

Runtime Parameters

This section describes the runtime parameters used for Adabas Transaction Manager.

- ATM Runtime Parameters

ATM Runtime Parameters

ATM transaction manager operation is controlled through the following parameters:

Important:

These runtime parameters must be prefixed with 'ATM' when defining them in the parameter input of the System Coordinator daemon within which the Transaction Manager is operating. For example: ATM TMDRQ=10).

- TMDRQ Parameter: Size of ATM Request Queue
- TMETDATA Parameter: ET Data Control
- TMGTT Parameter: Global Transaction Time Limit
- TMMSGSEV Parameter: Severity Threshold for Warning Messages
- TMRESTART Parameter: ATM Restart Control
- TMSYNCMGR Parameter: Support for External Transaction Coordinators
- TMTCIDPREF Parameter: Dynamic Client ID Prefix

TMDRQ Parameter: Size of ATM Request Queue

Parameter Type	Use	Possible Values	Default
Runtime	Sets the number of entries allowed in the transaction manager's internal request queue.	10 - 32767	10

The ATM transaction manager uses an internal request queue for scheduling some of the tasks it needs to perform. The TMDRQ parameter determines the total number of entries in the queue that is used to service certain incoming, asynchronous requests. This queue is currently used only when the ATM RRMS interface is active.

RRMS Considerations

When the RRMS interface is in use, the ATM dynamic request queue (DRQ) is used for communication between ATM RRMS exits and the ATM manager. The value specified for the TMDRQ parameter should therefore be increased if RRMS is to be used. Consider the number of global transactions that may reach a syncpoint at the same time, and increase TMDRQ by this number. You can specify a higher value, for safety, without incurring any performance degradation.

You can use Online Services to monitor usage of the DRQ. If you specify too small a value and the DRQ becomes full, backouts resulting in response code 9 (ADARSP009) are likely to occur.

TMETDATA Parameter: ET Data Control

Parameter Type	Use	Possible Values	Default
Runtime	Location of ET data	ATM TARGETS	TARGETS

The TMETDATA parameter determines the database or databases that will store ET data. The same TMETDATA parameter value must be specified for all Adabas Transaction Manager (ATM) instances on the network.

Possible values:

Value	Explanation
ATM	<p>ET data is always stored in and read from the ATM transaction manager's recovery file, without regard to the database ID indicated by the Adabas command.</p> <ul style="list-style-type: none"> ● treats ET data as belonging to a global transaction rather than to a database; ● there is just one copy of a client's ET data in a system; ● eliminates confusion resulting from the existence of different ET data in different databases under the same ETID; ● overrides the Natural ETDB parameter; ● should not be used if the EmergencySerialETs runtime control will be set to YES or FORCE for any client environment in which ET data is stored or read.
TARGETS	<p>ET data is stored during the commit process in all changed databases that are running with DTP=RM.</p> <p>ET data that is stored by an ET or CL command is always stored in the database that is the target of the command, whether or not that database runs with DTP=RM. If the database runs with DTP=NO, the ET data is written to the database only after any open global transaction has been committed.</p> <p>If the client storing ET data is at global transaction status, ATM is not required to carry out any commit processing; the data is simply stored in the database indicated by the Adabas command. ET data is always read from the database specified in the Adabas command.</p> <ul style="list-style-type: none"> ● treats ET data as belonging to a database or a local database transaction rather than to a global transaction; ● a client's ET data might exist in several databases in a system; ● a client can have several different ET data values in different databases at the same time; ● means that 3GL application programs using ET data must have knowledge of the database that holds ET data for a given transaction; ● honors the Natural ETDB parameter.

Notes:

1. The recommended setting for this parameter is the default, TARGETS. This setting eliminates the dangers associated with running in serial mode when the transaction manager is unavailable.
2. See also the section entitled *ET Data Storage* in your Adabas Transaction Manager operations documentation.

TMGTT Parameter: Global Transaction Time Limit

Parameter Type	Use	Possible Values	Default
Runtime	Sets time limit during which a global transaction can be open without being prepared.	1 - 16777215	720

The TMGTT parameter approximately specifies the maximum elapsed time, in units of 1.048576 seconds, that a global transaction can remain open without being prepared. If the limit is exceeded, ATM automatically backs out the global transaction from all affected databases. The next time the client issues a transactional Adabas command, a response code 9 (ADARSP009) is returned.

It is recommended that TMGTT be smaller than the lowest TT parameter of any database running with DTP=RM.

The TMGTT parameter does not supersede the TT parameter settings of other databases. If a database times out a client who has an unprepared global transaction open, the global transaction is subsequently backed out. A response code 9 (ADARSP009) is returned if the client then issues a transactional command.

Note:

Transaction timeout can happen when a client session stops issuing commands for a period of time. In these circumstances the transaction manager has no opportunity to give a response code to the client, to indicate that the timeout has taken place. In such cases, the pending response code will be preserved and returned to the client at the first possible opportunity. For further details, please refer to *Pending Response Codes* in the Adabas Transaction Manager introduction.

TMMSGSEV Parameter: Severity Threshold for Warning Messages

Parameter Type	Use	Possible Values	Default
Runtime	Sets severity threshold for the suppression of warning messages.	0 4 8	0

Every message that the ATM manager sends to the console has a severity level. Message severity levels are explained in the Adabas Transaction Manager *Messages and Codes*.

Using the TMMSGSEV parameter, you can prevent messages with low severity levels from being written to the console by the ATM manager. This parameter has no effect on messages that are issued by the ATM client proxy, or during the early part of the transaction manager's initialization.

Possible values:

Value	Description
0	No messages are suppressed.
4	Messages of severity less than 4 are not sent to the console.
8	Messages of severity less than 8 are not sent to the console.

TMRESTART Parameter: ATM Restart Control

Parameter Type	Use	Possible Values	Default
Runtime	Controls restart handling of problematic transactions.	NORMAL FORCE FORCEALL	NORMAL

When an ATM manager restarts, it rebuilds its global transaction list as nearly as possible to its latest state when it was last executing. It then attempts to complete or back out any incomplete global transactions. The TMRESTART parameter determines the manager’s restart action with regard to global transactions and transaction branches that remain incomplete at the end of this process.

Possible values:

Value	Description
NORMAL	Any incomplete transactions remain in an incomplete state until such time as they can be completed.
FORCE	ATM transfers to the suspect transaction journal (STJ) the details of every incomplete global transaction that has its root local to this ATM manager. The details of these transactions are deleted from ATM’s recovery information, the originating clients are closed, and any related internal resources are freed. ATM can no longer guarantee integrity for such global transactions.
FORCEALL	Details of all unresolved global transactions and transaction branches are transferred to the STJ. The details are deleted from ATM’s recovery information, the originating clients are closed, and any related internal resources are freed. ATM can no longer guarantee integrity for the affected global transactions.

TMSYNCMGR Parameter: Support for External Transaction Coordinators

Parameter Type	Use	Possible Values	Default
Runtime	Indicates whether or not the ATM manager is to interact with an external transaction coordinator.	NONE RRMS	NONE

The TMSYNCMGR parameter determines whether or not the ATM manager registers and interacts with an external transaction coordinator.

Possible values:

Value	Description
NONE	The ATM manager will not interact proactively with an external transaction coordinator. This setting does not preclude the use of the CICS Syncpoint Manager, which interfaces directly with the ATM's client proxy component and not with the ATM manager.
RRMS	The ATM manager will register with the IBM Recoverable Resource Management Services so that it can participate in transactions that involve other RRMS-enabled resource managers. This parameter value is valid only for z/OS systems in which RRS (a component of RRMS) is active. The current version of ATM offers participation in RRMS-coordinated two-phase commit for single-user, single-TCB batch applications and for applications running under Com-plete or IMS TM.

TMTCIDPREF Parameter: Dynamic Client ID Prefix

Parameter Type	Use	Possible Values	Default
Runtime	Defines the first one or two characters of dynamically allocated Client IDs.	up to 2 alphanumeric characters	TM

To aid interpretation of Adabas Online Services displays and diagnostic logs, the ATM manager dynamically allocates an 8-byte client identifier (TCID) for each client session that engages in transactional activity. These client identifiers are simply labels, and have no operational significance.

The format of a dynamically allocated TCID is

ppnnxxxx

—where

pp is the value of the TMTCIDPREF parameter, left-justified and with trailing blanks if required.

nn is the 2-byte binary Node ID of the Adabas System Coordinator daemon within which the ATM transaction manager is running as a service.

xxxx is a 4-byte binary suffix. Suffixes are allocated in sequence and are reused. The first TCID to be allocated has a suffix of zeros.