ADARUN Control Statements

The ADARUN function is used to invoke Entire Net-Work. ADARUN invokes the Entire Net-Work control program and:

- loads the module ADAIOR, which performs all operating system-dependent functions;

- reads and interprets all ADARUN parameter statements;

- loads the modules needed to execute the functions specified by the ADARUN parameters;

- performs any necessary modifications to those load modules, based on the specified parameters;

- passes control to Entire Net-Work.

The ADARUN statement is fully described in the Operations documentation of Adabas.

This section covers the following topics:

- Specifying ADARUN Control Statements

- CMADDR and CMLADDR Parameters: GETMAIN Memory Pool Start Address

- CMFIX or CMLFIX Parameters: GETMAIN Memory Pool Fixed Location

- CMSCOPE or CMLSCOPE Parameters: GETMAIN Memory Pool Scope

- CMSIZE or CMLSIZE Parameters: GETMAIN Memory Pool Use and Size

- CT Parameter: Command Timeout Limit

- FORCE Parameter: Allow Nucleus Database ID or Review Hub Table Entry Overwrite

- GROUPS Parameter: User Group Interprocess Communication

- IDTNAME Parameter: Define ID Table Name

- LU Parameter: Length of Intermediate User Buffer Area

- NAB Parameter: Number of Attached Buffers

- NC Parameter: Number of Command Queue Elements

- PROGRAM Parameter: Program to Run

- SVC Parameter: SVC Number

- TARGETID Parameter: Entire Net-Work Target ID

- TASKCTGY Parameter: Adabas Batch/TP Task Category Control

- Example

Specifying ADARUN Control Statements

When specifying ADARUN parameters:

- Ensure that the correct program to be executed is specified (see the PROGRAM parameter);

- Ensure that the correct target ID is specified (see the TARGETID parameter); and

- Determine which settings for the following parameters are applicable for the session:

  - FORCE (overwrite active target ID)

  - SVC (Adabas SVC number)

Each ADARUN parameter has a default value that ADARUN uses if the parameter is not explicitly specified. Parameters can be abbreviated, but the abbreviation must be unique; that is, not the same as those of other ADARUN parameters.

The Entire Net-Work session statistics can be used to determine the best settings for each parameter. The statistics can be displayed using Entire Net-Work operator commands during the session; they are also printed automatically at the end of a session.

The syntax of the ADARUN statement and parameters is:

```
ADARUN parameter = value [, parameter = value ]...
```

ADARUN statements must:

- Contain the word "ADARUN" in positions 1-6, followed by $parameter=value$ strings of one or more entries;

- Have one or more blanks, beginning in position 7, between "ADARUN" and the first $parameter=value$ string; and

- Not extend beyond position 72 of a line.

ADARUN control statements may contain multiple statement lines. Each line must be specified as a separate statement according to the rules above.

The ADARUN statement is fully described in your Adabas Operations documentation.

CMADDR and CMLADDR Parameters: GETMAIN Memory Pool Start Address

These parameters apply only to BS2000 environments running Sockets versions less than 2.2.

Parameter	Specify . . .	Minimum	Maximum	Default
	the start address of the GETMAIN memory pool			
CMADDR	above the 16MB line	0, or X'1000000'	X'FE000000'	0
CMLADDR	below the 16MB line	0, or X'10000'	X'E00000'	0

Note:
These parameters should only be used if required by an installation site, in which case the site will provide the needed value.

These parameters are involved with setting all required memory into a common memory pool for use by associated tasks on BS2000 above (CMADDR) or below (CMLADDR) the 16 megabyte line. They set the start address of this memory pool.

If the default value ("0") is used for a CMADDR or CMLADDR parameter, the start address depends on the value of the corresponding CMSIZE or CMLSIZE parameter:

- If the CMADDR or CMLADDR parameter value is "0" and the corresponding CMSIZE or CMLSIZE parameter is *not* "0", the operating system will set the start address at the next available megabyte boundary.

- If the CMADDR or CMLADDR parameter value is "0" and the corresponding CMSIZE or CMLSIZE parameter is *also* "0", required memory will not be obtained in a common memory pool but rather in class 6 memory.

Specific Product Recommendations

For Entire Net-Work 6 (mainframe), Software AG recommends setting the value of the CMADDR parameter to `X'01200000'`.

Examples

The following example allows for three (3) megabytes of user storage in the address range X'2000000' to X'4FFFFFF':

```
ADARUN PROG=ADANUC,CMADDR=2000000,CMSIZE=2500000
```

The following example allows for three (3) megabytes of user storage below 16 megabytes in the address range X'200000 to X'4FFFFF:

```
ADARUN PROG=ADANUC,CMLADDR=200000,CMLSIZE=25000000
```

CMFIX or CMLFIX Parameters: GETMAIN Memory Pool Fixed Location

These parameters apply only to BS2000 environments running Sockets versions less than 2.2.

Parameter	Specify . . .	Possible Values	Default
	whether the GETMAIN memory pool must have a fixed location or not		
CMFIX	above the 16MB line	YES | NO	NO
CMLFIX	below the 16MB line	YES | NO	NO

Note:
Use these parameters only if required by an installation site, in which case the site will provide the needed value.

The ..FIX parameter is ignored if the corresponding ..SIZE parameter value is 0.

These parameters are involved with setting all required memory into a common memory pool for use by associated tasks on BS2000 above (CMFIX) or below (CMLFIX) the 16 megabyte line. This parameter specifies whether the memory pool is at a fixed location or not:

Value	The application's GETMAIN memory pool . . .
NO	need not be located at the same start address in the subtask as in the main task.
YES	must be located at the same start address in the subtask as in the main task.

Note:
A subtask depends on the application. An example of this is Adabas Review in local mode.

Specific Product Recommendations

For Entire Net-Work 6 (mainframe), Software AG recommends setting the values of both the CMFIX and CMLFIX parameters to "YES".

Examples

The following example allows for three (3) megabytes of user storage above 16 megabytes in the address range X'2000000' to X'4FFFFFF'. This address range will also be used by the subtask:

```
ADARUN PROG=ADANUC,CMADDR=2000000,CMSIZE=2500000,CMFIX=YES
```

The following example allows for three (3) megabytes of user storage below 16 megabytes in the address range X'200000' to X'4FFFFF'. This address range will also be used by the subtask:

```
ADARUN PROG=ADANUC,CMLADDR=200000,CMSIZE=2500000,CMFIX=YES
```

CMSCOPE or CMLSCOPE Parameters: GETMAIN Memory Pool Scope

These parameters apply only to BS2000 environments running Sockets versions less than 2.2.

Parameter	Specify . . .	Possible Values	Default
	access to the GETMAIN memory pool		
CMSCOPE	above the 16MB line	GROUP | GLOBAL	GROUP
CMLSCOPE	below the 16MB line	GROUP | GLOBAL	GROUP

Note:
These parameters should only be used if required by an installation site, in which case the site will provide the needed value.

The ..SCOPE parameter is ignored if the corresponding ..SIZE parameter value is 0.

These parameters are involved with setting all required memory into a common memory pool for use by associated tasks on BS2000 above (CMSCOPE) or below (CMLSCOPE) the 16 megabyte line. This parameter specifies accessibility to the memory pool:

Value	Meaning
GROUP	The GETMAIN common memory pool can only be accessed by other tasks using the same user ID.
GLOBAL	The GETMAIN common memory pool can only be accessed by all user IDs in the system.

Specific Product Recommendations

For Entire Net-Work 6 (mainframe), Software AG recommends setting the values of the CMSCOPE and CMLSCOPE parameters to "GROUP".

Examples

The following example allows for three (3) megabytes of user storage at the next available megabyte boundary above the 16MB line accessible to tasks with the same user ID.

```
    ADARUN PROG=ADANUC,CMSIZE=2500000,CMSCOPE=GROUP
```

The following example allows for three (3) megabytes of user storage at the next available megabyte boundary below the 16MB line accessible to tasks with the same user ID.

```
    ADARUN PROG=ADANUC,CMLSIZE=2500000,CMLSCOPE=GROUP
```

CMSIZE or CMLSIZE Parameters: GETMAIN Memory Pool Use and Size

These parameters apply only to BS2000 environments running Sockets versions less than 2.2.

Parameter	Specify . . .	Minimum	Maximum	Default
	whether the GETMAIN is performed in a common memory pool and if so, its size in bytes (decimal)			
CMSIZE	above the 16MB line	0	address-limit	0
CMLSIZE	below the 16MB line	0	address-limit	0

Note:
These parameters should only be used if required by an installation site, in which case the site will provide the needed value.

These parameters are involved with setting all required memory into a common memory pool for use by associated tasks on BS2000 above (CMSIZE) or below (CMLSIZE) the 16 megabyte line. These parameters determine whether a common memory pool is used and if so, its size:

- If the ..SIZE parameter value is 0, the default, the required application memory is obtained in the class 6 memory of the system.

- If the ..SIZE parameter value is *not* 0, the required application memory is obtained in a common memory pool of the specified size rounded up to the next megabyte.

Specific Product Recommendations

For Entire Net-Work 6 (mainframe), Software AG recommends setting the CMSIZE parameter to "32000000" and the CMLSIZE parameter to "4096000".

Examples

The following example allows for three (3) megabytes of user storage at the next available megabyte boundary above the 16 megabyte line accessible to tasks with the same user ID.

```
    ADARUN PROG=ADANUC,CMSIZE=2500000
```

The following example allows for three (3) megabytes of user storage at the next available megabyte boundary below the 16 megabyte line accessible to tasks with the same user ID.

```
ADARUN PROG=ADANUC,CMLSIZE=2500000
```

CT Parameter: Command Timeout Limit

Parameter	Specify . . .	Minimum	Maximum	Default
CT	the maximum time (seconds) for interregion communication of results from Adabas to the user.	1	16777215	60

For Adabas Review, this is the maximum number of seconds (more precisely, units of 1.048576 seconds) that can elapse from the time an Adabas Review hub command has been completed until the results are returned to the user through the interregion communication (operating-system-dependent).

This parameter is used to prevent a command queue element and attached buffer from being held for a long period of time for a user who has terminated abnormally.

Possible causes of a command timeout are

- user region is swapped out or cannot be dispatched;

- user is cancelled;

- user has low priority in high activity system.

If the CT limit is exceeded,

- the command queue element and attached buffer are released;

- a message ADAM93 is printed; and

- if the user has not terminated, response code 254 is returned to the user program.

Example

The following example permits about 30 seconds to obtain a result through interregion communication from the Adabas Review hub

```
ADARUN PROG=ADAREV,CT=30
```

FORCE Parameter: Allow Nucleus Database ID or Review Hub Table Entry Overwrite

Parameter	Specify . . .	Possible Values	Default
FORCE	whether the nucleus or Adabas Review hub can overwrite an existing ID table entry.	YES | NO	NO

If running Adabas Review, this indicates whether the Adabas Review hub can overwrite an existing ID table entry. When a Review hub starts up, ADARUN scans the ID table to ensure that no entry exists for the Review hub. You can use the FORCE parameter to indicate whether the Review hub can overwrite an existing ID table entry.

The ID table entry is derived from the database ID and the job name. For Adabas Review, the ID table entry is derived from the Review hub ID (REVIEW=). The ID table entry is deleted when the nucleus terminates normally.

The FORCE parameter allows the nucleus or Adabas Review hub to overwrite the existing ID table entry and access the database.

⚠️ **Warning:**
Do not use the FORCE parameter unless absolutely necessary, or the integrity of the database could be lost. Ensure that no nucleus or Review hub is active for the ID table entry being overwritten.

Value	Meaning
YES	The nucleus or Adabas Review hub that is starting can overwrite an existing ID table entry. FORCE=YES is required when restarting a session that terminated abnormally with an ADAM98 message. In this case, the ID table still contains an active entry for the nucleus or Review hub. Overwriting the existing entry by specifying FORCE=YES prevents further communication to the overwritten nucleus or hub and causes loss of cross-memory environment resources, which cannot be restored until the next IPL.
NO	(default) If the ID table contains an entry for the nucleus or Adabas Review hub that is starting, the nucleus is denied access to the database or the Review hub is not permitted to start.

Note:
In an Adabas Cluster Services or Adabas Parallel Services environment, the FORCE parameter applies to the NUCID, rather than the database ID, because a cluster nucleus builds an ID table entry for the NUCID.

A data integrity block (DIB) entry will only be removed once the ID Table initialization has been successful. Therefore, you must set IGNDIB and FORCE both to "YES" if either of the following occur:

- You receive a PARM ERROR 26 after parameter settings IGNDIB=NO and FORCE=YES were applied;

- You receive a PARM ERROR 23 after parameter settings IGNDIB=YES and FORCE=NO were applied.

Examples

The following example specifies that if the ID table contains an active entry for DBID 7, overwrite the entry.

```
ADARUN PROG=ADANUC,FORCE=YES,DBID=7
```

The following example specifies that if the ID table contains an active entry for the Adabas Review hub, overwrite the entry.

```
ADARUN PROG=ADAREV,FORCE=YES,REVIEW=202
```

GROUPS Parameter: User Group Interprocess Communication

This parameter applies to the BS2000 operating system only.

Parameter	Specify . . .	Possible Values	Default
GROUPS	whether BS2000 interprocess communication is limited to users with the same logon ID.	YES | NO	NO

This parameter limits the accessibility of ADARER and its ID table (IDT) to a group of users with the same logon ID.

Value	Meaning
YES	Allows the user(s) access to the IDT that starts under the same logon ID as the Adabas nucleus. When initialized, the IDT is set to GROUPS=YES; all users (nuclei, utilities, Entire Net-work, and all user tasks) must therefore also specify GROUPS=YES in either the ADARUN statement or using the Adalink parameters.
NO	The default setting. All users on one machine have access to this IDT, even if they are logged on under a different logon ID.

Note:
More than one IDT with the same name can be used if one is set to GROUPS=NO (the default) and the rest specify GROUPS=YES.

Example

The following example allows BS2000 users access to the IDT that starts under the same logon ID as this Adabas nucleus.

```
ADARUN PROG=ADANUC,DBID=11,GROUPS=YES
```

IDTNAME Parameter: Define ID Table Name

This parameter applies to the BS2000 operating system only.

Parameter	Specify . . .	Possible Values	Default
IDTNAME	an alternate ID table.	ADA*ccccc*	ADABAS5B

Defines a name for an (alternate) Adabas environment. The name must be eight characters long and must begin with the characters "ADA".

Note:
All users of the new ID table must include the IDTNAME in either the ADARUN statement or ADALNK parameters.

Specific Product Recommendations

For Entire Net-Work 6 (mainframe), Software AG recommends setting the value of the IDTNAME parameter to "ADABAS5B".

Example

The following example defines the name ADAOURDB for the second Adabas environment.

```
ADARUN PROG=ADANUC,IDTN=ADAOURDB
```

LU Parameter: Length of Intermediate User Buffer Area

Parameter	Specify . . .	Minimum	Maximum	Default
LU	the size of the intermediate user buffer area.	none	none (see note 1)	65535 (see note 2)

The LU parameter is optional. The size specified must be large enough to accommodate all Adabas control information (108 bytes), all user buffers (format, record, search, value, ISN) that may be required for any given Adabas command, plus any user information passed from Adabas link routines to nucleus user exits.

If the multifetch/prefetch option or a utility that needs large record/ISN buffers is to be used during the session, the setting of LU must be large enough to contain the buffers needed.

Notes:

1. An error occurs if the LU parameter specifies a value greater than the byte count implied by the NAB (number of attached buffers) parameter. On z/OS and VM systems, LU cannot exceed a value greater than that produced by the following calculation: (*NABvalue* x 4096); on z/VSE and BS2000 systems, LU cannot exceed a value greater than that produced by the following calculation: (*NABvalue* x 4096) - 256. For more information about the NAB parameter, read *NAB: Number of Attached Buffers*, in *Adabas Operations Manual*.
2. Due to the length of the record buffer of the utilities that need the nucleus, e.g., ADAULD, the default value is set to 65,535. If the value of LU is less than 65,535 for an Adabas session, a response code will occur when such a utility is running.

The LU parameter syntax is:

```
LU={ n | 65535 }
```

Specific Product Recommendations

- For Event Replicator Server databases running with Adabas 7.4, the LU parameter must be greater than or equal to 164,000. For Event Replicator Server databases running with Adabas 8, the LU parameter must be greater than or equal to 167,000. In addition, if data is sent through Entire Net-Work from one or more Adabas nuclei to an Event Replicator Server, the Entire Net-Work LU parameter must be greater than or equal to the LU parameter setting for the Event Replicator Server itself.

- If data is sent through Entire Net-Work from one or more Adabas nuclei to an Event Replicator Server, the Entire Net-Work LU parameter setting must be greater than or equal to 164,000.

Example

The following example runs the Adabas nucleus with an Adabas intermediate user buffer area of 20,000 bytes.

```
ADARUN PROG=ADANUC,LU=20000
```

NAB Parameter: Number of Attached Buffers

Parameter	Specify . . .	Minimum	Maximum	Default
NAB	the number of attached buffers to be used.	1	varies, depending on the amount of available virtual storage	16

The NAB parameter defines the number of attached buffers to be used during the session. An attached buffer is an internal buffer used for interregion communication. It is required in all environments. Adabas allocates an attached buffer pool with a size equal to the value of NAB multiplied by 4096 bytes.

You may specify as many attached buffers as fit into the available virtual storage.

In environments running in 31-bit addressing mode, the attached buffer pool space is allocated above the 16-MB line.

Users of the Adabas Review hub should read *Storage Requirements* in the *Adabas Review Concepts Manual* for more information about the space requirements of the Command Queue for Adabas Review.

The NAB parameter syntax is:

```
NAB={ n | 16 }
```

Specific Product Recommendations

- For Event Replicator Server databases, set parameter NAB to a value greater than or equal to:

  ```
  41 * 10 * the-number-of-Adabas-nuclei-sending-data-to-the-Event-Replicator-Server
  ```

  For example, if one Adabas nucleus will be sending data to the Event Replicator Server, set the NAB parameter greater than or equal to 410 (for example NAB=420).

- If data is sent through Entire Net-Work from one or more Adabas nuclei to an Event Replicator Server, the Entire Net-Work NAB parameter must also be set to a value greater than or equal to:

  ```
  41 * 10 * the-number-of-Adabas-nuclei-sending-data-to-the-Event-Replicator-Server
  ```

Example

The following example runs the Adabas Review hub nucleus with 50 attached buffers.

```
ADARUN PROG=ADAREV,NAB=50
```

NC Parameter: Number of Command Queue Elements

Parameter	Specify . . .	Minimum	Maximum	Default
NC	the maximum number of command queue elements.	20	32767	200

The number of command queue elements (CQEs) established for the Adabas or Review hub session determines the maximum number of Adabas commands that may be queued or be in process at any one time during the session.

Each call from the Adabas nucleus is assigned a CQE. The CQE is released when the user receives the results of the command, the Adabas Review hub has processed the command, or the user has been timed out..

192 bytes are required for each CQE.

Software AG recommends that you set NC high enough to allow one command per active user for possible synchronization during execution of the online SAVE database function of the ADASAV utility.

The Adabas session statistics or Adabas Online System can be used to tune this parameter for the next session.

For more information about the space requirements of the Command Queue for Adabas Review, refer to .

Example:

Run the Adabas nucleus with a maximum of 500 elements in the command queue.

```
ADARUN PROG=ADANUC,NC=500
```

The following example runs the Adabas Review hub nucleus with a maximum of 500 elements in the command queue.

```
ADARUN PROG=ADAREV,NC=500
```

PROGRAM Parameter: Program to Run

Parameter	Specify:	Possible Values	Default
PROGRAM	the program to be executed.	see table below	USER

This parameter specifies what to execute. The possible values are described in the following table:

Specify:	To start:
ADACOM	an ADACOM task (used in Adabas Cluster Services and Adabas Parallel Services environments) For more information, refer to your Adabas Cluster Services and Adabas Parallel Services documentation.
ADANUC	an Adabas nucleus For more information about executing an Adabas nucleus, read *Adabas Session Execution*, in the *Adabas Operations Manual*.
ADAREV	an Adabas Review hub. Specify this in conjunction with the ADARUN REVIEW parameter. For more information, refer to your Adabas Review documentation.
NETWRK	an Entire Net-Work node For more information, refer to your Entire Net-Work documentation.
RENTUSER	a user program to be run using a reentrant Adabas batch/TSO link routine. For more information, refer to description of the Adabas TP monitor installation in your Adabas installation documentation.
USER	a user program to be run using a non-reentrant Adabas batch/TSO link routine. For more information, read *Linking Applications to Adabas*, in the *Adabas Operations Manual*
utility-name	an Adabas utility Specify an Adabas utility for *utility-name*. For more information, refer to the *Adabas Utilities Manual*.

Examples

The following example specifies that an Adabas nucleus is running.

```
ADARUN PROGRAM=ADANUC
```

The following example specifies that an Adabas Review hub is running.

```
ADARUN PROGRAM=ADAREV, REVIEW=202
```

The following example specifies that an Entire Net-Work node is running.

```
ADARUN PROGRAM=NETWRK
```

SVC Parameter: SVC Number

This parameter applies to the operating environments z/OS and z/VSE only.

Parameter	Specify . . .	Possible Values	Default
SVC	the Adabas SVC number or Adabas Review hub SVC number to be used for the session.	see text	45 (z/VSE) 249 (z/OS)

The SVC number is specified as an integer. It must correspond to the number used for the Adabas SVC at your installation.

The Adabas SVC or Adabas Review hub SVC are used to perform various Adabas internal functions under z/OS and z/VSE.

Valid SVC values are as follows:

z/OS	200-255
z/VSE	45 is recommended; any free SVC value can be used. See the Adabas Installation documentation for information about finding free values for z/VSE.

Example

The following example runs an Adabas session under z/OS using SVC 202 for the Adabas SVC.

```
ADARUN PROG=ADANUC,SVC=202
```

The following example runs an Adabas Review hub session under z/VSE using SVC 45 for the Adabas Review hub SVC.

```
ADARUN PROG=ADAREV,SVC=45
```

TARGETID Parameter: Entire Net-Work Target ID

Parameter	Specify . . .	Minimum	Maximum	Default
TARGETID	the unique Entire Net-Work target ID for this node.	1	65535	1

The TARGETID parameter is an optional ADARUN parameter that specifies the unique Entire Net-Work target ID of a node. It is synonymous with the Adabas ADARUN DBID parameter.

All target IDs used by Entire Net-Work, Adabas (database IDs), Natural global buffer pools, etc., must be unique throughout all Entire Net-Work nodes. In particular, the Entire Net-Work target ID must not coincide with any database ID used in the network, with the exception of isolated databases that are defined for local availability only and are therefore unknown to Entire Net-Work. For more information about global target IDs, read .

Example

The following example specifies an Entire Net-Work target ID of 12 for a node.

```
  ADARUN TARGETID=12
```

TASKCTGY Parameter: Adabas Batch/TP Task Category Control

This parameter applies in BS2000 operating environments only.

Parameter	Specify . . .	Possible Values	Default
TASKCTGY	the Adabas task category.	BATCH	TP	BATCH

BS2000 TP (interactive processing) environments favor TP-processing tasks over batch tasks. By default, Adabas has batch status. You can use the TASKCTGY parameter to assign TP-processing priority to the Adabas nucleus.

Value	Meaning
BATCH	(default) The nucleus retains batch status.
TP	Issues a TINF macro to force the Adabas nucleus to TP status.

Example

The following example forces the nucleus to TP-processing status.

```
  ADARUN PROG=ADANUC,TASKCTGY=TP
```

Example

The following is an example of an Entire Net-Work ADARUN statement:

```
ADARUN PROG=NETWRK,TARGETID=3333,NAB=20,NC=50,LU=65535,SVC=251
```

For this node, Entire Net-Work:

- runs with a target ID of 3333;

- allocates an attached buffer pool for 20 interregion communication buffers;

- processes as many as 50 requests simultaneously;

- uses the SVC 251; and

- ensures adequate buffer size for Adabas compatibility by setting the value of the LU parameter to 65535. For more information about the LU parameter, read about it in the Adabas Operations documentation.