Session Monitoring

The Session Monitoring function can be used to obtain information anfd statistics on all applications being managed by the Adabas System Coordinator.

- Session Monitoring Menu
- Change Perspective
- Display Adabas Client Job Information
- Display Session Information
- Network Discovery
- Display Daemon Group Members
- Display Cache Statistics

Session Monitoring Menu

To display the Session Monitoring menu

- Select service 2 from the main menu.

```
 10:57:19 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                     -  Session Monitoring  -                       C12000M1
 Run-mode: Local (node 0)                    Perspective: Daemon (node 650)

                  Code    Service
                  ----    ------------------------
                   0      Change Perspective
                   1      Adabas Client Job Information
                   2      Memory Pool Statistics
                   3      Network Discovery
                   4      Daemon Group Members
                   5      Daemon Cache Statistics
                   .      Exit
                  ----    ------------------------
            Code..: _




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

From this menu, you can	Service	Cmd
change perspective	0	
display active Adabas client jobs	1	2.1
display memory pool statistics	2	
network discovery	3	2.3
display daemon group members	4	2.4
display cache statistics	5	2.5

All session monitoring requests will be directed to the current information source as displayed in the Perspective field at the top of the screen. By default this will be either your local client session when you are running in Local (non-daemon) mode or if you are running in daemon mode, monitoring requests will be directed to your coordinator daemon. Options 4 and 5 are only available if you are currently using daemon perspective, as in the example screen above.

Change Perspective

This option can be used to route monitoring requests to any active coordinator daemon or to your local client session (see screen below).

To access the Change Perspective screen from the Session Monitoring menu

- Select service 0.

```
+-----------------------------------------------------------+
|  11:12:59        Change Perspective         2008-05-22  |
|  Current perspective: Daemon (node 650)     C12PSPM1    |
|                                                         |
|  Local:  Shows session monitoring information for this  |
|          job and active targets of the Adabas router    |
|          in use by this job                             |
|  Daemon: Shows session monitoring information for jobs  |
|          managed by the System Coordinator daemon and   |
|          active targets known to the daemon             |
|                                                         |
|  Revert to local (node 0)......: _                      |
|  Change to daemon node.........: _____                  |
|                                                         |
|                                                         |
|             PF3 Exit    PF5 Set perspective             |
|                                                         |
+-----------------------------------------------------------+
```

Change perspective by marking “Revert to local” or entering a daemon node and pressing PF5. For jobs defined to run in daemon mode other options are available:

```
+-----------------------------------------------------+
|  11:17:04        Change Perspective         2008-05-22  |
|  Current perspective: Daemon (node 660)     C12PSPM1    |
|                                                         |
|  Local:  Shows session monitoring information for this  |
|          job and active targets of the Adabas router    |
|          in use by this job                             |
|  Daemon: Shows session monitoring information for jobs  |
|          managed by the System Coordinator daemon and   |
|          active targets known to the daemon             |
|                                                         |
|  Revert to daemon (node 650)...: _                      |
|  Change to daemon node.........: _____                  |
|  Change to local (node 0)......: _                      |
|                                                         |
|            PF3 Exit    PF5 Set perspective              |
|                                                         |
+-----------------------------------------------------+
```

Mark “Revert to daemon…” and press PF5 to revert to the job’s default daemon (after changing perspective to another daemon) or mark “Change to local…” and press PF5 to switch to local perspective.

Display Adabas Client Job Information

To display the Adabas Client Jobs screen from the Session Monitoring menu

- Select service 1 or enter the command 2.1 on a command line.

```
 11:35:09 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                    -  Adabas Client Job Information  -            C12100M1
 Run-mode: Local (node 0)                      Perspective: Local (node 0)
                                                Start Time            Maximum
 C  Service    Job Name   Job Num.   Appl.ID   (HH:MM.SS) Sessions  Concurrent
 _  None       DAEFCI18   C24243     DAEFCI18   16:30.46       14         1
 Mark with D(etail),S(essions),M(emory Pools),R(efresh Job Debug Parms),(sna)P
End of List
 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Refr                                              Menu
```

This screen shows the TP monitors and other tasks that are currently active and managed by Adabas System Coordinator. Local perspective shows the job that you are executing in, daemon perspective shows all jobs managed by that daemon. The following fields are displayed:

Field	Description
C	This field can be used to display additional information: • D: display internal information • S: display session information • M: display memory pool information • R: refresh client debug controls • P: snap internal information to CORDUMP
Service	The clustered application service name (if any) used by this job.
Job ... Appl. ID	The job name, job number, and Application ID
Start Time	The start time of the job.
Sessions	The number of user sessions active in the job.
Maximum Concurrent	The number of concurrent threads active. This is a measure of the highest level of concurrent Adabas command throughput.

Display Memory Pools

Selecting Memory Pool Statistics results in the following screen being displayed:

```
11:41:34 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                     -  Display Memory Pool Statistics  -            C12200M1
 Run-mode: Local (node 0)                      Perspective: Local (node 0)
                                              Pool       Free       Free
 C    Node     Job Name   Pool Name  Extents Size(k)   Memory(k)  Elements  Type
 _   LOCAL    DAEFCI18   F8108320      0       256       243.8        30    O
 _   LOCAL    DAEFCI18   F8132896      0       256       192.8         6    O
 _   LOCAL    DAEFCI18   F8116512      0       256       225.8        14    O
 _   LOCAL    DAEFCI18   F8104224      0       256       247.5        60    O
 _   LOCAL    DAEFCI18   F8107296      0       256       235.1        33    O
 _   LOCAL    DAEFCI18   F8124704      0       256       168.9         7    O
 _   LOCAL    DAEFCI18   F8100256      0       256       253.0      1012    O
 _   LOCAL    DAEFCI18   F8100128      0       256       254.9      2039    O
 _   LOCAL    DAEFCI18   PRIVUSER      0      7695      7315.2        24    O
 _   LOCAL    DAEFCI18   PRIVATE       0       256       251.7         2    O




 Mark with D(etail),S(nap)
End of List
 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Refr                                              Menu
```

This screen shows the memory pools that are used by jobs. The following information is provided:

Field	Description
Pool Name	The PRIVATE pool is allocated in the job's private memory. Shared memory pools are always managed by a coordinator daemon. Fixed pools are named F*vrnnnnn* where *vr* is the product version and revision level and *nnnnn* is the pool element size.
Extents	The number of extents. Performance may be improved by tuning job parameters to eliminate extents.
Free Memory	The amount of free memory available in all extents in the pool.
Free Elements	The number of free elements in the pool.
Type	Pool type. O: The job created and owns the pool P: The job has joined a pool that was created by a previous job

Memory pool display can also be selected from the Session Monitoring menu (option 2).

Display Session Information

See next section Display Session Information.

Display Session Information

Selecting Display Session Information results in the following screen being displayed:

```
11:43:46 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
 Job Name: DAEFCI18    -  Display Session Information  -             C12130M1
 Run-mode: Local (node 0)                    Perspective: Local (node 0)
 Select Sessions: ________        Dormant    Memory(k)     Adabas    Quick
 C Service  Session ID   Txn   (HHH:MM.SS)  Allocated      Cmds    Locates  Typ
 _ None      CICSTCCN  DEMO       0:00.08       40.4          34        33  P
 _           ¬ý¥ETCCN  DEMO       0:00.09       38.6           1         0  P
 _           CICSTCB1  *timeout   1:09.20        0.2       13419     13417  P
 _           ¬ý¥ETCB1  *timeout  19:38.23        0.2           2         0  P
 _           CICSTCO3  *timeout   1:09.20        0.2         692       691  P
 _           ¬ý¥ETCO3  *timeout   1:09.20        0.2           1         0  P
 _           CICSTA29  *timeout  24:28.27        0.2         379       378  P
 _           ¬ý¥ETA29  *timeout  24:28.27        0.2           1         0  P
 _           CICSTCBK  DEMO       0:00.04       42.7        1262      1260  P
 _           ¬ý¥ETCBK  DEMO       1:21.24       38.6           1         0  P
 _           CICSTC18  *timeout  21:08.56        0.2         270       266  P
 _           ¬ý¥ETC18  *timeout  21:08.56        0.2           1         0  P
 _           CICSTCLA  *timeout  19:38.23        0.2        3474      3444  P
 _           ¬ý¥ETCLA  *timeout  19:38.23        0.2          37        11  P
 Mark with D(etail),S(nap),P(urge),(swi)T(ch debug on/off),C(ontrols)

 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Refr  SortN Top   Back  Fwd   SortT SortU SortO Menu
```

This screen shows the client sessions that are active in a job managed by the Adabas System Coordinator. The following information is provided:

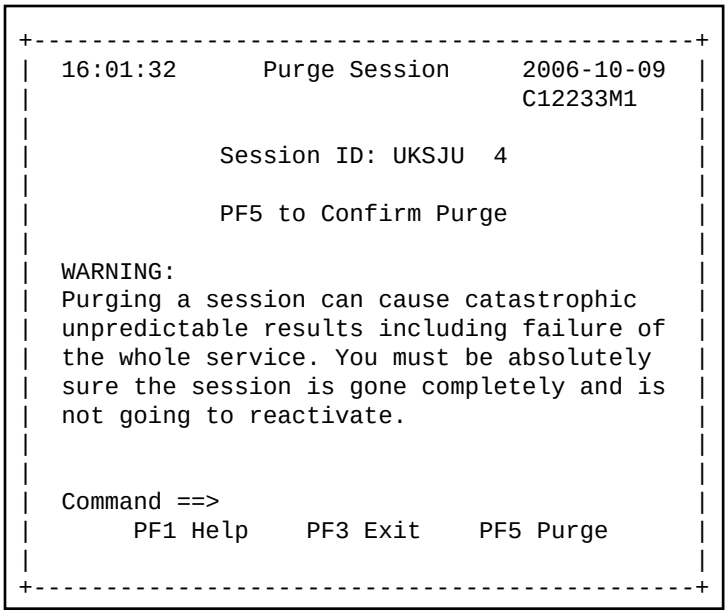
Field	Description
Session ID	The Session ID (last 8 characters only). IDs comprised of special characters are normally generated by the system.
Txn	The current or last Transaction ID executed (TP systems only). The value ‘*timeout’ indicates that the inactivity threshold has been reached for this client session.
Dormant	The amount of time since the last user activity.
Memory	The amount of memory allocated by the user.
Adabas Cmds	The number of Adabas commands executed for this user.
Quick Locate	The number of times the coordinator optimized command processing because two or more commands for the same user were executed consecutively.
Type	Indicates whether or not the user is managed by an Adabas System Coordinator daemon. A value of ‘S’ indicates that the user is managed by a Adabas System Coordinator daemon.

PF keys can be used to sort the user list in various sequences:

Key	Description
PF5 (SortN)	The list is sorted by User ID.
PF9 (SortT)	The list is sorted in descending time since the user was last active.
PF10 (SortU)	The list is sorted in descending order of the number of Adabas calls issued.
PF11 (SortO)	The list is sorted in descending order of user search optimization. This shows the number of times for each user that an index search was avoided.

Mark a session with one of the commands shown:

- D: display internal information
- S: snap internal information to CORDUMP
- P: purge this session. Be careful not to purge a session that is still in use as this may have unpredictable results. You must confirm the purge request with PF5:



- T: activate or deactivate client debug monitoring for a session
- C: display or modify client runtime controls for a session. Select which product’s controls you want to see:

```
+-----------------------------------+
!  14:59:11              U1PRODM1   !
!                                   !
!  Select which product's runtime   !
!  controls you want to maintain:   !
!                                   !
!    _   System Coord.              !
!    _   Adabas Fastpath            !
!    _   Adabas Vista               !
!    x   Transaction Manager        !
!                                   !
!        PF3 Exit                   !
!                                   !
+-----------------------------------+
```

and press Enter

```
15:00:10            ***** CURRENT SESSION CONTROLS *****            2006-07-21
              -  Adabas Transaction Manager Session Controls  -      SETATMM1

                                Last modified 2006-05-10 at 18:49:13 by UKLT
                                       Added 2006-05-10 at 18:49:09 by UKLT
          ATM ON/OFF ... ON_
          SVC number ........................... 252
          System coordinator group name ........ ICFDEMO
          Maximum number of open databases ..... 10
          Number of log record entries ......... 256__
          Transaction control .................. GLOBAL  (Local/Global)
          Emergency serial ET commands ......... FORCE   (Yes/No/Force)
          Generate OP commands ................. NO_     (Yes/No)
          Transaction model .................... MESSAGE (Message/Dynamic)
          External syncpoint on BT command ..... YES     (Yes/No)
          External syncpoint on CL command ..... YES     (Yes/No)
          External syncpoint on ET command ..... YES     (Yes/No)
          Use client-side transaction manager .. NO_     (Yes/No)
          Use host system transaction manager .. NO_     (Yes/No)
          Use extended hold processing ......... NO_     (Yes/No)

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

You can then modify the controls (those which are modifiable on runtime control overrides – see Maintain Client Runtime Control Overrides) for this client session only and press PF5 to update them. Press PF6 to revert to the pre-defined runtime controls for all products.

Network Discovery

to use the Network Discovery function from the Session Monitoring menu

1. Select service 3 or enter the command 2.3 on a command line.

```
11:51:39 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                           -  Network Discovery  -                    C12300M1
 Run-mode: Local (node 0)                     Perspective: Daemon (node 650)

 Coord  L Last Update                                      Status
  Node  R (HH:MM.SS)    DBID   Nuc ID       Type         A S P F   Resp Subc
   650  L  00:17.32      656     656    Unidentified     - - - F   245     2
                         655    6551    Ada Cluster(S)   A S P -
                         651     651    ATM              A S P -
                         650     650    System Coord     A S - -
                         652     652    Adabas           A S P -
                         640     640    Adabas           A S P -
   660  R  11:51.37      660     660    System Coord     A S - -
                         661     661    ATM              A S P -
                         653     653    Adabas           A S P -
                         655    6552    Ada Cluster(S)   A S P -




End of List
 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Peek  Exit  Refr  Persp                                 Prods Menu
```

Each Adabas System Coordinator daemon maintains a list of targets that are or were at one time active. This information is communicated to all daemons in the cluster.

When the perspective is daemon, this screen displays the network from that daemon’s perspective.

2. You can change the perspective to another daemon or local by pressing PF5:

```
 +-----------------------------------------------------+
|  11:56:09        Change Perspective         2008-05-22  |
|  Current perspective: Daemon (node 650)     C12PSPM1    |
|                                                         |
|  Local:  Shows session monitoring information for this  |
|          job and active targets of the Adabas router    |
|          in use by this job                             |
|  Daemon: Shows session monitoring information for jobs  |
|          managed by the System Coordinator daemon and   |
|          active targets known to the daemon             |
|                                                         |
|  Revert to local (node 0)......: x                      |
|  Change to daemon node.........: _____                  |
|                                                         |
|                                                         |
|            PF3 Exit    PF5 Set perspective              |
|                                                         |
+-----------------------------------------------------+
```

Select the required perspective and press PF5.

3. Local perspective shows the targets active on the Adabas router that your client session is connected to:

```
11:58:10 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                           -  Network Discovery  -                    C12300M1
 Run-mode: Local (node 0)                    Perspective: Local (node 0)

 Coord  L Last Update                                      Status
  Node  R (HH:MM.SS)    DBID   Nuc ID       Type         A S P F   Resp Subc
                       61001   61001    Entire Network   A - - -
                       60099   60099    Adabas           A - P -
                         180     180    Unidentified     A - - F
                         640     640    Adabas           A S P -
                         652     652    Adabas           A S P -
                         650     650    System Coord     A S - -
                         651     651    ATM              A S P -
                         655    6551    Ada Cluster(S)   A S P -
                       12000   12000    System Coord     A S - -
                       12002   12002    ATM              A S P -
                       12004   12004    Adabas           A S P -
                       12006   12601    Ada Cluster(S)   A S P -


End of List
 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Peek  Exit  Refr  Persp                                 Prods Menu
```

4. On systems where the Adabas router uses an SVC, you can use PF2 to “peek” at targets active on another SVC:

```
+-----------------------------------------------------------+
|  12:01:21           Change Router           2008-05-22    |
|  Current perspective: Local (node 0)        C12300M3      |
|                                                           |
|  You can peek into another Adabas router in the local     |
|  computer by entering the SVC number BUT...               |
|  WARNING: If you specify an incorrect SVC, there will     |
|  be unpredictable results such as outage of the whole     |
|  TP service and or transaction failures, loops etc.       |
|                         SVC: 254                          |
|                                                           |
|                                                           |
|                PF3 Exit    PF5 Set peek                   |
|                                                           |
+-----------------------------------------------------------+
```

Enter the required SVC number and press PF5. Take note of the warning and be careful to specify a valid Adabas SVC number.

```
12:02:05 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                           -  Network Discovery  -                   C12300M1
 Run-mode: Local (node 0)                    Perspective: Peeking at SVC 254

 Coord  L Last Update                                      Status
  Node  R (HH:MM.SS)    DBID   Nuc ID       Type         A S P F   Resp Subc
                       50932   50932    Entire Network   A - - -
                         180     180    Unidentified     A - - F
                         135     135    Unidentified     A - - F   245     2
                          11      11    Adabas           A S P -
                         110     110    Adabas           A S P -
                       17030   17030    Adabas           A - P -
                       17003   17003    Adabas           A S P -
                       17001   17001    Adabas           A S P -
                        8001    8001    Unidentified     A - - F   101     8
                       17035   17035    Adabas           A S P -
                       17005   17005    System Coord     A S - -
                       17002   17002    System Coord     A S - -


End of List
 Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Peek  Exit  Refr  Persp                                 Prods Menu
```

Display Daemon Group Members

To display the daemon group members screen from the Session Monitoring menu

1. Select service 4 or enter the command 2.4 on a command line.

```
12:07:12 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                      -  Display Daemon Group Members  -             C12400M1
 Run-mode: Local (node 0)                    Perspective: Daemon (node 650)
                                 Start Time             <----Cluster Moves--->
 Coordinator Name  Node  System  (HH:MM.SS)   Sessions       Total   Ave. Size
 ICFDCOR1           650  DAEF     08:43.25           0           0           0
 ICFDCOR2           660  DA2F     08:43.30           0           0           0









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

The screen shows the daemons that are active in the coordinator group. This option is only available when using daemon perspective, because node information is kept in the daemon, not in the local client.

The following information is provided:

Field	Description
Coordinator Name	The name and job number of the coordinator daemon task.
Node	The Adabas Node ID of the coordinator daemon.
System	The operating system ID.
Start Time	The start time of the coordinator daemon.
Sessions	The number of client sessions currently managed by this coordinator daemon.
Cluster Moves	The number of client sessions that have been routed dynamically to this system, and the average session message size per move. This field is only relevant for clustered applications in a multisystem environment.

Display Cache Statistics

To display the Cache Statistics screen from the Session Monitoring menu

1. Select service 5 or enter the command 2.5 on a command line.

```
 12:09:29 ***** A D A B A S   SYSTEM COORDINATOR 8.1.2 (I003) *****  2008-05-22
                  -  Display Cache Statistics - Summary  -           C12500M1
 Run-mode: Local (node 0)                     Perspective: Daemon (node 650)
  Detail                                  Detail
   Page                                    Page
    1  CSCSREADHITC......: 0                4  CSCSXINMINVALC....: 0
    .  CSCSRMDIRHITC.....: 0                .  CSCSXICMINVALC....: 0
    .  CSCSCASTOUTCC.....: 0                5  CSCSCASTOUTC......: 0
    .  CSCSREFSIGMISSC...: 0                .  CSCSREFSIGMISSC...: 0
    2  CSCSTMCFULLCLC....: 0                .  CSCSTMCFULLC......: 0
    .  CSCSDIRENTRYC.....: 0                .  CSCSDIRENTRYC.....: 0
    .  CSCSWHITCB1C......: 0                6  CSCSDATAREAELEC...: 0
    .  CSCSWMNOTREGC.....: 0                .  CSCSTOTCHNGDC.....: 0
    3  CSCSWMINVSTATEC...: 0                .  CSCSDATAREAC......: 0
    .  CSCSWMTSCFULLC....: 0                .  CSCSCMPLREFLSTC...: 0
    .  CSCSDIRENTRYRCLC..: 0                7  CSCSPRTCREFLSTC...: 0
    .  CSCSDAENTRCLC.....: 0                .  CSCSXILCVIREPL....: 0
    4  CSCSXIDIRRCLC.....: 0                .  CSCSWUXIC.........: 0
    .  CSCSXIWRITEC......: 0


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

This screen displays the IBM sysplex coupling facility cache memory statistics. The definition of each statistical value is provided on a series of detailed screens, together with a repetition of the value.

Use PF11 to display a series of detail screens. Use PF10 to return to the last screen. You can then use the same PF keys to proceed forward or backward to the desired screen.

Cache statistics are valid only if the coordinator group is defined as type “Sysplex”.