

Adabas Fastpath

Adabas Fastpath Parameters

Version 8.2.2

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Preface

This document describes the Adabas Fastpath parameters.

- **Parameter Types**
- **Parameter Descriptions**

1 Parameter Types

- Parameter Descriptions 2

Adabas Fastpath optimization and operation is controlled by the following types of parameters:

- *Buffer parameters* control the operation of the Adabas Fastpath buffer.
- *File parameters* control the optimization of specific files. Some file parameters can override buffer parameter settings when applied to a specific file.
- *Client Runtime Controls* define which sessions participate in Adabas Fastpath optimization and provide dynamic control for the user.

Fastpath shares some runtime controls with Adabas System Coordinator. When a new runtime control is added a panel appears with a title System Coordinator Runtime Controls. Please refer to Adabas System Coordinator for further information on the controls appearing in this panel.

Adabas Fastpath parameters can be maintained using Adabas Fastpath Online Services, function Parameter Maintenance.

Parameter Descriptions

This section provides a description of each Adabas Fastpath parameter:

Buffer Parameters	File Parameters	Client Runtime Controls
Additional Encodings	Additional Encodings	Command Time
Async Coherence Messages	Cache Secure File	Direct Access
Average Item Size	Default Pacing Rate	Fastpath On/Off
Coherence Limit and Suspension Period	Direct Access Optimization	Job End Statistics
Dataspace Name		
Default Pacing Rate	End Time	Read-Ahead Memory Limit
Direct Access	Expanded File	Read-Ahead Optimization Control
Fast Cache Attempts	Initial Status	System Coordinator Group Name
Fast Set Create Attempts	L1/L2/L3 Read; L9 Histogram	Maximum read-ahead unit size(k)
Find (Sx/L1)	Password Secure File DA-Caching	Maximum read-ahead rate
Freespace Index	RB Length Limit	
Histogram	Read-Ahead Optimization	
Keep	Set Concurrency	
Log	Set ID Length Limit	

Buffer Parameters	File Parameters	Client Runtime Controls
Maximum Jobs	Set Limit	
Minimum Buffer Size	Start Time	
RB Length Limit	S1/S2 FIND; S8/S9 Sort ISN List	
Read Ahead	Update Sensitivity	
Read Logical (L3)		
Read Physical (L2)		
Restart Every n Hours		
Restart Time		
Set Concurrency		
Set ID Length Limit		
Size		

Additional Encodings

Parameter Type	Use	Possible Values	Default
Buffer	Controls whether data in a character encoding other than that used by the database/file to hold the data can be cached.	None All Single byte ascii Single byte ebcdic Double byte ascii Double byte ebcdic	None

Additional Encodings

Parameter Type	Use	Possible Values	Default
Buffer	Controls whether data in a character encoding other than that used by the database/file to hold the data can be cached. The Default of this parameter value is defined by the value of the Buffer parameter.	Default None All Single byte ascii Single byte ebcdic Double byte ascii Double byte ebcdic	Default

API Runtime Overrides

Parameter Type	Use	Possible Values	Default
Client runtime control	Controls whether API runtime overrides may be used. Refer to the Adabas System Coordinator documentation for more information.	Y or N	N

Async Coherence Messages

Parameter Type	Use	Possible Values	Default
Buffer	This parameter indicates whether synchronous or asynchronous communication is to be used for retaining cache coherence in remote systems from where the update thread executes. There may be some performance gain by using asynchronous mode but the safest mechanism is synchronous.	Y N	Y

Autorestart

Parameter Type	Use	Possible Values	Default
Buffer	Controls whether or not automated buffer restarts should occur.	Y or N	N

Average Item Size

Parameter Type	Use	Minimum	Maximum	Default
Buffer	All memory allocations within the Adabas Fastpath buffer are recorded in an index. This parameter is used as a divisor into the buffer size to decide how many items will be expected within the first index block.	64	32768	1024

Cache Secure File

Parameter Type	Use	Possible Values	Default
File	Records cached by Adabas Fastpath become available to all sessions. Files that are password protected are not normally cached. This field may be set to Y and a password provided in the Password Secure DA-Caching file parameter to allow the caching of such files. Use of this parameter is to be carefully considered and only used where the risk to secure data is acceptable.	Y or N	N

Coherence Limit and Suspension Period

Parameter Type	Use	Possible Values	Default
Buffer	<p>There is more overhead required by Fastpath to distribute update information across multiple systems (lpars) where distributed caching/optimization for direct-access is used. In periods of intensive update activity this can be counter-productive. These controls allow you to set a threshold where direct-access is suspended for a file if the amount of inter-system update notification breaches a certain level - and then resumed at a later period automatically. This allows Fastpath to react sensibly and dynamically to "floods" of updates.</p> <p>Coherence Limit</p> <p>The number of distributed update operations to a file per second, as an average over the period of a minute, that will cause the file to temporarily suspend direct access optimization.</p> <p>Suspension Period</p> <p>The number of minutes that direct-access optimization (etc.) is suspended when the coherence limit is breached. It is automatically resumed after this period.</p>	<p>Coherence Limit: 0-255</p> <p>Suspension Limit: 0-255</p>	<p>Coherence Limit: 32</p> <p>Suspension Limit: 10</p>

Clustered Application Service Name

Parameter Type	Use
Client runtime control	<p>The service name to be used to link together the instances of the application system.</p> <p>For clustered applications (job types CICS Cluster, IMS, UTM), the service name is required to link all the instances of the same application system. If the job is running in a single image (for example, UTM), this name is still required.</p> <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>

Command Time

Parameter Type	Use	Possible Values	Default
Client runtime control	If a command time is specified, then any commands that are successfully optimized by Fastpath will have this command time.	0-99999999	00000000

Dataspace Name

Parameter Type	Use	Possible Values	Default
Buffer	<p>This controls where the Fastpath buffer is allocated. If a name is specified the Fastpath buffer is allocated as a dataspace.</p> <p>The Fastpath buffer can be allocated as a dataspace to alleviate shortages of shared memory, a critical resource. This feature allows you to run with the z/OS setting of USERCSAKEY=NO as recommended by IBM. For backwards compatibility the default remains shared memory (ECSA). For more information on dataspaces please refer to <i>IBM documentation SA22-7614-00, MVS Programming: Extended Addressability Guide, second edition October 2001</i>, which applies to z/OS.</p>	<p>1-8 characters with no embedded blanks.</p> <p>First character must be #, @ or J-Z.</p> <p>All others characters must be letters, numbers, #, @ or \$.</p> <p>The name must not begin with "SYSA" through "SYSI".</p>	None

Direct Access Optimization

Parameter Type	Use	Possible Values	Default
File	<p>Defines the direct access optimization settings at the file level for Adabas commands:</p> <ul style="list-style-type: none"> ■ L1: Get ISN ■ L3: Read Logical ■ L9: Histogram ■ S1: Find ■ S2: Find Sorted <p>Each command type may have optimization set ON or OFF. In addition, this setting may have up to seven field level overrides which can be achieved by inserting the Adabas two-character field name(s) on the appropriate command line.</p> <p>For L3 , L9 , S1 , S2 commands, when optimization is set</p> <ul style="list-style-type: none"> ■ ON, field level overrides indicate that commands using that field <i>are not to be optimized</i>. ■ OFF, field level overrides indicate that commands using that field <i>are to be optimized</i>. 	ON OFF	OFF

Default Pacing Rate

Parameter Type	Use	Possible Values	Default
Buffer	<p>Expressed as a percentage, this parameter controls the rate at which housekeeping is performed by FASTABM.</p> <p>It is recommended this parameter is only modified when you are instructed to do so by Software AG.</p>	1-100	10

Default Pacing Rate

Parameter Type	Use	Possible Values	Default
File	<p>Expressed as a percentage, this parameter controls the rate at which housekeeping is performed by FASTABM.</p> <p>If a value of 0 is entered, then the Buffer parameter value is assumed.</p> <p>It is recommended this parameter is only modified when you are instructed to do so by Software AG.</p>	0-100	0

Direct Access

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings at the buffer level.</p> <p>OFF prevents direct-access optimization altogether. ON enables direct-access optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

Direct Access Optimization Control at Job Level

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Controls direct access optimization at the job level.</p> <p>If this job parameter is set to OFF, direct access optimization is not performed, regardless of the settings in the buffer and file parameters.</p>	ON OFF	ON

End Time

Parameter Type	Use	Minimum	Maximum	Default
File	<p>Indicates the time that optimization is to be ended.</p> <p>File start and end times define the period for which the file parameters are to be used for optimization. The start and end times are continuously monitored and the file parameters are switched on/off dynamically. It is also possible to define various file parameters each with a different start and end time period.</p> <p>Note: The values 00:00 and 24:00 have the same meaning; that is, midnight.</p>	00:00	24:00	none

Estimated Client Sessions

Parameter Type	Use	Default
Client runtime control	<p>This parameter is used to determine the approximate size of the Adabas System Coordinator user pool where</p> <ul style="list-style-type: none"> ■ type "a" represents batch, TSO, CMS, and TIAM jobs ■ type "b" represents Com-plete, CICS, CICSplex, IMS, and UTM jobs <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>	type a: 2 type b: 1000

Expanded File

Parameter Type	Use	Possible Values	Default
File	<p>This parameter must be defined (no default) and tells Adabas Fastpath whether or not the Adabas file is defined as 'expanded'. If this parameter is set to Y, direct access optimization for L3 or L9 commands for the file are not permitted.</p> <p>For more information on expanded files, refer to the Adabas documentation.</p>	Y N	none

External Monitoring

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Monitor information will be located in shared memory under the control of a COR daemon.</p> <p>A COR group must be specified.</p> <p>Refer to the Adabas System Coordinator documentation for more information.</p>	Y N	N

Fast Cache Attempts

Parameter Type	Use	Possible Values	Default
Buffer	The number of records to be cached in high-speed mode in order to accelerate the learning period of the direct-access algorithm (per set). Once this number is reached the normal asynchronous caching mechanism is used.	0-255	32

Fast Set Create Attempts

Parameter Type	Use	Possible Values	Default
Buffer	The number of sets to be created in high-speed mode in order to accelerate the learning period of the direct-access algorithm. Once this number is reached the normal asynchronous mechanism is used.	0-255	25

Fastpath ON/OFF

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Controls whether any Fastpath optimization should be attempted for this session.</p> <p>If this parameter is set to OFF, Fastpath optimization is not attempted, regardless of the settings in the buffer and file parameters.</p>	ON OFF	ON

Find (Sx/L1)

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings for these commands at the buffer level.</p> <p>OFF prevents optimization altogether. ON enables optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

Fixed Memory Pool Size

Parameter Type	Use	Default
Client runtime control	<p>Determines the initial size of all fixed pools managed by the Adabas System Coordinator.</p> <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>	256

Freespace Index

Parameter Type	Use	Minimum	Maximum	Default
Buffer	All free memory in the Adabas Fastpath buffer is classified into a fixed-size freespace index. This parameter sets the number of different freespace categories (entries) in the index.	16	32768	512

Group

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>If External Monitoring is on, then the COR group must be specified. If the group is not active, then External Monitoring can not occur.</p> <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>	Group Name	none

Histogram (L9)

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings for this command at the buffer level.</p> <p>OFF prevents optimization altogether. ON enables optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

Initial Status

Parameter Type	Use	Possible Values	Default
File	<p>Controls the activation of file parameters.</p> <p>If the setting is OFF, the file parameters are inactive. The setting must be changed to ON and SYSAFP must be used to stop/start the file.</p>	ON OFF	ON

Job End Statistics

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Controls whether the optimization statistics for a job are to be saved or printed.</p> <p>Possible values are:</p> <ul style="list-style-type: none"> ■ None: No information will be displayed or saved. ■ Daemon messages: Fastpath performance information will be sent to the operator console by the Adabas Fastpath asynchronous buffer manager using the AFP-0040 to AFP-0042 messages for the named job(s). ■ File history: Statistics will be saved in the configuration file. <p>Note: File History is only an option for wholly named jobs (it is not an option offered for *default jobs or jobs that use a wildcard).</p>	<p>None</p> <p>Daemon messages</p> <p>File history</p>	None

Keep

Parameter Type	Use	Minimum	Maximum	Default
Buffer	<p>Determines the number of days that the statistics log is to be retained.</p> <p>When automatic statistic logging is enabled (see the parameter Log), any entries that are younger than <i>n</i> days will be kept for each buffer in the Configuration file. Older entries will be subject to eventual overlay.</p>	1	32768	30

Log

Parameter Type	Use	Minimum	Maximum	Default
Buffer	<p>Controls how often the statistics log is to be written (specified in minutes).</p> <p>A statistics log record is written to the Adabas Fastpath configuration file by the Adabas Fastpath asynchronous buffer manager every <i>n</i> minutes. A value of 0 implies no automatic logging but does not prevent logs being requested by using the Adabas Online Special Services function. See also the parameter Keep.</p>	0	32768	60

L1/L2/L3 Read; L9 Histogram

The use of these parameters is described in the descriptions of the following parameters:

- [Direct Access Optimization](#)
- [Read-Ahead Optimization](#)

Manage Sessions

Parameter Type	Use
Buffer	<p>Determines type of session management to be used for clustered application sessions.</p> <p>For clustered applications (job types CICS Cluster, IMS, UTM) where dynamic user movement is possible, you can choose to manage only terminal tasks. This is more efficient and is possible when non-terminal tasks do not move between regions in a clustered application.</p> <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>

Maximum Idle Time

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Maximum idle time of a session before session recovery is called.</p> <p>Refer to the Adabas System Coordinator documentation for more information.</p>	0- 2147483647	none

Maximum Jobs

Parameter Type	Use	Minimum	Maximum	Default
Buffer	<p>This parameter indicates the maximum number of optimized jobs which are to be run concurrently. The corresponding number of job areas are then reserved. If an area is not available, additional (concurrent) jobs are not optimized.</p> <p>TP Monitors such as CICS, Com-plete, and Shadow require only a single job area. UTM and IMS/DC require a job area for each task being used (plus 1). TSO, TIAM, and CMS require a job area for each user. Batch jobs use one area each.</p>	1	9999	12

Maximum read-ahead unit size(k)

Parameter Type	Use	Possible Values	Default
Maximum read-ahead unit size (k)	<p>Sets the limit for the amount of memory that may be allocated for a single read-ahead operation.</p> <p>Caution: Large settings require Adabas ADARUN LU and NAB settings to be reviewed to avoid response code 152.</p>	For batch: 0-256	64
		For TP: 0-64	16

Maximum read-ahead rate

Parameter Type	Use	Possible Values	Default
Maximum read-ahead rate	<p>Sets the limit for the number of records that may be processed in a single read-ahead operation.</p> <p>Caution: Large settings require Adabas ADARUN LU and NAB settings to be reviewed to avoid response code 152.</p>	For batch: 0-8192	4096
		For TP: 0-255	255

Minimum Buffer Size

Parameter Type	Use	Minimum	Maximum	Default
Buffer	<p>Defines the minimum buffer memory size (in k) to be requested from the operating system for the Adabas Fastpath buffer.</p> <p>If the value is 0, the buffer parameter <code>Size</code> is the only value used.</p>	0	value	0

Password For Secure File DA-Caching

Parameter Type	Use	Possible Values	Default
File	<p>Used in combination with the <code>Cache Secure File</code> file parameter, this field allows for specifying the 8-character password required for access to the secured file.</p>	1-8 char	0

Read Logical (L3)

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings for this command at the buffer level.</p> <p>OFF prevents optimization altogether. ON enables optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

Read Physical (L2)

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings for this command at the buffer level.</p> <p>OFF prevents optimization altogether. ON enables optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

RB Length Limit

Parameter Type	Use	Minimum	Maximum	Default
Buffer or File	<p>Restricts the size of buffer used for evaluating data for direct access optimization.</p> <p>A file parameter value can be used to restrict the buffer parameter setting. A file parameter with a value of zero is ignored.</p>	16	32768	1024

Read-Ahead

Parameter Type	Use	Possible Values	Default
Buffer	<p>Defines the optimization settings at the buffer level.</p> <p>OFF prevents read-ahead optimization altogether. ON enables read-ahead optimization according to the file and job parameters that are defined.</p>	ON OFF	ON

Read-Ahead Memory Limit

Parameter Type	Use	Minimum	Maximum	Default
Client runtime control	Limits the amount of memory that can be used for read-ahead optimization for a job.	0		0

Read-Ahead Optimization

Parameter Type	Use	Possible Values	Default
File	<p>Defines the read-ahead optimization settings at the file level for Adabas commands:</p> <ul style="list-style-type: none"> ■ L1: Get ISN ■ L2: Read Physical ■ L3: Read Logical ■ L9: Histogram ■ S1: Find ■ S2: Find Sorted ■ S8: Process ISN List ■ S9: Sort ISN List 	ON OFF	OFF

Parameter Type	Use	Possible Values	Default
	<p>Each command type may have optimization set ON or OFF. In addition, this setting may have up to seven field level overrides which can be achieved by inserting the Adabas two-character field name(s) on the appropriate command line.</p> <p>When optimization is set</p> <ul style="list-style-type: none"> ■ ON, field level overrides indicate that commands using that field <i>are not to be optimized</i>. ■ OFF, field level overrides indicate that commands using that field <i>are to be optimized</i>. 		

Read-Ahead Optimization Control at Job Level

Parameter Type	Use	Possible Values	Default
Client runtime control	<p>Controls read-ahead optimization at the job level.</p> <p>If this job parameter is set to OFF, read-ahead optimization is not performed, regardless of the settings in the buffer and file parameters.</p> <p>In addition, you can choose between the batch (BAT) or TP monitor (TP) algorithm for setting the incremental multifetch factor. The batch algorithm accelerates the read-ahead rate more than the TP algorithm.</p>	OFF BAT TP	<p>ON</p> <p>Note: Default settings are Batch=BAT and TP Monitor=TP.</p>

Restart Every n Hours

Parameter Type	Use	Minimum	Maximum	Default
Buffer	<p>Indicates frequency of automated buffer restarts.</p> <p>If the value is not zero, it indicates the minimum number of hours that must elapse since the last buffer start/restart before auto-restart may occur.</p>	0	999	0

Restart Time

Parameter Type	Use	Minimum	Maximum	Default
Buffer	Indicates the time at which automated restarts should occur. Entered as hours and minutes in the 24-hour clock. The default is midnight.	0	23:59	0

Set Concurrency

Parameter Type	Use	Minimum	Maximum	Default
Buffer or File	This parameter indicates the number of concurrent retrievals which can occur from each set of direct access data created by Adabas Fastpath. A file parameter value can be used to restrict the buffer parameter setting. A file parameter with a value of zero is ignored.	1	16	2

Set ID Length Limit

Parameter Type	Use	Minimum	Maximum	Default
Buffer or File	Adabas Fastpath uses direct access set identifiers which contain search and format data for direct access command models. This parameter limits the size of data items within each set. A file parameter value can be used to restrict the buffer parameter setting. A file parameter with a value of zero is ignored.	256	16384	1024

Set Limit

Parameter Type	Use	Minimum	Maximum	Default
File	Adabas Fastpath creates sets of direct access command models. This parameter limits the size (in KB) of data items within each set.	0		0

Size

Parameter Type	Use	Minimum	Maximum	Default
Buffer	This parameter defines the size (in k) of the memory to be allocated to the Adabas Fastpath buffer. When requesting the memory from the operating system, the value actually obtained depends on the setting of the parameter Minimum Buffer Size .	1MB		4MB

Start Time

Parameter Type	Use	Minimum	Maximum	Default
File	<p>Indicates the time that optimization is to be started.</p> <p>File start and end times define the period for which the file parameters are to be used for optimization. The start and end times are continuously monitored and the file parameters are switched on/off dynamically. It is also possible to define various file parameters each with a different start and end time period.</p> <p>Note: The values 00:00 and 24:00 have the same meaning; that is, midnight.</p>	00:00	24:00	none

System Coordinator Group Name

Parameter Type	Use
Client runtime control	<p>Identifies the Adabas System Coordinator group that is to manage the job.</p> <p>For clustered applications (job types CICS Cluster, IMS, UTM), this name is required to link all the instances of the job in the cluster. If the job is running in a single image (for example, UTM), the name is still required.</p> <p>Refer to the <i>Adabas System Coordinator</i> documentation for more information.</p>

S1/S2 FIND; S8/S9 Sort ISN List

The use of these parameters is described in the descriptions of the following parameters:

- [Direct Access Optimization](#)
- [Read-Ahead Optimization](#)

Update Sensitivity

Parameter Type	Use	Possible Values	Default
File	<p>This parameter is used to control how update commands are to be processed for a file.</p> <p>The possible settings are:</p> <p>N (none): Ignore update type commands for data held in the Adabas Fastpath buffer</p> <p>R (record level): Remove data held in the Adabas Fastpath buffer when update type commands are found</p> <p>F (file): Remove data for the file held in the Adabas Fastpath buffer when update type commands are found</p> <p>D (distributed record level): Use only on advice from Software AG.</p>	N R F D	R

