software AG

Adabas Transaction Manager

Online Services

Version 8.2.2

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Adabas Transaction Manager

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1 Online Services

This section describes the Adabas Transaction Manager online administration tool.

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Additionally:

- **How to dynamically change the TM distributed transaction timeout**
- **How to stop inactive Adabas sessions**
- **How to stop Adabas sessions**
- **How to display/start ET Data management activity**
- **How to maintain TM controls**

2   Using Adabas Transaction Manager Online Services

Online Services Main Menu

ATM Online Services is available from a Natural application installed in library SYSATM and accessed from the AOS main menu. The application must be executed from a Natural session that has been configured to use ATM. Refer to section Installation for details.

▶ **To invoke Adabas Transaction Manager Online Services**

■   select Adabas Transaction Manager from the AOS main menu,

   Or:

   log on to SYSATM and enter the command MENU.

The Main Menu screen will then appear:

```
 09:52:35    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****     2006-04-13
                              -  Main Menu  -                        T1MAINM1

Manager: 20531                                             Terminal: TCG3


             Code    Service
             ----    -------------------------------------
               0     System Settings
               1     Maintenance
               2     Transaction Manager Information
               3     Special Services
               4     About Adabas Transaction Manager
               .     Exit
             ----    -------------------------------------
        Code ..: _




 You can easily switch around the tools for Fastpath, Vista etc by use of
 PF11, or use the codes COR, AFP, AVI, AAF, ATM as commands - anytime.

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

Whenever the MENU command is executed, the transaction manager proxy tries to locate its local transaction manager (TM):

■ If one is found, its node ID is displayed: for example: Manager: 20531.

- If the local manager is not executing, you may specify a manager's node ID later.

  When the Manager ID is displayed, it may be followed by the text "(Host TC Active)" indicating that ATM's interface to the host system transaction coordinator is active in this node. On a z/OS system, this means that the ATM RRMS interface is active.

The following options are available:

Option	Description
System Settings	Maintain configuration file setting.
Client Runtime Controls	Add and maintain client runtime control definitions.
Transaction Manager Information	Display Transaction Manager information.
Special Services	Provide special services for the ATM components.
About Adabas Transaction Manager	Display product information.

By default, the latest installed version of Online Services is executed. If you wish to use an earlier version, use PF12 to display a list of the available versions and then select the version to be used.

> **Note:** From the Adabas Transaction Manager main menu, you may switch to the online systems of Adabas System Coordinator, Adabas Fastpath, Adabas Vista or Adabas SAF Security by pressing PF11. This will result in a window appearing within which you can make your product selection. You may also switch from any screen with a command line by entering the appropriate three-character code (for example, AVI for Adabas Vista) as a command. You may only switch to the same version of another online system.

Navigation

You can access screens in two ways:

- sequentially by selecting a menu service and entering it in the `Code` field; or

- directly by typing a numerical command on the command line.

For example, entering the command `1.1` on the command line directly accesses the Client Runtime Controls screen within the Maintenance function without first accessing the Maintenance menu.

Function	Object or Subfunction	Command
System Settings	Menu	0
	LFILE 152 Maintenance	0.1
Runtime Control Maintenance	Menu	1
Transaction Manager Information	Menu	2
	Statistics	2.1

Function	Object or Subfunction	Command
	Active Transactions	2.2
	Pending Response Codes	2.3
	Known Databases	2.4
	Partner Transaction Managers	2.5
	Recovery File Functions	2.6

Using PF Keys

The following PF keys are available on one or more of the screens:

PF Key	Label	Description
PF1	Help	Invoke help information for the current screen.
PF2	Oper	Issue the operator command typed in the command line.
PF3	Exit	Return to the previous screen.
PF4	Refr	Refresh the information on the screen.
PF5	Stop	Stop transaction request. See section **Stop Transaction**.
PF7	Top	Return to the first screen of a list display.
PF8	Fwd	Scroll forward through a list display.
PF9	HstTC / TC	Invoke the Host TC Token Display or Client TC Display.
PF10	ErrI	Display error information. See section **Display Error Information**.
PF11	Net / TID	Toggle between net name and Terminal ID.
PF11	Flip	Toggle between different list formats. See section **Active Transactions**.
PF12	Menu	Return to the main menu.

Help Information

▶ **To invoke help information**

■ Press PF1.

The help screen that appears applies to the current screen and may comprise several pages. From each help screen, you can access lower level options or return to previous, higher levels.

You can navigate by entering

-	to move backwards and up a menu level
1 - 7	to move down a level to the function selected

If the help screen comprises multiple pages, you can enter

+	to move to the next page
-	to move to a previous page until page 1, then back up a level

3   System Settings

This function is used to maintain the system configuration file. This file contains the definitions of ATM's client runtime controls.

System Settings Menu

▶ **To display the System Settings menu**

■ Select service System Settings (option 0) from the main menu. The following menu will appear:

```
15:22:49       ***** A D A B A S TRANSACTION MANAGER 8.2.2 *****       2006-04-19
                        -  System Settings  -                          T10000M1


                    Code    Service
                    ----    --------------------
                     1      LFILE 152 Maintenance
                     2      SAF Security Settings
                     .      Exit
                    ----    --------------------
             Code..: _




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

From this menu, you can	Code	Command
customize the use of the configuration file (LFILE 152)	1	0.1
Activate security protection for online administration	2	0.2

Configuration File (LFILE 152) Maintenance

▶ **To customize the use of LFILE 152**

1   Select service 1 from the System Settings menu or enter the command 0.1 on a command line.

The LFILE 152 Maintenance window will appear:

```
15:22:59              LFILE 152 Maintenance            2006-04-19
                                                        U1LFILM2


Current Settings for LFILE 152:

Original LFILE = ( 152 , 199   , 20    )
Current LFILE  = ( 152 , 199__ , 20___ )
                 (effective only for this Natural session)


Default pop-up settings:
Do you want to see this window again?
                   - for the current SYSATM session... Y
                   - for future SYSATM sessions....... Y


                   PF3 Exit     PF5 Update/Confirm ↵
```

In the Original LFILE field, the database and file number are displayed for the configuration file that was allocated to LFILE 152 at the start of your current SYSATM session.

These values were allocated to LFILE 152 using the static Natural parameter `NTFILE ID=152,..` or the dynamic Natural parameter `LFILE=(152,..)`. For more information about specifying LFILE 152, see the installation instructions relevant to your operating system.

2   In the Current LFILE field, you can change the database and file number to access a different configuration file.

Specify the new configuration file database and file number, if necessary.

3   Review the default settings.

The LFILE 152 Maintenance window is displayed whenever an Online Services function is selected that accesses the configuration file, making it possible for the user to access multiple configuration files from within a single Natural session.

You may choose to deactivate the LFILE 152 Maintenance window and thus the possibility of changing the configuration file for just the current session or for all future sessions.

Regardless of the options you choose, you can always modify those choices by invoking the LFILE 152 Maintenance function from the System Settings menu.

4   Use PF5 to confirm all changes you have entered.

SAF Security Settings

▶ **To activate security protection for online administration**

■ Select service 2 from the System Settings menu or enter the command 0.2 on a command line. The SAF Security settings window will appear:

```
13:54:23              SAF Security Settings              2011-03-04
                                                         U1SAFSM1


Protect SYSATM with SAF Security: N (Y/N)
System Coordinator Daemon Group : _____

Action if no daemon available (mark one):
         Disallow all functions: _
     Allow read functions only: _
          Allow all functions: _




           PF3 Exit      PF5 Update/Confirm
```

For an explanation of these settings refer to *Activating security protection for online administration of Transaction Manager* in the Adabas SAF Security documentation.

4 Client Runtime Controls

This service is used to define/maintain client runtime controls for jobs that are to use Adabas Transaction Manager.

> **Note:** See section Parameters for a complete description of all client runtime controls.

> **Note:** Client runtime controls are shared between all installed optional products, and can be defined by any Online Services application (SYSCOR, SYSAVI, SYSAFP, SYSATM).

List Client Runtime Controls

▶ **To display a list of jobs with runtime control definitions**

■   Select service 1 from the Maintenance menu or enter the command 1.1 on the command line.

```
08:29:12     ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****      2006-04-13
                    - Client Runtime Controls (ATM) -          U11300M1
                                              Reposition to Type: _____
                                                           Name: _____
                          Client Controls
 C Type          Name       AFP   AVI   ATM   COR      Comments
 _ Batch         UKAQBDUS                Y     Y         Overrides,Info
 _               UKAQBMM0                Y     Y
 _               UKAQB85A                Y     Y         Overrides,Info
 _               UKPDNAT                 Y     Y         Overrides,Info
 _               UKPDSER                 Y     Y         Overrides,Info
 _               UKPDV75                 Y     Y
 _               UKPDV75A                Y     Y
 _               UKPDV75B                Y     Y
 _               UKPDWLS                       Y         Overrides,Info
 _ CICS          *DEFAULT                Y     Y         Overrides,Info
 _ IMS (DTR)     *DEFAULT                Y     Y
 _ TSO           *DEFAULT                Off   Y         Overrides,Info

 Mark with Jobs,Modify,Purge,Rename,Copy,Overrides,Information,History          ↵



 Command ==>
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Refr        Top   Back  Fwd   Bot   Add   Prods Menu
```

Press PF11 to view the Adabas add-on products for which runtime controls are currently defined, and then press PF11 again in order to modify the controls related to that product.

Press PF8 to move to the next page, or use the Reposition field to position anywhere within the list.

Add Client Runtime Controls

A set of runtime controls includes the name of the Adabas System Coordinator group in which the job will execute. You must define the group before you create any runtime controls that include the name of the group. Refer to the *Adabas System Coordinator* documentation for details of groups, and how to define them.

▶ **To add a new set of runtime controls**

1   Once you have defined your System Coordinator group, or groups, navigate to ATM's Runtime Controls screen, and press PF10.

The following menu will appear:

```
08:33:18    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****    2006-04-13
                   -  Add Client Runtime Control  -              U11310M1

 Select (mark one) :
                         x Batch
                         _ COM-PLETE
                         _ CICS (DTR - Dynamic transaction routing)
                         _ CICS (Standard)
                         _ IMS (DTR)
                         _ UTM (DTR)
                         _ TSO
                         _ CMS
                         _ TIAM
                         _ more choices for type or

                         _ API controlled




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

2   Select the required job type and press Enter. A new screen will prompt you to enter the name of the job for which you want to define runtime controls. You can use wild-card notation to represent a collection of jobs, and you can define a default set of runtime controls for the chosen type of job. For further details, refer to the documentation for the Adabas System Co-ordinator.

3   When you have entered the job name, press PF5. You will be prompted to enter some inform-
    ation for the Adabas System Coordinator. Refer to the *Adabas System Coordinator* documentation
    for details. When you have done this, press PF5. You will see the following screen, which allows
    you to specify the ATM runtime controls for the current job.

```
12:25:13    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****    2012-02-23
              -  Adabas Transaction Manager Runtime Controls  -      U1133TM1
 Job Type: Batch
     Name: TESTJOB2            Last modified 2012-02-23 at 12:25:13 by UKGXN
       ATM ON/OFF ...... ON_           Added 2012-02-23 at 12:25:13 by UKGXN
       System coordinator group name ......... WORKSHOP                       ↵

       Maximum number of open databases ...... 4____
       Continuous operation mode ............. FORCE     (Yes/No/Force)
       Coordinate Adabas outside the group ... YES       (Yes/RM/No)
       ET data storage location............... NONE      (TM/Adabas/RM/NONE)  ↵

       Generate OP commands .................. NO_       (Yes/No)
       Use extended hold processing .......... NO_       (Yes/No)
       Distributed transaction timeout(secs).. 0_____  (0 to 16777215)
       Adabas transaction dynamics ........... FULL__    (TP/Full/Forced)
       Open distributed transaction support... NO_       (Yes/No)
          Transaction control by other vendors NO_       (Yes/No)
                            by ET .......... YES       (Yes/No)
                            by BT .......... YES       (Yes/No)
                            by CL .......... YES       (Yes/No)


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

For specific information on each of these controls, see section Client Runtime Controls.

> **Note:** The initial controls for the new job are copied from those specified in the *DE-
> FAULT entry for the selected job type. If no default entry exists for the job type, then
> product default values are displayed.

> **Note:** Each job or TP system that uses Adabas Transaction Manager must be associated
> with an Adabas System Coordinator group, the name of which must be specified in
> the above screen. If you have not yet defined the group in which your job will execute,
> quit this operation, and use the Adabas System Coordinator Online Services application
> to define the group. Refer to the *Adabas System Coordinator* documentation for details.

4   Change any of the displayed values as required, then use PF5 to save the updated control set-
    tings.

5 Transaction Manager Information

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

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:

```
 12:29:09    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****    2012-02-23
                 -  Transaction Manager Information  -          T12000M1

Manager: 20530                                         Terminal: DAEETCLU
                  Code   Service
                  ----   -------------------------------------
                   0     Select a different Transaction Manager
                   1     Statistics
                   2     Active Transactions
                   3     Pending Response Codes
                   4     Known Databases
                   5     Partner Transaction Managers
                   6     Recovery File Functions
                   .     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

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 ATM, SYSATM supplies it for you. For example, if you enter the command NOLOG, it will be changed to ATM 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 ATM HALT or ATM 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 displays statistics maintained by the current transaction manager.

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

```
 09:23:02     ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****      2011-10-22
                  -  Transaction Manager Statistics  -              T12100M1

Manager: 20531


                Code   Service
                ----   ----------------------------------
                 1     Transactions
                 2     Recovery file
                 3     Other
                 .     Exit
                ----   ----------------------------------
          Code ..: _








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

- Transactions
- Recovery file
- Other

Transactions

This function displays statistical information about transactions managed by the current transaction manager as shown here:

```
09:24:35    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****      2011-10-22
                        -  Transaction Statistics -            T12110M1
Manager: 20531
--Transaction activities summary ----------Done----------------Undone--------
 Adabas DTP:        Single-phase:                 0 (0%)              0 (0%)
                           Full:                  0 (0%)              0 (0%)
                      Sub-total:                  0 (0%)              0 (0%)
 Adabas open DTP:   Single-phase:                 0 (0%)              0 (0%)
                           Full:                  0 (0%)              0 (0%)
                      Sub-total:                  0 (0%)              0 (0%)
 Combined total:                                  0 (100%)            0 (100%)
--Other ----------------------------------------------------------------------
Transaction timeouts and heuristics:             0                   0
   Duration (secs) average and peak:             0.00                0.00
            Pending response codes:              0




 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
Single-phase	The number of transactions processed by this transaction manager which did not require full two phase commit processing and which resulted in a positive outcome ('Done') or negative outcome ('Undone').This statistic is provided for Adabas DTP (transactions that involve only the Adabas domain) and Adabas open DTP (transactions that involve other vendor domains).
Full	The number of transactions processed by this transaction manager which did require full two phase commit processing and which resulted in a positive outcome ('Done') or negative outcome ('Undone').This statistic is provided for Adabas DTP (transactions that involve only the Adabas domain) and Adabas open DTP (transactions that involve other vendor domains).
Transaction timeouts	The number of transactions processed by this transaction manager which were undone as a result of the distributed transaction time limit being exceeded.
Heuristics	The number of transactions processed by this transaction manager which have experienced some degree of heuristic termination, either by the transaction manger itself or by an Adabas RM.
Duration	The average duration and peak duration of transactions processed by this transaction manager.
Pending response	The number of transactions that have resulted in a response code but which have yet to be reported back to the corresponding client session.

Recovery file

This function displays statistical information about the recovery file in use by the current transaction manager as you can see here:

```
09:26:45    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****     2011-10-22
                  -  Recovery file Statistics -                     T12120M1
Manager: 20531
--Summary -------------------------------------------------------------------
      Blocksize...............:              4096 (bytes)
      Reads and writes.......:                 0                0
--Detail --------------------------------------------------------------------
      Usage..                          Number of blocks
      Recovery...............:                 0
      ET data................:                 0
      Pending response.......:                 0
      Suspect transactions...:                 0
      System migration.......:                 0
      General management.....:                 0
                      Total:                 0




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

The following information is provided:

Section	Description
Summary	This section displays the blocksize of the recovery file and the read/write activity against the recovery file.
Detail	This section displays the number of blocks currently in use for each of the different types of information maintained in the recovery file.

Other

This function displays statistical information that can be used to monitor the use of the transaction manager's resources, as you see here:

```
09:28:02    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****     2011-10-22
                       -  Other statistics  -                       T12130M1
Manager: 20531
--High water marks ----------------------------------------------------------   ↵

    Item..                          Maximum      HWM            Time
    RRMS request queue (TMDRQ)..:      10         0
    Concurrent transactions.....:      -          1         2011-10-22 09:22:02
    Peer TMs....................:      -          1         2011-10-22 09:22:02
    Known databases.............:      -          4         2011-10-22 09:22:02
    Peer TMs per transaction....:      -          1         2011-10-22 09:22:02
    Databases per transaction...:      -          2         2011-10-22 09:22:02




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

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

Section	Description
High water marks	This section displays the high water marks (and the time the high water mark first occurred) for a number of items. Items which display a maximum value are transaction manager controls and this information can therefore be used to monitor that these controls are suitably defined.

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 8.2.2 *****    2006-04-13
                        -  Transactions  -                         T12200M2

Manager: 20531                                           Terminal: TCU5

      <-------Client ID------->                      Tx.Start    Last Act
 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 8.2.2 *****      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.

Item	Description
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 8.2.2 *****      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
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

Field	Description
	■ 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 *nnnnn* 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 manager was last asked to perform some action on behalf of the transaction's owner. The date has the format MM/DD.
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 8.2.2 *****     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  |
                |                                          | 00
  <----------CHA |  AUTO-BACKOUT -  Return Code: 00000      | ING ATMs-->
 DBNo. TM Node  |                  Database No.:            | us      Err
 20532          |                  Command Code:            |
                |            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.

> **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 distributed transaction.

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 8.2.2 *****      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.

By default, the transaction manager attempts to complete (back out or commit) any incomplete transaction within the scope of the selected STOP function, according to the transaction's current status. In the event that the outcome was a back out, the stopped transaction(s) will remain in the transaction manager's list with a pending response 9 sub-code 92 (a subsequent STOP function against such a pending transaction will result in its removal from the list).

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	By selecting this option, no such pending response code will be retained and the transaction(s) will be immediately removed from the transaction manager's list. **Note:** This option is not applicable when a STOP function is attempted against a transaction branch. Under these circumstances, if successful, the branch transaction will be removed from the branch transaction manager's list (refer to the earlier cautionary statement).
Transfer to STJ	Selecting this option will result in (a) the transfer of transaction details to the suspect transaction journal (STJ), (b) the removal of the transaction(s) from the transaction list, and (c) a console message identifying the transaction in question, but only under the following circumstances: 1. The transaction is one that had previously been the subject of a STOP function and which remained in the transaction manager's list with a pending response 9 subcode 92. 2. The attempted transaction outcome was unsuccessful. **Note:** A successful outcome will not result in the transfer of transaction details to the suspect transaction journal even if this option is selected. **Caution:** This option may result in the removal of a transaction from the transaction list after an unsuccessful transaction outcome and as a result distributed transaction integrity is likely to be lost.

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 8.2.2 *****     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 8.2.2 *****     2006-04-19
                        -  Pending Response Codes -               T12300M1
Manager: 20531                                            Terminal: TCP0
                                    Rsp-  Sub-       Time
  ID          (Hex)          Jobname   code  code   MMDD HH:MM    DBs
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---
```

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 8.2.2 *****    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 8.2.2 *****      2006-04-18
                    -  Display Known Databases   -                 T12400M1
Manager: 20531
                                                        Date/Time
    C        DB No.        TM Node        DTP        Usage     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(ist) 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.

Field	Description
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 8.2.2 *****     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.

Field	Description
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 8.2.2 *****      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 8.2.2 *****     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 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 8.2.2 *****    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:

```
08:33:14    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****     2006-04-18
                      - Migrated Transactions -               T12631M1
Manager: 20531                                            Terminal: TCEQ

CommID: 000F7100 20640000 40404040 40404040 00F71380 B8E71F47 3206D801
   XID: C1C4C101 00000050 00000002 5033000F 71002064 00004040 40404040 404000F7
        1380B8E7 1F473206 D801D7C4 F0F34040 4040C4C1 C5C6C3C9 F1F8B902 C6B15FFB
        76610000 00000000 00000000 00000000 00000000 00000000 00000000 C2D80000
        00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

CICS URID: 0000000000000000     Appl ID:              TRUE:                    ↵

RRS  URID: 000000000000000000000000000000000000

Owning ATM: 20535




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

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 8.2.2 *****     2006-04-19
                        -  Pending Error Records -                    T12640M1

Manager: 20531                                               Terminal: TCP0
                                          Rsp- Sub-      Time
 C      ID         (Hex)         Jobname  code code    MMDD HH:MM    DBs
 _    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.

6   Special Services

Special Services Menu

▶ **To display the Special Services menu**

■ Select service 4 from the main menu.

```
16:32:59    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****    2006-05-29
                        -  Special Services  -                     V13000M1



                Code    Service
                ----    ---------------------------
                 1      Fix Display
                 .      Exit
                ----    ---------------------------
         Code ..: _




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

From this menu, you can	Code	Command
access the fix display	1	4.1

Fix Display

▶ **To display the applied fixes**

■ Select option 1 from Special Services menu.

```
08:36:03    ***** A D A B A S   TRANSACTION MANAGER 8.2.2 *****    2010-04-23
            -  Fix Display: ATM 8.2.2 Patch: 0000 02/21/09  -     U1FIXOM1
              Local client job running this current session

 C  Patch Reference Type Description
 _  0000  AT822001  EXE  For example only                                    ↵

















 Mark with any character for detail


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

Initially the screen will list all fixes applied to the Adabas Transaction Manager kernel in the local client environment.

Note: You can select other display perspectives (e.g. Coordinator daemon or Adabas database) by using PF4. You can also directly list the applied fixes for Adabas System Coordinator, Adabas Vista, and Adabas Fastpath by using PF11 to first select the appropriate product.

7 How to dynamically change the TM distributed transaction timeout

You can use the *network discovery* function in System Coordinator administration to perform tasks against a selected System Coordinator daemon within which your transaction manager is running as a service. First identify the daemon, and then use "T" (for Tasks) to see what tasks can be performed. One such task is the ability for administrators to dynamically display/modify the transaction manager distributed transaction timeout. This avoids the necessity of bouncing the transaction manager if a change to this TM control is required.

For more information refer to the *tasks* option in the Network Discovery function of the Current Activity Displays section in Adabas System Coordinator Online Services.

▶ **To display/modify the Transaction Manager distributed transaction timeout**

1   Use "T" on the row for the System Coordinator daemon where your transaction manager service is running to see the list of tasks allowed.

2   Select the "TM: Set TM distribution transaction timeout" task and press PF5.

3   The following window will appear showing the current time limit:

```
10:30:49 Set TM Distributed Transaction Timeout 2011-03-03
 Current target: 1650  Type: System Coord

 Current distributed transaction timeout(secs): 720_____




              PF3 Exit    PF5 Set TMGTT
```

Modify the time limit by changing the value and pressing PF5.

8 How to stop inactive Adabas sessions

You can use the *network discovery* function in System Coordinator administration to perform tasks against a selected System Coordinator daemon within which your transaction manager is running as a service. First identify the daemon, and then use "T" (for Tasks) to see what tasks can be performed. One such task is the ability to stop all sessions that have been dormant for a specified number of seconds. This is a large productivity gain because it avoids the administrator having to seek out manually those databases where such dormant sessions reside.

For more information refer to the *tasks* option in the Network Discovery function of the Current Activity Displays section in Adabas System Coordinator Online Services.

▶ **To stop inactive sessions**

1   Use "T" on the row for the appropriate database to see the list of tasks allowed.

2   Mark the "TM: Stop inactive users (STOPI)" task, specify the dormant period and press PF5.

> **Note:** This feature is not yet activated.

9 How to stop Adabas sessions

You can use the *current activity* function in System Coordinator administration to perform tasks against a selected session. First identify the session, and then use the PF10 "tasks" function off the session statistics display to see what tasks can be performed. One such task is the ability for administrators to automatically stop a selected session in all databases where that session is active. This is a large productivity gain because it avoids the administrator having to seek out manually those databases where this session is active.

For more information refer to the *tasks* option in the Expand Adabas client sessions function of the Current Activity Displays section in Adabas System Coordinator Online Services.

▶ **To stop an Adabas session**

1   Use PF10 "Tasks" off the session statistics display to see the list of tasks allowed.

2   Mark the "TM: Stop Adabas UQEs" task, and press ENTER.

A warning screen is displayed:

```
17:14:02                      Stop Adabas UQEs                    2012-05-21
                                                                   U1TSKOM2
 Session ID: CICSTCKG
      Hex: 0000000000000000000000000000000000000000C3C9C3E2E3C3D2C7


                         PF5 to Confirm Purge


WARNING:
Purging a session can cause catastrophic unpredictable results
including failure of the whole service. You must be absolutely sure
the session is gone completely and is not going to reactivate.



                        PF3 Exit    PF5 Purge
```

Press PF5 to continue with the stop request:

```
12:27:50      ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****     2011-04-14
                        - Stop Adabas UQEs -                        U1TSK1M1
Using daemon node: 0     (optional, if 0 the runtime daemon node is used)
Session: CICSTC95 Fully qualified session (hexadecimal):
                000000000000000000000000000000000000000C3C9C3E2E3C3F9F5
Number of databases currently being accessed:
      Database Comment
        135
        640










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

Press PF5 to action the stop.

10 How to display/start ET Data management activity

You can use the *network discovery* function in System Coordinator administration to perform tasks against a selected System Coordinator daemon within which your transaction manager is running as a service. First identify the daemon, and then use "T" (for Tasks) to see what tasks can be performed. One such task is the ability for administrators to control the location of ET data by performing ET data management activity between the transaction manager and Adabas databases.

For more information refer to the *tasks* option in the Network Discovery function of the Current Activity Displays section in Adabas System Coordinator Online Services.

▶ **To display/start ET data management activity**

1   Use "T" on the row for the System Coordinator daemon where your transaction manager service is running to see the list of tasks allowed.

2   Select the "TM: ET data management" task and press PF5.

3   The following screen will appear:

```
11:28:39     ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****     2012-01-25
                     - ET data management  -                        U1UTROM2
Node ID: 20530
-- Recent ET data management activity --------------   2011-10-23 12:15:01
   Status: Ended                          Result: Success
   From:  Adabas database 20532           To: Current TM
   ET data reads:          1178           Replace: Yes
        writes:            1178
-- Start ET data management activity ------------------------------------------
   From (choose one): _     Current TM (mark)
                      _____ Other TM node (prior release)
                      _____ Adabas database
   To (choose one):   _     Current TM (mark)
                      _____ Other TM node (prior release)
                      _____ Adabas database
   Replace (Y/N):     _



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

The most recent ET data management activity information is displayed as follows:

Field	Description
Status	The status of the most recent activity.
Result	The result of the most recent activity.
From	Identifies the source from which the ET data was read.
To	Identifies the target in which ET data was stored.
Replace	Indicates whether or not ET data in the target location was overwritten by ET data from the source location, if both locations contained data for the same ETID.
ET data reads	The count of ET data read from the source location.
ET data writes	The count of ET data stored at the target location.

4   Optionally, start a new activity by modifying the following fields and pressing PF5.

Field	Description
From	Identify the source from which the ET data is to be read.
To	Identify the target in which ET data will be stored.
Replace	Indicates whether or not ET data in the target location will be overwritten by ET data from the source location, if both locations contain data for the same ETID.

5   📄   **Note:** If you are upgrading from a prior release then the current release notes will in-
            dicate whether or not ET data migration is necessary. If this is the case then specify the

following options to ensure your ET data is migrated from the old release to the new release:

- From: Define your old TM node id alongside 'Other TM node (prior release)'
- To: Mark 'Current TM'
- Replace: Y

11 How to maintain TM controls

TM controls are set using the daemon maintenance (within group) function in System Coordinator administration.

For more information refer to the *maintain a daemon group daemon definition option* in the Maintain Daemon Groups function of the Maintenance section in Adabas System Coordinator Online Services.

▶ **To maintain TM controls**

1   Use "L" on the row for the appropriate System Coordinator group name to see the list of daemon members in which your transaction manager service is running.

2   Use "PF11" to maintain Adabas Transaction Manager daemon parameters (TM controls).

3   Use "M" on the row for the daemon member in which your transaction manager service is running and for which you wish to maintain TM controls.

```
12:50:36      ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****      2012-02-27
             -  Adabas Transaction Manager Daemon Parameters  -       C11261M1
 Run-mode: Pulsing (node 2650)
Group Name: WORKSHOP    Daemon: ICFDCOR5               Operating System: Multi
    SVC ID: 254         Node..: 2650


    Distributed transaction timeout(secs)..: 720_____   (1 to 16777215)
    Transaction recovery...................: NORMAL__   (Normal/Force/ForceALL)
    Enforce ADARUN DTP=RM..................: No_        (Yes/No)
    ET data storage location...............: RM         (TM/RM

    Open distributed transaction (system)..: NO         (Yes/No)
                            Concurrency..: 100          (10 to 32767)







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

For information on each of these parameters refer to TM Controls.

▶ **To purge TM controls**

■   The TM controls will automatically be purged when its associated daemon member is purged.

12 Activity Displays

This section provides an overview of the activity display functionality.

Activity display for jobs

Activity displays are provided through System Coordinator administration by selecting *Current activity displays* at the main menu then *Adabas client job information*. At that point you will see a summary list of all the jobs that are known. Use "d" to select further detail for the job you are interested in. This will show further detail from Coordinator; then use PF11 to toggle until the Transaction Manager detail for the job is encountered as follows:

```
 11:58:42      ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****      2012-03-07
                   -  Transaction Manager Job Statistics   -         C12110M1
 Run-mode: Pulsing (node 2650)                 Perspective: Daemon (node 2650)
 Job Name: DAEFCI18
 ---Transaction activities summary ----------Done----------------Undone--------
 Adabas DTP:         Single-phase:             20 (60%)               1 (50%)
                            Full:              0 (0%)                 0 (0%)
             Continuous operation:             0 (0%)                 0 (0%)
                       Sub-total:             20 (60%)               1 (50%)
 Adabas open DTP:    Single-phase:            13 (39%)               1 (50%)
                            Full:              0 (0%)                 0 (0%)
             Continuous operation:             0 (0%)                 0 (0%)
                       Sub-total:             13 (39%)               1 (50%)
 Combined total:                             33 (100%)               2 (100%)
 ---Other -----------------------------------------------------------------------
     Recovery file reads and writes:          0                     0
   Duration (secs) average and peak:          0.42                  11.13
         RM and non-RM used count:            1                     2
 Transaction timeouts and heuristics:         0                     3
 Adabas dynamic commits and backouts:         2                     0

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

Here Transaction Manager is displaying a breakdown of all transaction processing performed for the job, the following information is provided.

Field	Description
Adabas DTP	Transactions affecting only Adabas resources.
Adabas open DTP	Transactions affecting Adabas resources and others.
Single-phase	The number of transactions affecting only a single Adabas.
Full	The number of distributed transactions.
Continuous operation	The number of transactions processed during TM outage.

Field	Description
Recovery file reads and writes	The number of recovery file reads and writes performed during transaction processing.
Duration (secs) average and peak	The average and peak duration time taken by Adabas Transaction Manager to apply or undo transactions.
RM and non-RM used count	The peak number of Adabas databases (RM and non-RM) used by a session.
Transaction timeouts	The number of transactions undone as a result of the distributed transaction time limit being exceeded.
Heuristics	The number of transactions heuristically completed either by the TM or by Adabas.
Adabas dynamic commits	When client runtime control Adabas transaction dynamics is set to FULL or FORCED, this is the number of times a session was transactional at the end of a TP message-pair.
Adabas dynamic backouts	When client runtime control Adabas transaction dynamics is set to TP, this is the number of response 240 sub-code 596s issued to prevent a transaction persisting a TP message-pair.

Activity display for client sessions

Activity displays are provided through System Coordinator administration by selecting *Current activity displays* at the main menu then *Adabas client job information*. At that point you will see a summary list of all the jobs that are known. Use any undefined character to expand to see a list of all the sessions for the job. Again use any character to select a particular session. The detail for a session will show a list of one or more Adabas client connections (multiple will be shown where ADAMODE demands multiple connections). Again use any unassigned character to select one of these connections for further display. Finally use PF11 to toggle until the Transaction Manager detail for the connection is encountered as follows:

```
11:27:38     ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****    2012-03-08
              -  Transaction Manager Session Statistics  -        U1STSOM3
 Node ID: LOCAL Session ID: CICSTC27 Hex: C3C9C3E2E3C3F2F7 Job Name: DAEFCI18
 Terminal name: TC27            Network name: DAEFTC27      Login id: UKSTAD
---Transaction activities summary ---------Done----------------Undone--------
 Adabas DTP:          Single-phase:              3 (100%)              0 (0%)
                             Full:               0 (0%)               0 (0%)
             Continuous operation:               0 (0%)               0 (0%)
                        Sub-total:               3 (100%)              0 (0%)
 Adabas open DTP:   Single-phase:                0 (0%)               0 (0%)
                             Full:               0 (0%)               0 (0%)
             Continuous operation:               0 (0%)               0 (0%)
                        Sub-total:               0 (0%)               0 (0%)
 Combined total:                                 3 (100%)              0 (100%)
---Other ---------------------------------------------------------------------
       Recovery file reads and writes:          0                    0
     Duration (secs) average and peak:          0.28                 0.31
            RM and non-RM used count:           0                    1
 Transaction timeouts and heuristics:           0                    0
 Adabas dynamic commits and backouts:           0                    0

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

Here Transaction Manager is displaying a breakdown of all transaction processing performed for the session, the following information is provided.

Field	Description
Adabas DTP	Transactions affecting only Adabas resources.
Adabas open DTP	Transactions affecting Adabas resources and others.
Single-phase	The number of transactions affecting only a single Adabas.
Full	The number of distributed transactions.
Continuous operation	The number of transactions processed during TM outage.
Recovery file reads and writes	The number of recovery file reads and writes performed during transaction processing.
Duration (secs) average and peak	The average and peak duration time taken by Adabas Transaction Manager to apply or undo transactions.
RM and non-RM used count	The peak number of Adabas databases (RM and non-RM) used by a session.
Transaction timeouts	The number of transactions undone as a result of the distributed transaction time limit being exceeded.
Heuristics	The number of transactions heuristically completed either by the TM or by Adabas.

Field	Description
Adabas dynamic commits	When client runtime control Adabas transaction dynamics is set to FULL or FORCED, this is the number of times a session was transactional at the end of a TP message-pair.
Adabas dynamic backouts	When client runtime control Adabas transaction dynamics is set to TP, this is the number of response 240 sub-code 596s issued to prevent a transaction persisting a TP message-pair.

When running in local perspective, PF9 provides some additional session information:

```
 12:33:41     ***** A D A B A S   SYSTEM COORDINATOR 8.2.2 *****     2011-04-14
                        -  Session Details  -                         U1TMAOM1
Job Name: DAEFCI18       Co-ordinator: ATM               Client Type: 00 - DTP
Terminal ID: TC27     E3C3F2F700000000      Net Name: DAEFTC27 C4C1C5C6E3C3F2F7
Client ID:            0000000000000000      Status:   F00000000000  GT
CommID: 000CA10E 20980001 40404040 40404040 00FC7700 C3C9C3E2 E3C3F2F7
   XID: C1C4C101 00000050 00000000 00000000 00000000 00000000 00000000 00000000
        00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
        00000000 00000000 00000000 00000000 00000000 00000000 00000000 C2D80000
        00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
                                            ASA: 00000000 GTQE: 00000000
Last Function Call: 22  - WRAP CMD          Transaction dynamics: FULL
 DBNo.  L/R  DTP    ETID        Status     |         Pending Response Codes
 640    R    N            8060 ET          |            Resp.   Subcode
 135    R                 8062 ET          |
                                           |
                                           |
                                           |
                                           |
                                           |
                                           |


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