Adabas Transaction Manager

Glossary

Version 8.2.1

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Adabas Transaction Manager

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Glossary

This glossary provides definitions for major terms used within Adabas Transaction Manager.

A

Adabas System Coordinator	A set of software components that provides common interfaces and services for use by products such as Adabas Transaction Manager, Adabas Fastpath and Adabas Vista.
Adabas Transaction Manager	A set of software components that manages the process of committing global transactions across Adabas databases on behalf of clients to ensure global transaction integrity.
ATM	See Adabas Transaction Manager.
ATM transaction manager	The server component of ATM. This component of ATM executes as a service within the Adabas System Coordinator daemon and provides transaction coordination and restart/recovery logic.

B

back out	The process of removing the changes made as part of a global transaction that has not completed (synonymous with roll back).
branch	See transaction branch.

C

client proxy	A software component that executes as a subroutine of an Adabas link module and interfaces with Adabas Transaction Manager on behalf of each client session.
client runtime controls	Parameters that govern the behavior of the ATM client proxy for a particular client session or job, or the behaviour of an ATM transaction manager with respect to the client session or job.

commit	The successful completion of a transaction. After commit, all actions by resource managers on behalf of the transaction are guaranteed to be durable (permanent), even if any parts of the system fail. In terms of Adabas: end of transaction (ET).
complete a global transaction	The process of either backing out or committing a prepared global transaction. See also back out, roll back, rollback, commit, global transaction, and prepare.
COR	An abbreviation for Adabas System Coordinator.
COR group	A group of one or more Adabas System Coordinator daemons that together provide services to a related group of application jobs or other software components.

D

distributed transaction processing	The execution of business transactions that are allowed to extend over multiple resource managers. A DTP system implies the use of two-phase commit processing and typically consists of application programs, resource managers, and a transaction manager per system image.
DTP	See distributed transaction processing.
DTP mode	The method of committing global transactions that relies on the two-phase commit protocol (see also serial mode).
DTR	See dynamic transaction routing.
dynamic Client ID	A unique but reusable identifier assigned to a client session by the transaction manager for internal use.
dynamic transaction routing	A load balancing and availability function, offered by some application environments, which allows client sessions to migrate from one address space to another, possibly in a different operation system image.

G

global transaction	A complete unit of work involving a number of actions performed by one or more resource managers. A transaction must be atomic (performed completely or not at all), consistent, isolated from other transactions, and (once it has been completed) durable.

	See also transaction.
global transaction queue	The list of active transactions that the ATM transaction manager maintains. It contains an entry for: ■ each active transaction in the local system; and ■ each active transaction branch belonging to a remote client session.

J

job parameters (now known as client runtime controls)	Parameters that govern the behavior of the ATM client proxy for a particular client session or job, or the behaviour of an ATM transaction manager with respect to the session or job.

P

partner ATM transaction manager	In a configuration that includes more than one operating system instance, an ATM transaction manager must execute in each system that is to participate in distributed transaction processing. The transaction managers are referred to as partner ATM transaction managers.
PRR file	Persistent recovery record file. See recovery record file.
prepare	The first phase of the two-phase commit process, during which target databases arrive at a recoverable state from which they can either commit or roll back the changes they have made as part of a global transaction.

R

recovery record file	A file in the ATM transaction manager's recovery file that contains recoverable details of active transactions that have not fully completed.
resource manager	A software component that is responsible for managing changes to a set of resources. Typically, an RM is an instance of a database management system (DBMS).
RM	See resource manager.
roll back	The process of removing the changes made as part of a global transaction that has not completed (synonymous with back out).

	After a rollback, all actions by resource managers on behalf of the transaction have been undone. In terms of Adabas: back out transaction (`BT`).

S

serial mode	The method of transaction control that relies on a series of single-phase commit operations to secure a global transaction. This protocol does not guarantee global transaction integrity. See also DTP mode.
STJ file	See suspect transaction journal file.
suspect transaction journal file	A file in the transaction manager's recovery file that contains details of incomplete transactions that have been purged from the transaction manager memory by operator intervention or by using Online Services.
syncpoint	The point in a transaction at which the decision to commit or back out takes place.
SYSCO daemon	An abbreviation for Adabas System Coordinator daemon – a software component that executes in its own address space and provides services to ATM and other software components.
SYSCO file	A central file store, managed by a group of SYSCO daemons, for use by other software components, such as ATM transaction managers.

T

TM	See transaction manager.
transaction	A complete unit of work involving a number of actions performed by one resource manager. A transaction must be atomic (performed completely or not at all), consistent, isolated from other transactions, and (once it has been completed) durable. See also global transaction.
transaction branch	A part of a global transaction that is managed as a subordinate unit of the transaction as a whole. A transaction that crosses system boundaries has a branch on each affected system that is remote from the client; the ATM transaction manager on each of these systems manages the corresponding transaction branch on behalf of the ATM transaction manager that is local to the user.
transaction identifier	A unique identifier of a global transaction. Also known as XID.

transaction manager	A software component that is responsible for coordinating transactions that change resources controlled by more than one resource manager.
transaction manager client proxy	A software component that executes as a subroutine of an Adabas link module and interfaces with Adabas Transaction Manager on behalf of each client session.
transactional Adabas command	A type of Adabas command that affects or is related to the processing of global transactions.
transparency	The feature of Adabas Transaction Management that makes it possible for an application program to benefit from global transaction integrity without being aware of the two-phase commit process.
two-phase commit	A protocol for ensuring the integrity of global transactions.

U

unsolicited syncpoint request	A request to commit or back out a global transaction that is issued by some software component without involving the application's ATM client proxy.

X

XID	See transaction identifier.