

Transaction Manager Information

This function can be used to obtain information from an executing Adabas Transaction Manager.

- Transaction Manager Information Menu
- Select Different Transaction Manager
- Statistics
- Active Transactions
- Pending Response Codes
- Display Known Databases
- Display Partner Transaction Managers
- Recovery File Functions
- Zap Information

Transaction Manager Information Menu

 To display the Transaction Manager Information menu

- Select option 2 from the Online Services main menu. The following menu will appear:

```

09:16:10      ***** A D A B A S  TRANSACTION MANAGER 8.1.2 *****      2006-04-13
              - Transaction Manager Information -                          T12000M1

Manager: 20531                                     Terminal: TCR9

      Code      Service
      ----      -
          0      Select a different Transaction Manager
          1      Statistics
          2      Active Transactions
          3      More Pending Response Codes
          4      Known Databases
          5      Partner Transaction Managers
          6      Recovery File Functions
          7      Zap Information
          .      Exit
      ----      -
      Code ..: _

      New Manager Node: _____

      Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help  Oper  Exit                                          Menu
  
```

From this menu, you can	Code	Command
select a different transaction manager	0	
display statistics	1	2.1
display active transactions	2	2.2
display pending response codes	3	2.3
display known databases	4	2.4
display partner transaction managers	5	2.5
invoke recovery file functions	6	2.6
display zap information	7	2.7

The ID of the transaction manager you are currently working with is displayed on this screen and on most screens in this part of the application. For example,

Manager: 20531.

You can use PF2 to issue ATM operator commands to the transaction manager with which you are working. If you omit the command prefix TM, SYSATM supplies it for you. For example, if you enter the command NOLOG, it will be changed to TM NOLOG. The text you enter on the command line is not validated before the command is issued, except to check whether the command will terminate the transaction manager. If you enter the command TM HALT or TM END (or simply HALT or END), a window appears asking you to confirm your intention to close down the transaction manager. See section Operator Commands for a complete description of all operator commands.

Select Different Transaction Manager

If your system contains more than one operating system image and Entire Net-Work is being used to connect them, you may wish to work with a transaction manager that is executing in a different operating system image. In this case, select option 0 and enter the ID of the transaction manager in the field New Manager Node.

Note:

Running more than one ID table in the same system with Entire Net-Work providing the connection between users of each ID table is equivalent to executing across different operating system images.

Statistics

This option provides access to current statistics maintained by the transaction manager, and allows the administrator to reset statistical counts to zero.

Selecting option 1, Statistics, from the Transaction Manager Information menu displays the following menu:

```

09:23:02      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-13
              - Transaction Manager Statistics -                          T12100M1

Manager: 20531

              Code   Service
              ----   -
              1     Current Statistics
              2     Transaction Times
              3     High-water Marks
              .     Exit
              ----   -
Code ..: _

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit

```

- Current Statistics
- Transaction Times
- High-Water Marks

Current Statistics

This function displays statistical information about transactions managed by the current transaction manager. The display has the following format.

```
09:24:35      ***** A D A B A S  TRANSACTION MANAGER 8.1.2 *****      2006-04-13
                  - Current Statistics -                                T12110M1
Manager: 20531
```

	Transactions	Commits	Tran timeout	Heur- istic
ATM- only	237	233	2	
Extrn.	1315	1311		
-----	-----	-----	-----	-----
Total	1552	1544	2	
Open	6			
HWM	25			
-----	-----	-----	-----	-----

```
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit  Refr                                Menu
```

The following information is provided:

Field	Description
Transactions	The number of transactions, or branches, processed by this manager appears on the line that begins “Total”. This figure is broken down on the preceding lines into transactions that were controlled only by ATM (“ATM-only”), and transactions that were controlled by an external transaction coordinator, such as the CICS syncpoint manager or RRMS (“Extrn.”). “Open” indicates the number of transactions, or branches, that are currently open and that involve this transaction manager. “HWM” indicates the high-water mark for transactions; that is, the highest number of transactions, or branches, that have been in progress at the same time, involving this transaction manager.
Commits	This column indicates how many of the transactions, or branches, that this manager has processed were committed. The total is broken down into those that were controlled solely by ATM, and those that were controlled by an external transaction coordinator.
Tran timeout	This column indicates how many of the transactions, or branches, that this manager has processed were backed out because the global transaction time limit was exceeded. The total is broken down into those that were controlled solely by ATM, and those that were controlled by an external transaction coordinator.
Heuristic	This column indicates how many of the transactions, or branches, that this ATM has processed, have experienced some degree of heuristic termination, either by ATM or by a database. The total is broken down into those that were controlled solely by ATM, and those that were controlled by an external transaction coordinator.

Transaction Times

This function displays timing statistics for transactions (or branches) controlled by the transaction manager. The display has the following format.

09:31:27	***** A D A B A S	TRANSACTION MANAGER 8.1.2 *****	2006-04-13
	- Transaction Times -		T12120M1
Manager: 20531			
Upper bound (secs.)	Tran count	Committed	Backed out
-----	-----	-----	-----
0.50	1432	1422	10
1.00	112	108	4
2.00	4	4	0
5.00	0	0	0
10.00	2	0	2
300	0	0	0
600	1	0	1
9999999	0	0	0
-----	-----	-----	-----
Total:	1551	1534	17
-----	-----	-----	-----
Command ==>			
Enter -PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---			
Help Exit Refr Menu			

The following information is provided:

Field	Description
Upper bound (secs)	The transaction time ranges for which the manager maintains counts. The first row, for example, represents transactions that were completed within 0.5 seconds. The final row represents transactions that took longer than 600 seconds to complete.
Tran count	The number of transactions, or branches, processed by this manager, that completed within the time range indicated by the left-most column.
Committed	The number of transactions, or branches, committed by this manager, that completed within the time range indicated by the left-most column.
Backed out	The number of transactions, or branches, backed out by this manager, that ended within the time range indicated by the left-most column.

High-Water Marks

This function can be used to monitor the use of the transaction manager's resources, including its main storage areas.

The information provided can be used to determine if the setting for the ATM parameter TMDRQ is satisfactory.

09:37:02		***** A D A B A S		TRANSACTION MANAGER 8.1.2 *****		2006-04-13	
				- High-water Marks -		T12130M1	
Manager: 20531							
Item/parm	Max	HWM	Hits	First hit			
Buffer areas		27	3	04/13 08:14			
TMDRQ	10	0	0				
Request Q		2	1	04/13 08:06			
Client IDs	16777215	13	2	04/13 08:14			
Transactions		19	3	04/13 08:14			
TM nodes	191	3	1	04/13 08:13			
Databases	191	3	4	04/13 08:14			
DBs per tran	191	2	487	04/13 08:11			
TMs per tran	191	2	331	04/13 08:13			
Pending rsps		2	1	04/13 09:15			

Most entries in the list on this screen do not relate directly to any parameter, but are included for information. The following is a brief summary of the items listed

Item	Description
Buffer areas	Adabas buffer areas.
TMDRQ	Deferred request queue (ADARUN parameter).
Request Q	Internal request queue.
Client IDs	Count of dynamic Client IDs.
Transactions	Active transactions.
TM nodes	Number of remote ATM managers.
Databases	Number of databases.
DBs per tran	Number of databases in a single transaction.
TMs per tran	Number of remote ATM managers involved in a single transaction.
Pending rsps	Response codes waiting to be returned to client sessions.

Active Transactions

Option 2 provides information about all active transactions that involve the current transaction manager.

- Screen Format Used For Listing Transactions
- Display Detail Information for a Transaction

- Display Error Information
- Stop Transaction
- Display Pending ET Data

Screen Format Used For Listing Transactions

By default, active transactions are listed in the following format:

```

10:17:20      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-13
                                   - Transactions -                               T12200M2

Manager: 20531                                           Terminal: TCU5

      <-----Client ID----->
C CL   Char      Hex      Jobname   Status   MMDD HH:MM  MMDD HH:MM  DBs  TM
  L TM?q    ? E3D41B9800000001  DAEFCI18  GT OPEN  0413 10:17  0413 10:17   2   1
  L TM?q    ? E3D41B9800000012  DAEFCI18  GT OPEN  0413 10:17  0413 10:17   1

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit  Refr              Top                      Flip  Menu

```

By pressing PF11, you can view the list in an alternative format, which correlates the transaction owner's Communication ID with the Client ID:

```

10:22:50      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-13
                                   - Transactions -                               T12200M1

Manager: 20531                                           Terminal: TCU5

C L/R <-----Communication ID-----> Client ID

  L 000F7100 20640000 B902BE37 DE383581 00000001 C3C9C3E2 C5F0F0F1 TM ?q ?
  L 000F7100 20640000 B902C0D2 914965A2 00000001 C3C9C3E2 C5F0F0F2 TM ?q ?

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit  Refr              Top                      Flip  Menu

```

PF11 can be used to switch back and forth between the two list formats.

The first list format provides the following information:

Item	Description
C	Enter a non-blank character and press Enter to obtain more detailed information about a particular transaction. See Display Detailed Information for Transaction.
CL	C: Contains one of the following transaction coordinator values: ● P: transactions controlled by another ATM manager. ● C: transactions controlled by a client-side transaction coordinator ● H: transactions controlled by the host system transaction coordinator. ● a blank indicates that the transaction is controlled by the current ATM manager L: Indicates whether the client is local to (L) or remote from (R) the manager; that is, whether or not the client is executing in the same operating system instance
Char	The transaction owner's Client ID in character format.
Hex	The transaction owner's Client ID in hexadecimal format.
Jobname	The name of the job under which the transaction is executing.
Status	A summary description of the transaction's current status. See Display Detailed Information for Transaction for more information.
Tx.Start	The time at which the transaction began; that is, the time of the transaction's first change-type command.
Last Act	The time at which the transaction manager was last asked to perform some action on the transaction. For example, when the transaction changed another database.
DBs	The number of databases that have been changed by the transaction.
TM	The number of remote ATM managers that are involved in the transaction. Blanks indicate that the transaction has not changed any remote databases.

The second list format provides the following information:

Item	Description
C	Enter a non-blank character and press Enter to obtain more detailed information about a particular transaction. See Display Detailed Information for Transaction.
L/R	Indicates whether the transaction's owner is local to (L) or remote from (R) the transaction manager; that is, whether or not the client is executing in the same operating system instance.
Communication ID	The transaction owner's Communication ID in hexadecimal format.
Client ID	The transaction owner's Client ID in character format.

Display Detail Information for a Transaction

Detail information for a transaction can be obtained by marking the C column in the Transaction screen and pressing Enter.

The following screen will appear:

```

07:17:35      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-19
              - Transaction Details -                                T12210M1

Manager: 20531                                           Terminal: TCP0
Clnt Type: 84 - LOCAL   Client ID: TM?q  ? E3D41B9800000012   Jobname: QTT81013
Status: 8000000000 - GT OPEN   Co-ordinator: THIS ATM         PRR ISN: 00000000
CommID: 000FA10E 20860000 40404040 40404040 00F64400 E3F8F1F0 F1F34040
      XID: C1C4C101 00000050 00000002 5033000F A10E2086 00004040 40404040 404000F6
           4400E3F8 F1F0F1F3 4040E3F8 F1F0F1F3 4040D8E3 E3F8F1F0 F1F3BEAD 3BBC0734
           EC800000 00000000 00000000 00000000 00000000 00000000 00000000 C2D80000
           00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
      Start: 04/19 07:17.32   Tx Timeout: 07:19.38
           Pending Response: 000                               Sub Code: 0000
<-----CHANGED DATABASES-----> | <---PARTICIPATING ATMs-->
DBNo. TM Node   Status   Resp/subcode | TM Node   Status   Err
20532          0021 CHANGED    0    0 | 20535     0020 BRANCH
20536 20535    0021 CHANGED    0    0 |

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit  Refr              Top                      Flip  Menu

```

The following information is provided:

Field	Description
Clnt Type	The type of client session in hexadecimal format followed by an indication of whether the client is local to or remote from the transaction manager.
Client ID	The Client ID in character and then in hexadecimal format.
Jobname	The name of the job under which the transaction is, or was executing

Field	Description
Status	The transaction's status codes in hexadecimal followed by an indication of the most important element of the codes in character format. Possible character indicators are: ● GT: no transaction is in progress for this client ● GT OPEN: the transaction has begun ● IN PREP: the transaction is in the prepare phase ● PREPARED: the transaction has completed the prepare phase ● IN CMIT: the transaction is in the commit phase ● IN BKOUT: the transaction is being backed out ● BKD OUT: the transaction was backed out ● MIXED: the transaction completed with mixed committed and backed out status ● BR OPEN: the transaction is a branch of a transaction owned by another ATM manager
Coordinator	The transaction coordinator that has control of the global transaction. Possible values are: ● THIS ATM: the ATM transaction manager indicated in the Manager field (top left of screen) ● OTHER ATM: the ATM manager <i>nnnnn</i> has control ● CLIENT TC: the client's client-side transaction coordinator has control ● HOST TC: the host system transaction coordinator has control
PRR ISN	The ISN of the recovery record for the transaction. The ISN is located in the ATM recovery record (PRR) file. This field will normally contain zeros until the transaction reaches prepared status.
UAB	This field contains internal information which might be useful to Software AG's support staff in problem resolution.
GTQE	This field contains internal information which might be useful to Software AG's support staff in problem resolution.
CommID	The transaction owner's 28-byte Adabas Communication ID.
XID	The Transaction ID of the transaction.
Start	The start time of the transaction. The date has the format MM/DD.
Tx Timeout	The time at which the transaction will reach the global transaction time limit.
Last Act	The time at which the ATM daemon was last asked to perform some action on behalf of the transaction's owner. The date has the format MM/DD.

Field	Description
Pending Response and Sub Code	The response code and subcode that the manager will return to the transaction owner when the opportunity arises. These fields normally contain zeros.

The remainder of the screen displays

- a list of databases changed by the transaction
- a list of remote ATM managers that are responsible for remote branches of the transaction

If one or both of the lists is too long to fit on the display, “More” appears at the foot of the screen. Use PF8 to scroll down the list and PF7 to return to the top of the list.

Changed Databases

Field	Description
DBNo.	Database ID of the changed database.
Manager	The Node ID of the remote ATM manager executing in the same system image as the database. If the database is executing in the same system as the current manager, this field contains blanks.
Status	The status of the database with respect to the current transaction, followed by a summary value. Possible summary values are: • CHANGED: the transaction updated this database • IN PREP: the database was asked to prepare the transaction • PREPARED: the database prepared the transaction • IN CMIT: the database was asked to commit the transaction • COMMITTD: the database committed the transaction • IN BKOUT: the database was asked to back out the transaction • BKD OUT: the database backed out the transaction • HEURIST: a heuristic decision was taken • PND FRG : “forget” pending
Rsp and Sub	Any response code and subcode that the database returned to the manager for the transaction.

Participating ATMs

Field	Description
Manager	The Node ID of the ATM manager participating in the current transaction.
Status	The status of the ATM manager with respect to the current transaction, followed by a summary value. Possible summary values are: ● BRANCH: a transaction branch was created ● IN PREP: the manager was asked to prepare the transaction branch ● PREPARED: the manager prepared the transaction branch ● IN CMIT: the manager was asked to commit the transaction branch ● COMMITTD: the manager committed the transaction branch ● IN BKOUT: the manager was asked to back out the transaction branch ● BKD OUT: the manager backed out the transaction branch ● HEURIST: a heuristic decision was taken
Err	Enter a non-blank character and press Enter to display details of any errors recorded in a manager's feedback block. See Display Error Information.

Host TC Token Display

If the transaction is under the control of the host system transaction coordinator (HOST TC), PF9 at the foot of the screen is labelled "HstTC". Pressing PF9 invokes the Host TC Token Display window showing the identifiers used by the host transaction coordinator for the transaction.

Display Error Information

ATM records the details of errors in a feedback block in the transaction's global transaction queue entry (GTQE).

If the error occurs while processing a request from an ATM client proxy or remote ATM manager, the feedback block is returned to the component that issued the request; otherwise, it remains intact in the GTQE.

To display the feedback block for a transaction, press PF10 on the Transaction Details screen.

To display the feedback block of a remote ATM manager participating in a transaction, type a non-blank character next to the ATM manager entry in the Participating ATMs list and press Enter.

The error information is displayed in a window with the following layout:

```

07:29:20      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-19
              - Transaction Details -                                     T12210M1
Manager: 20531 +-----Error Information-----+ erminal: TCP0
ClnT Type: 84 - | 07:29:22 Error Information      2006-04-19 | Jobname: QTT81013
Status: 8000000 | | T1ERRIM1 | PRR ISN: 00000000
CommID: 000FA10 | | | F1F34040
      XID: C1C4C10 | ERROR CODES -      Primary: 00204 | 40404040 404000F6
      4400E3F | | Secondary: 00204 | F1F3BEAD 3E5BBCD9
      4D00000 | | Queueing: 00000 | 00000000 C2D80000
      0000000 | | Database No.: 20532 | 00000000 00000000
      Start: 04/19 | | Command Code: ET |
Last Act: 04/19 | | Response/Sub-Code: 022 / 0021 |
      <-----CHA | AUTO-BACKOUT - Return Code: 00000 | 00
      DBNo. TM Node | | Database No.: | ING ATMs-->
      20532 | | Command Code: | us      Err
      | | Response/Sub-Code: 000 / 0000 |
      | | PF3 Exit |
      +-----+
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit Refr Stop ET Top ErrI Menu

```

The following information is provided.

Field	Description
ERROR CODES	Describes one or more errors that occurred during processing of the transaction. The meaning of the error code in the fields Primary and Secondary can be found in the section Messages and Codes. In the example, an ET command was issued to database 20532 on behalf of the transaction, and a response code 22 (subcode 21) was returned. This response and subcode were returned to the client in the supplied Adabas control block.
AUTOBACKOUT	If an error caused ATM to attempt an autobackout, this field provides details of any error that occurred during the autobackout process. The meaning of the error code in the Return Code field can be found in the section Messages and Codes.
Err	Enter a non-blank character and press Enter to display details of any errors recorded in an ATM feedback block.

Stop Transaction

This function can be used if it becomes necessary to terminate a transaction by manual intervention. For example, a client session has abended without completing a transaction and it is necessary to free its resources.

To invoke this function, press PF5 on the Transaction Details screen.

The following window will appear:

```

07:17:35      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-19
                                     - Transaction Details -                                     T12210M1
Manager: 20531                                                         Terminal: TCP0
Clnt Type: 84 - +-----Stop Transaction Options-----+ ame: QTT81013
Status: 8000000 | 07:26:34 - Stop Transaction - 2006-04-19 | ISN: 00000000
CommID: 000FA10 | T1STOPM1 | 4040
XID: C1C4C10 | 4040 404000F6
      4400E3F | WARNING: Transaction integrity could be lost | BEAD 3BBC0734
      EC80000 | Select one of the following functions: | 0000 C2D80000
      0000000 |   _ Stop a transaction | 0000 00000000
      Start: 04/19 |   _ Stop all trans in same service |
      Last Act: 04/19 |   _ Stop all transactions |

<-----CHA      Select additional options as required:      ATMs-->
DBNo. TM Node |   _ No rsp 9 for client |      Err
20532 |   _ Transfer to STJ |

      PF1 Help      PF3 Exit      PF5 Confirm

+-----+
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit Refr Stop ET Top ErrI

```

Mark one of the following functions:

Function	Description
Stop a transaction	Terminate the transaction for which detail information is being displayed.
Stop all trans in the same service	Terminate the transaction for which detail information is being displayed and all other incomplete transactions belonging to clients in the same address space. This option can be used, for example, to terminate all transactions belonging to clients in a given CICS region. When this option is invoked, a console message is issued so that the event can be audited.
Stop all transactions	Terminate all incomplete transactions. When this option is invoked, a console message is issued so that the event can be audited.

Caution:

If you terminate a transaction branch or a part of a transaction that is controlled by an external transaction coordinator, only the local branch or local part of the transaction is affected. This could compromise the integrity of the global transaction as a whole.

By default, ATM attempts to complete (back out or commit) any incomplete transaction within the specified scope of the “Stop” request, according to its current status. By default, if a transaction is backed out, a pending response code 9 will be retained, either in the manager’s transaction queue or in the

pending response code list. ATM will not, by default, attempt to complete a transaction or branch that is controlled by another ATM manager or by an external transaction coordinator if this transaction or branch has reached the prepared state, unless ATM is certain of the intended outcome.

You can optionally increase the severity of the action to be applied to the selected incomplete transactions by marking one of the following options:

Function	Description
No rsp 9 for client	If this option is selected, no pending response code will be set for the owner of a transaction which is resolved, even if it was backed out. The transaction will disappear from the manager's list.
Transfer to STJ	This option causes the same processing as the "No rsp 9" option. Further, termination is attempted for any selected transaction or branch that is controlled by another ATM manager or an external transaction coordinator. Additionally, any of the selected transactions or branches that then remain (because they could not be resolved) are copied to the suspect transaction journal (STJ) and removed from the transaction list, without regard to the status of the transaction. Messages are written to the console giving details of the operation. Caution: When this option is used, global transaction integrity is likely to be lost. This option is provided for emergency use only.

Display Pending ET Data

Pressing PF6 from the Transaction Details screen will display any pending ET data if the transaction is partially through the commit process.

The ET data is displayed in hexadecimal and character format:

```

08:08:56      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-18
              - ET Data Display -              T1ETDTM1
TM Node: 20531
Offset      <----- Memory Contents ----->      <--Characters-->
00000000    C9E2D640 00010266 00000000 00000000      ISN ???
00000010    40404040 40404040 40404040 40404040
00000020    40404040 40404040 40404040 40404040
00000030    40404040 40404040 40404040 40404040
00000040    40404040 40404040 40404040 40404040
00000050    40404040 40404040 40404040 40404040
00000060    40404040 40404040 40404040 40404040
00000070    40404040 40404040 40404040 40404040
00000080    40404040 40404040 40404040 40404040
00000090    40404040 40404040 40404040 40404040
000000A0    40404040 40404040 40404040 40404040
000000B0    40404040 40404040 40404040 40404040
000000C0    40404040 40404040 40404040 40404040
000000D0    40404040 40404040 40404040 40404040
000000E0    40404040 40404040 40404040 40404040
000000F0    40404040 40404040 40404040 40404040

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help      Exit      Top      Fwd

```

Pending Response Codes

- Display Pending Response Codes
- Display Pending Response Code Details
- Delete Pending Response Code

Display Pending Response Codes

Selecting option 3, Pending Response Codes, from the Transaction Manager Information menu will display a list of client sessions for which the manager has pending response codes. Such a pending response code will be set, for example, when a transaction is timed out by the manager. The list looks like this:

07:42:39		***** A D A B A S		TRANSACTION MANAGER 8.1.2 *****		2006-04-19	
				- Pending Response Codes -		T12300M1	
Manager: 20531						Terminal: TCP0	
ID	(Hex)	Jobname	Rsp- code	Sub- code	Time MMDD HH:MM	DBs	
TM?q	? E3D41B9800000007	DAEFCI18	9	86	0419 07:40	1	
TM?q	? E3D41B9800000011	QTT81013	9	86	0419 07:39	1	

The following information is provided:

Function	Description
C	Enter a non-blank character and press Enter to obtain more detailed information about a particular pending response code. See Display Pending Response Code Details.
ID	The Client ID of the client session for which the pending response code is set. The ID is shown both in character and hexadecimal formats.
Jobname	The name of the job under which the client session is or was executing.
Response code	The pending response code.
Sub-code	The pending response code's subcode.
Time	The time at which the pending response code was set. The date has the format MM/DD.
DBs	The number of databases that took part in the transaction which caused the pending response code to be set.

Display Pending Response Code Details

More detailed information about a pending response code can be obtained by marking the C column in the Pending Response Codes screen.

The following screen will appear:

```

07:53:46      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-19
              - Pending Response Codes -                                T12310M1
Manager: 20531                                           Terminal: TCP0

CommID: 000FA10E 20860000 40404040 40404040 00F64400 C3C9C3E2 E3C3E3F4

                                <-----DATABASES----->
ID:          CICSTCT4          DBNo. TM Node      Status      Resp/subcode
Job name:    QTT81013          20532          0401 BKD OUT      0          0
Response code: 9
Sub-code:    86
              MM/DD HH:MM.SS
Time:        04/19 07:39.00
ISN:         2

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit  Refr  Del                                           Menu

```

The following information is provided on the left of the screen:

Function	Description
CommID	The Adabas communication ID of the client session for which the pending response code is set.
ID	The last 8 bytes of the Adabas communication ID of the session for which the pending response code is set, in character format.
Jobname	The name of the job under which the client session is or was executing.
Response code	The pending response code.
Sub-code	The pending response code's subcode.
Time	The time at which the pending response code was set. The date has the format MM/DD.
ISN	The ISN of the record which represents this pending response code in the manager's PRR file.

The right-hand side of the screen displays a list of the databases that were changed by the transaction which caused the pending response code to be set.

If the list is too long to fit on the display, "More" appears at the foot of the screen. Use PF8 to scroll down the list and PF7 to return to the top of the list.

Delete Pending Response Code

Normally, a pending response code is kept in the manager's memory, and possibly also in its recovery file, until the manager has an opportunity to return it to the transaction's owner, or until the owner is known to have disappeared.

For more information, see the section Introduction, Pending Response Codes.

The Display Pending Response Code Details screen provides a facility for deleting the pending response code. To use this facility, display the details of the pending response code that you want to delete, then press PF5 (“Del”). You will be prompted to confirm your intention to delete the pending response code.

Note:

If you use this facility, the pending response code will be removed from the manager’s memory and from the recovery file, so the owner of the transaction will never receive the pending response code. This might mean, for example, that the owning client will never become aware that the previous transaction was backed out.

Display Known Databases

Selecting option 4, Display Known Databases, from the Transaction Manager Information menu will display a list of all databases in the network that are known to this ATM. The list includes all databases that are enabled for two-phase commit processing; that is,

- all local databases that are running with ADARUN DTP=RM, and
- all remote databases that are running with ADARUN LOCAL=NO and have been identified to the transaction manager by remote ATMs.

Other databases may appear in the list, depending on the way they are used. The display has the following format:

08:13:38 ***** A D A B A S TRANSACTION MANAGER 8.1.2 ***** 2006-04-18					
- Display Known Databases - T12400M1					
Manager: 20531					
C	DB No.	TM Node	DTP	Usage	Date/Time MM/DD HH:MM.SS
—	131	20531	N		
—	20532	20531	Y	2	04/18 08:04.41
—	20536	20535	Y	1	04/18 08:05.46
Mark with L(list) or Q(uiesce)					
Command ==>					
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---					
Help		Exit	Refr	Top	

The following information is provided

Field	Description
C	Command input field. The following options are provided: ● L: list active transactions that involve the selected database The format of the list is identical to that displayed using option 2 (active transactions). ● Q: quiesce all transactions that involve the selected database ATM attempts to complete (commit or back out) any transactions that involve the selected database, depending on the status of the transaction. If the transaction manager is managing transaction branches that involve the selected database, it asks the ATMs that own those transactions to complete them (that is, commit them or back them out), as appropriate This option does not prevent new transactions from changing the selected database.
DB No.	The normal Database ID.
Manager	The ID of the database's local ATM.
DTP	Indicates whether the database is running DTP=RM (Y) or DTP=NO (N).
Usage	The number of open transactions that involve the database.
Date/Time	The time at which the database's local ATM became aware that the database was active. This can be either the time at which the database was started or the time at which its local ATM started.

Display Partner Transaction Managers

Option 5, Display Partner Transaction Managers, on the Transaction Manager Information menu displays a list of remote ATMs in the network that are known to this ATM.

```
08:18:45      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-18
                                     - Display Partner ATMs -                      T12500M1
Manager: 20531
ATM Session: 43          COR Group: CORATM81          Date/Time
TM Node      Jobname      Status      Session      MM/DD HH:MM.SS  Host TC
20535        ATM20535      84 ACTIVE      41            04/18 08:05.26  N

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11--PF12---
      Help      Exit  Refr              Top
```

The following information is provided.

Field	Description
ATM Session	The ATM Session field above the table on this display indicates the number of the current session of the ATM identified by the Manager field above it. Session numbers begin with 1 when the transaction manager is first started and increase by 1 each time it is restarted.
COR Group	This field above the table of partner ATMs displays the name of the Adabas System Coordinator group with which the local transaction manager and its partner ATMs are associated.
TM Node	The ID of the remote ATM.
Jobname	The name of the transaction manager job.
Status	The latest known status code for the remote transaction manager, together with a summary interpretation. Possible values are: ● ACTIVE: the transaction manager is active ● TM DOWN: the transaction manager is not available ● DB RSTRT: a database that is local to this ATM has restarted; restart processing is required for any work involving this database ● PND RSTT: the local ATM must perform restart processing for work involving this remote ATM
Session	The number of the current session of the partner ATM manager. Session numbers begin with 1 when an ATM manager is first started and increase by 1 each time it is restarted.
Date/Time	The time at which the remote ATM manager was started.
Host TC	Indicates whether the remote ATM is interfacing to its local host transaction coordinator. Only RRMS under z/OS is currently supported as a local host transaction coordinator for an ATM manager.

Recovery File Functions

This option can be used to list and display recovery records, to browse the suspect transaction journal, to list and display migrated transaction records, and to list and display pending error records.

Selecting option 6, Recovery File Functions, from the Transaction Manager Information menu displays the following menu:

```

08:24:28      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-18
                  - Recovery File Functions -                               T12600M1

Manager: 20531

                Code   Service
                ----   -
                  1   List Recovery Records
                  2   Browse Suspect Transaction Journal
                  3   List Migrated Transaction Records
                  4   List Pending Error Records
                  .   Exit
                ----   -
Code: _

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help           Exit                                           Menu

```

- Displaying Recovery Records and Suspect Transactions
- List Migrated Transaction Records
- List Pending Error Records

Displaying Recovery Records and Suspect Transactions

Select code 1 or 2 to list recovery records or browse the suspect transaction journal (STJ). The order in which records are displayed is not significant.

For both options, the resulting list has the following layout; only the subheading differs:

```

08:26:51      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-18
              -   Suspect Transactions   -                               T12610M1
Manager: 20531                                           Terminal: TCEQ

C L/R  <-----Communication ID----->      Client ID
-   L   000F7100 20640000 40404040 40404040 00F1E100 B8E5C585 C647B560  TM?q  ?
-   L   000F7100 20640000 40404040 40404040 00F71380 B8E71F47 3206D801  TM?q
-   L   000F7100 20640001 40404040 40404040 00F24880 E4D2D7C4 404040F2  TM?q  ?
-   L   000F7100 20640000 40404040 40404040 00F11B80 B8EFAAF9 6445FE42  TM?q

Mark with D(isplay) or P(urge)

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12
      Help      Exit  Refr                        Top                                Menu

```

The following information is provided

Item	Description
L/R	Indicates whether the transaction's owner is (or was) local to (L) or remote from (R) the transaction manager; that is, whether or not the client is (or was) executing in the same operating system instance.
Communication ID	The transaction owner's Communication ID in hexadecimal format.
Client ID	The transaction owner's Client ID in character format.

For a more detailed display of an item, type D in the C column next to the item and press Enter. The resulting display has the same layout as the Transaction Details screen.

To delete a record from the STJ or the recovery record file, type P (for "purge") in the C column next to the selected item and press Enter. You are prompted to confirm that the record should be deleted.

Caution:

The purge function is provided for housekeeping of the STJ file. If you use it to delete a record from the recovery record file, you could compromise the integrity of the related global transaction, and results are unpredictable. Therefore, for audit purposes, a console message is issued when a recovery record is deleted.

List Migrated Transaction Records

To list migrated transaction records, enter code 3. If a client executes in an environment in which dynamic transaction routing can take place, and the client's session is migrated from one system image to another while the client has a global transaction in progress, a migrated transaction record (MTR) is created. An MTR is deleted when the transaction finally terminates. MTRs are stored, not in the ATM's recovery database, but in a central file store that is provided for the Adabas System Coordinator daemons in the associated COR group.

```

08:30:35      ***** A D A B A S   TRANSACTION MANAGER 8.1.2 *****      2006-04-18
                        - Migrated Transactions -                                T12630M1
Manager: 20531                                           Terminal: TCEQ
C   <-----Communication ID----->   TM Node
_   000F7100 20640000 40404040 40404040 00F71380 B8E71F47 3206D801 20535

Mark with D(isplay) or P(urge)

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12
      Help      Exit  Refr              Top                      Menu

```

The following information is provided.

Field	Description
C	Command input field. The following options are provided: ● D: display the selected record The resulting display is described below. ● P: purge the record This function is provided for housekeeping by the administrator in exceptional cases. Normally, records are deleted automatically when the associated transaction completes. Caution: If you purge a record, it is possible that ATM will be unable to resolve the associated transaction with integrity.
Communication ID	The client's 28-byte Adabas Communication ID.
TM Node	The Node ID of the transaction manager that is currently local to the client who owns the transaction.

The Display function produces a display with the following format:

[illegible]

Field	Description
CommID	The 28-byte Adabas Communication ID of the client who owns the transaction.
XID	The ID of the transaction.
CICS URID	If the transaction is controlled by the CICS syncpoint manager, the CICS URID might be displayed.
Appl ID	If the transaction is controlled by the CICS syncpoint manager, the CICS appl ID might be displayed.
TRUE	If the transaction is controlled by the CICS syncpoint manager, the name of the CICS Task Related User Exit might be displayed.
RRS URID	If the transaction is controlled by RRMS, the RRS URID might be displayed.
Owning ATM	The Node ID of the transaction manager that is currently local to the client who owns the transaction.

List Pending Error Records

To list pending error records, enter code 4. If a transaction fails in such a way that the ATM manager sets a pending response code, a pending error record might also be stored, so that the pending response code will survive a component failure, or restart of the transaction manager. Pending error records are listed like this:

```

07:41:53      ***** A D A B A S      TRANSACTION MANAGER 8.1.2 *****      2006-04-19
              - Pending Error Records -                                T12640M1

Manager: 20531                                                    Terminal: TCP0

C          ID          (Hex)      Jobname      Rsp- Sub-      Time
_         TM?q      ?   E3D41B9800000007   DAEFCI18      9    86      0419 07:40      1
_         TM?q      ?   E3D41B9800000011   QTT81013      9    86      0419 07:39      1

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help          Exit  Refr          Top          Menu

```

The fields in this screen are as described in the section Display Pending Response Codes.

For a more detailed display of an item, type D in the C column next to the item and press Enter. The resulting display has the same layout as the Pending Response Code Details screen

To delete a pending error record, type P (for “purge”) in the C column next to the selected item and press Enter. You are prompted to confirm that the record should be deleted

Note:

If you delete a pending error record using this function, the transaction manager retains details of the pending response code in memory. If the owner of the transaction tries to do further transactional work during the current execution session of the transaction manager, the pending response code will be given. If you want to remove the pending response code from the transaction manager's memory as well as from the recovery file, use the "delete" function of the Pending Response Details display.

Zap Information

This function can be used to determine the zaps that have been applied to the ATM kernel module that is being used by the transaction manager with which you are working.

This function is invoked by selecting option 7, Zap Information, on the Transaction Manager Information menu. The following screen will appear:

```

18:19:28      ***** A D A B A S  TRANSACTION MANAGER 8.1.2 *****      2006-12-11
                  - Display Applied Zaps -                      T1ZAPDM1
Version: ATM 8.1.2  Assembly Date: 12/28/06  Job Name: LOCAL      Manager: 651

---  ---  ---  ---  005  ---  007  ---  ---  ---  ---  ---  ---  ---  ---
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Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Exit                                          Menu

```

The number displayed represents the last 3 digits of the actual zap number with leading zeros suppressed. In the example, zap AT811005 appears as 5 and zap AT811007 appears as 7.