forceall |

| Old TM Parameter | Values | Online configuration | Values |
|------------------|--------------|---|-------------|
| TMSYNCMGR | None / RRMS | TM Control: Open distributed transaction (system) | No / Yes |
| TMDRQ | 10 to 32767 | TM Control: Open distributed transaction (system)...Concurrency | 10 to 32767 |
| TMMMSGSEV | 0 / 4 / 8 | Discontinued | |
| TMTCIDPREF | Alphanumeric | Discontinued | |

 **Important:** Please review your new online TM configuration controls to make sure it correctly reflects your processing requirements.

New client runtime control “Distributed transaction timeout”

You can now override the TM distributed transaction timeout control value by using the new client runtime control of the same name. For more information about this new client runtime control refer to Distributed transaction timeout in the *Adabas Transaction Manager, Parameters, Client Runtime Controls* documentation.

New TM control “Enforce ADARUN DTP=RM”

Using this new TM control, you can make sure that all databases involved in a distributed transaction are running with ADARUN DTP=RM and are successfully connected to the TM. For more information about this new TM control refer to Enforce ADARUN DTP=RM in the *Adabas Transaction Manager, Parameters, TM Controls* documentation.

New client runtime control “ET data storage location”

You can now specify your required ET data storage location at the job level with this new client runtime control. For more information about this new client runtime control refer to ET data storage location in the *Adabas Transaction Manager, Parameters, Client Runtime Controls* documentation.

Unified Trace

Adabas System Coordinator 8.2.2 provides a unified trace feature that allows consistent diagnosis of client, database and daemon jobs configured to use Adabas System Coordinator and any of its related products: Adabas Fastpath, Adabas Transaction Manager, Adabas Vista and Adabas SAF Security.

This feature replaces the internal logging capability previously provided by the ATM client proxy and TM.

Support for Optimize for Infrastructure

Adabas Transaction Manager client jobs keep statistics for each job that is running in addition to each session. These statistics can be seen in the activities displays of System Coordinator. These statistics will form the basis of integration with Optimize for Infrastructure in a forthcoming service pack of this release

4 Enhancements

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This section provides an overview of the enhancements provided with this release.

Amended Prefix for Transaction Management Service Operator Commands

With Version 8.2, the prefix for the transaction management service operator commands is ATM and not TM like in previous versions.

ATM Messages

The following messages are new or have been enhanced; an explanation of all messages is in the Messages and Codes section.

ATM103

This enhanced message now displays the first 5 incomplete global transactions which are stopping the Transaction Manager from closing down during normal termination. The messages are repeated every 60 seconds until the incomplete transactions are resolved.

ATM105

This new informational message indicates when the Transaction Manager close down process has ended.

ATM106

This new informational message is issued by a transaction manager approximately five minutes after start-up and hourly thereafter. It displays a list of known databases and peer transaction managers.

ATM120

This new informational message is issued by a DTP=RM database that is initializing. The nucleus is waiting for connection to the local Transaction Manager for distributed transaction processing.

ATM121

This new warning message is issued when a database is started with ADARUN DTP=TM. This method of identifying a Transaction Manager is no longer applicable.

ATM124, ATM126, ATM127, ATM128, ATM129, ATM036

The text in these messages has changed, however the circumstances when these messages are issued have not changed.

ATM180

This new error message indicates a problem with the recovery file has been encountered.

ATM177, ATM178, ATM179, ATM181, ATM182

These new informational messages are related to the agent processing which may follow the abnormal termination of a transaction manager. For more information refer to Transaction Manager failover.

Daemon Network Node Number Included in Messages

Messages issued by the Adabas Transaction Manager service now include the node number (in the Adabas network) of the System Coordinator daemon under which it is running. This helps you understand origin of messages more clearly, especially if you run multiple nodes in a large system. The new message format appears as:

```
ATM $nnn$   $ss$   $xxxxx$  MESSAGE TEXT
```

where $xxxxx$ is the node number; nnn is the message number and ss is the severity.

Online Fix Description

The fix display in SYSATM has been enhanced to include a short description of each fix that is applied which helps you to get a better understanding of each fix that is in use.

The local session details display has moved

The option to display local sessions has moved. It now appears within an integrated System Coordinator session display for all sibling products together such as Fastpath, Vista, Transaction Manager in the System Coordinator *current activity display*.

Adabas transaction dynamics

The new client runtime control “Adabas transaction dynamics” replaces “Transaction model” and enhances it with the following additional capability:

- An “Adabas dynamic commits” count is maintained of those Adabas transactions which persist across TP message-pairs (displayed on the job/session statistics screen within the System Coordinator current activity display function).
- Prevention of Adabas transactions persisting across TP message-pairs with a response 240 sub-code 596. An “Adabas dynamic backouts” count is maintained for such preventions (displayed on the job/session statistics screen within the System Coordinator current activity display function).

For more information about this control refer to Adabas transaction dynamics in the *Adabas Transaction Manager Parameters* documentation.

Rename of client runtime control “Emergency Serial ET Commands”

The client runtime control “Emergency Serial ET commands” has been renamed to “Continuous operation mode”. For more information about this control refer to Continuous operation mode in the *Adabas Transaction Manager Parameters* documentation.

Replacement for client runtime control “Transaction Model”

The client runtime control “Transaction model” has been replaced with the new client runtime control “Adabas transaction dynamics”. No configuration file conversion is necessary. For more information about this control refer to Adabas transaction dynamics in the *Adabas Transaction Manager Parameters* documentation.

Rename of client runtime control “Use Client-Side Transaction Manager”

The client runtime control “Use Client-Side Transaction Manager” has been renamed to “Open distributed transaction support”. For more information about this control refer to Open distributed transaction support in the *Adabas Transaction Manager Parameters* documentation.

Replacement for client runtime control “Use Host System Transaction Manager”

The client runtime control “Use Host System Transaction Manager” has been replaced with the new client runtime control “Open distributed transaction support”. Conversion to the new runtime control is done automatically the first time SYSCOR is entered. For more information about this control refer to Open distributed transaction support in the *Adabas Transaction Manager Parameters* documentation.

Replacement for client runtime control “Transaction Control”

The client runtime control “Transaction Control” has been replaced with the new client runtime control “Transaction control by other vendors”. No configuration file conversion is necessary. For more information about this control refer to Transaction control by other vendors in the *Adabas Transaction Manager Parameters* documentation.

Rename of client runtime controls “Generate External Syncpoint on ET/BT/CL Command”

The client runtime controls “Generate External Syncpoint on ET/BT/CL Command” have been renamed to “Transaction control by ET/BT/CL”. For more information about these controls refer appropriately to Transaction control by ET, Transaction control by BT, Transaction control by CL in the *Adabas Transaction Manager Parameters* documentation.

Improved transaction manager statistics

The transaction manager statistics have been improved to include differentiating between those transactions that required full two phase commit processing and those transactions that didn't. In addition, statistics relating to the recovery file are now also provided. For more information about these improvements refer to Statistics in the *Online Services* documentation.

ET data management

The Copy ET Data utility program has been replaced with the new ET data management feature. This feature is provided as part of *tasks* in the System Coordinator *network discovery* function.

Replacement for client runtime control “Application Controls ET Data”

The client runtime control “Application Controls ET Data” has been replaced with the new client runtime control “ET data storage location”. No configuration file conversion is necessary. For more information about this control refer to ET data storage location in the *Adabas Transaction Manager, Parameters, Client Runtime Controls* documentation.

Increase in TM parameter default value for RRMS concurrency processing

The TM parameter default value for RRMS concurrency processing has been increased from 10 to 100 in order to be more tolerant of high-end systems. For more information about this control refer to Concurrency in the *Adabas Transaction Manager, Parameters, TM Parameters* documentation.

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- TM parameter TMMMSGSEV 20
- TM parameter TMTCIDPREF 20
- Client runtime control “Number of Log Record Entries” 20
- TM logging 21

This section provides an overview of removed or no longer supported features for this release.

ATM Messages

The following messages are no longer applicable, and have been removed.

ATM004, ATM006, ATM008, ATM009, ATM011, ATM022, ATM035, ATM056, ATM113, ATM114, ATM116, ATM117, ATM159.

TM controls using DDCARD input

The use of DDCARD input to define TM controls has been discontinued and replaced by online configuration. For more information about defining and maintaining TM configuration online refer to TM controls maintenance.

TM parameter TMSGSEV

The use of the TM parameter TMSGSEV has been discontinued.

TM parameter TMTCIDPREF

The use of the TM parameter TMTCIDPREF has been discontinued.

Client runtime control “Number of Log Record Entries”

The use of the ATM client proxy internal logging capability has been discontinued and replaced by unified tracing.

TM logging

The use of the TM internal logging capability has been discontinued and replaced by unified tracing.

6 Installation Changes

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- Recovery File 24

This section provides an overview of the installation changes for this release.

ATM Transaction Manager

The transaction management service now runs as a service within the Adabas System Coordinator daemon. Runtime parameters for the transaction manager are now defined in the parameter input of the System Coordinator daemon within which the transaction manager is operating. Please refer to the Installation section for detailed installation instructions.

Installing CICS Resource Manager Interface for z/OS and z/VSE

With version 8.2, there is no longer a requirement to link an Adabas Transaction Manager component with the Adabas TRUE. The standard Adabas System Coordinator implementation now provides all necessary CICS Resource Manager Interface services. Please refer to the Installation Procedures section for detailed installation instructions.

Recovery File

Recovery information is now maintained in a single direct access file defined to the Adabas System Coordinator daemon within which the transaction manager runs as a service. This recovery file is shared by all transaction managers operating within the same Adabas System Coordinator group. Please refer to the Installation section for detailed installation instructions.



Note: It is very important that all transaction managers operating within the same Adabas System Coordinator group **share the same recovery file.**

7 Required Maintenance

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- Adabas 26

This section provides an overview of required maintenance for this release.

Adabas Transaction Manager

During the final certification stages of this release, fixes may have been produced after the final freeze of the installation kit. Depending upon timing, some or all of the available fixes may be supplied with the kit in an "all zaps" dataset. These fixes, and any others that have appeared since should be applied during the installation process.

No additional maintenance is required.

Adabas

Ensure the following maintenance is applied:

For ADA 8.2.2: A0822005

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Upgrading from Previous Releases

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- ET Data Migration 28

This section describes actions which must be taken when upgrading from a previous release.

General Upgrade Considerations

Care must be taken so that the upgrade is only performed when no recovery data exists. That is; no outstanding recovery records, no suspect transaction records, no migrated transaction records, and no pending error records. Use the Adabas Transaction Manager Online Services to purge any outstanding records before an upgrade is performed. Recovery information from previous releases can not be migrated to Version 8.2 (with the exception of ET Data – see below).

ET Data Migration

If your site uses ET data and your TMs run with `TMETDATA=ATM` then current ET data must be migrated from the old ET data Adabas file repository to the new recovery file repository. Refer to the section *Display/Start ET Data Management Activity* for information on how to manage this migration.

9 Inter-Operating with Previous Releases

Transaction Manager 8.2 is able to inter-operate previous supported releases dynamically as transactions include databases managed by earlier releases. All transaction managers in the same System Coordinator group must be at the same software level because inter-operation support is implemented across groups not within them.

