

# Cluster Nucleus Session End Statistics

In addition to the end-of-session statistics printed by every Adabas nucleus, the statistics for a cluster nucleus also include global cache and lock statistics.

If you are running the selectable unit Adabas Online System (AOS), all of the statistics shown in the following sample output are displayed.

If you are running only the demo version of AOS delivered with Adabas, the statistics displayed are limited as follows:

Section	Displays statistics only for...
Global Cache Statistics	totals, DS, and NI
Global Lock Statistics	buffer flush, hold ISN, new data RABN, and global update command sync locks

This chapter covers the following topics:

- General Nucleus Information
- Input/Output Statistics
- Command Statistics
- User Statistics
- Efficiency Statistics
- Global Cache Statistics (Cluster Nucleus Only)
- Global Lock Statistics (Cluster Nucleus Only)
- Data Set Activity Statistics

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## General Nucleus Information

The A d a b a s nucleus session

Started 2001-02-13 22:58 and ended 2001-02-13 23:05

Duration 00000:06:59 hours

Wait-time 00000:02:26 hours

Cpu-time 00000:00:53 hours

## Input/Output Statistics

- I/O Counts (Including Initialization)



### Distribution of Commands by Thread

Thread	Number
1	2,657
2	1,803
3	1,401
4	1,300
5	1,193
6	977
7	917
8	1
Total	10,249

### Distribution of Commands by File

File	Number
0	4,281
30	5,968
Total	10,249

### Distribution of Commands by Type

Cmd-type	Number
A1/4	1,968
CL	44
ET	4,040
N1/2	2,000
OP	43
UC	7
REST	2,147
Total	10,249

### User Statistics

There were 43 users participating

Most calls ( 303) initiated by user USADFMB2

Most I/O-s ( 331) initiated by user USADFMB2

Most thr.-time (00:00:08) was used by user USADFMB1

### Efficiency Statistics

46 Formats had to be translated

0 Formats had to be overwritten

0 Autorestarts were done

0 Throw-backs due to ISN problem

0 Throw-backs due to space problem

143 Bufferflushes were done

- Buffer Flush Information
- Actual High-water Marks for Major Pools (Except the Buffer Pool)

### Buffer Flush Information

Flush phases 212  
 Blocks flushed 28,503  
 Flush I/Os

Flush requests:  
 Return immediately 52,658  
 Return after logical flush 0  
 Return after entire flush 15

### Actual High-water Marks for Major Pools (Except the Buffer Pool)

AREA	ADARUN	PARM	HIGH-WATER-MARK
AB -POOL	NAB=	2000	51712 ( 0 %)
CQ -POOL	NC =	96000	3840 ( 4 %)
DUQ -POOL	LDE=	5000	0 ( 0 %)
FI -POOL	LFP=	20000	6560 ( 32 %)
HQ -POOL	NH =	16856	588 ( 3 %)
SC -POOL	LCP=	10000	0 ( 0 %)
TBI -POOL	LI =	10000	0 ( 0 %)
TBS -POOL	LQ =	100000	0 ( 0 %)
UQ -POOL	NU =	500	8844 ( 6 %)
UQF -POOL	NU =	500	1512 ( 3 %)
WORK-POOL	LWP=	800000	114296 ( 14 %)
XID -POOL	XID=		

### Global Cache Statistics (Cluster Nucleus Only)

Cast-out dir : 188  
 Synchronous : 188  
 Asynchronous : 0

Unlock cast-out: 212  
 Synchronous : 132  
 Asynchronous : 80

Directory reads: 3  
 Synchronous : 0  
 Asynchronous : 3

- Totals
- Address Converter (AC)
- Data Storage (DS)

## Totals

## Cluster Nucleus Session End Statistics

- Data Storage Space Table (DSST)
- File Control Block (FCB)
- Normal Index (NI)
- Upper Index (UI)
- File Statistics for Files with More than 25% of the Total Cache Statistics

## Totals

Reads	:	15,006
Synchronous	:	15,006
Asynchronous	:	0
In cache	:	6,245
Not in cache	:	8,761
Area full	:	0
Writes	:	66,726
Synchronous	:	66,726
Asynchronous	:	0
Written	:	66,726
Not written	:	0
Area full	:	0
Validates	:	327,623
Block invalid	:	0
Cast-out reads	:	28,503
Synchronous	:	28,503
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

## Address Converter (AC)

Reads	:	8
Synchronous	:	8
Asynchronous	:	0
In cache	:	0
Not in cache	:	8
Area full	:	0
Writes	:	2,004
Synchronous	:	2,004
Asynchronous	:	0
Written	:	2,004
Not written	:	0
Area full	:	0
Validates	:	5,983
Block invalid	:	0
Cast-out reads	:	72

## Cluster Nucleus Session End Statistics

## Data Storage (DS)

Synchronous	:	72
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

## Data Storage (DS)

Reads	:	2,775
Synchronous	:	2,775
Asynchronous	:	0
In cache	:	26
Not in cache	:	2,749
Area full	:	0
Writes	:	4,972
Synchronous	:	4,972
Asynchronous	:	0
Written	:	4,972
Not written	:	0
Area full	:	0
Validates	:	9,965
Block invalid	:	0
Cast-out reads	:	2,921
Synchronous	:	2,921
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

## Data Storage Space Table (DSST)

Reads	:	2
Synchronous	:	2
Asynchronous	:	0
In cache	:	0
Not in cache	:	2
Area full	:	0
Writes	:	2,004
Synchronous	:	2,004
Asynchronous	:	0
Written	:	2,004
Not written	:	0
Area full	:	0
Validates	:	4,490
Block invalid	:	0
Cast-out reads	:	69
Synchronous	:	69
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

**File Control Block (FCB)**

Reads	:	5
Synchronous	:	5
Asynchronous	:	0
In cache	:	0
Not in cache	:	5
Area full	:	0
Writes	:	4,970
Synchronous	:	4,970
Asynchronous	:	0
Written	:	4,970
Not written	:	0
Area full	:	0
Validates	:	56,029
Block invalid	:	0
Cast-out reads	:	119
Synchronous	:	119
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

**Normal Index (NI)**

Reads	:	12,057
Synchronous	:	12,057
Asynchronous	:	0
In cache	:	6,219
Not in cache	:	5,838
Area full	:	0
Writes	:	44,096
Synchronous	:	44,096
Asynchronous	:	0
Written	:	44,096
Not written	:	0
Area full	:	0
Validates	:	25,685
Block invalid	:	0
Cast-out reads	:	22,973
Synchronous	:	22,973
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

**Upper Index (UI)**

Reads	:	159
Synchronous	:	159
Asynchronous	:	0
In cache	:	0
Not in cache	:	159
Area full	:	0
Writes	:	8,680
Synchronous	:	8,680
Asynchronous	:	0
Written	:	8,680
Not written	:	0
Area full	:	0
Validates	:	225,471
Block invalid	:	0
Cast-out reads	:	2,349
Synchronous	:	2,349
Asynchronous	:	0
Deletes	:	0
Timeouts	:	0

**File Statistics for Files with More than 25% of the Total Cache Statistics**

File 30:

Reads	:	14,998
Writes	:	64,710
Validates	:	323,105

**Global Lock Statistics (Cluster Nucleus Only)**

- General Control Block (GCB) Lock
- Security Lock
- File Space Table (FST) Lock
- File Lock Table Lock
- Online Save Lock
- Buffer Flush Lock
- Global ET Sync Lock
- Recovery Lock
- Hold ISN Locks



- Unique Descriptor Locks
- ETID Locks
- New Data RABN Locks
- Checkpoint Lock
- ET Data Lock
- Global Update Command Sync Lock
- Parameter Lock

**General Control Block (GCB) Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**Security Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**File Space Table (FST) Lock**

Obtains - Conditional	:	1
Granted	:	1
Rejected	:	0
Unconditional	:	1
Synchronous	:	2
Asynchronous	:	0
Releases - Issued	:	2
Synchronous	:	2
Asynchronous	:	0

**File Lock Table Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	5
Synchronous	:	5
Asynchronous	:	0
Releases - Issued	:	5
Synchronous	:	5
Asynchronous	:	0

**Online Save Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**Buffer Flush Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	152
Synchronous	:	152
Asynchronous	:	0
Releases - Issued	:	152
Synchronous	:	152
Asynchronous	:	0

**Global ET Sync Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**Recovery Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0

## Hold ISN Locks

## Cluster Nucleus Session End Statistics

Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

## Hold ISN Locks

Obtains - Conditional	:	3972
Granted	:	3972
Rejected	:	0
Unconditional	:	0
Synchronous	:	3972
Asynchronous	:	0

Releases - Issued	:	3972
Synchronous	:	3972
Asynchronous	:	0

## Unique Descriptor Locks

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0

Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

## ETID Locks

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0

Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

## New Data RABN Locks

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	1000
Synchronous	:	1000
Asynchronous	:	0

Releases - Issued	:	1000
Synchronous	:	1000
Asynchronous	:	0

**Checkpoint Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	4
Synchronous	:	4
Asynchronous	:	0
Releases - Issued	:	4
Synchronous	:	4
Asynchronous	:	0

**ET Data Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**Global Update Command Sync Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	143
Synchronous	:	143
Asynchronous	:	0
Releases - Issued	:	143
Synchronous	:	143
Asynchronous	:	0

**Parameter Lock**

Obtains - Conditional	:	0
Granted	:	0
Rejected	:	0
Unconditional	:	0
Synchronous	:	0
Asynchronous	:	0
Releases - Issued	:	0
Synchronous	:	0
Asynchronous	:	0

**Data Set Activity Statistics**

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.....
ADAI03 DDWORKR1      3 READS      7251 WRITES
ADAI03 DDDATAR1    1750 READS      2853 WRITES
ADAI03 DDASSOR1    4710 READS      6913 WRITES

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