

DIRRATIO / ELEMENTRATIO : Cluster Cache Directory to Elements Ratio

The DIRRATIO and ELEMENTRATIO parameters together define the ratio of directory entries to data elements in the Adabas Cluster Services coupling facility cache structure or the Adabas Parallel Services global cache area.

This ratio influences the allocation of the cache structure/area when the first cluster nucleus starts. It has no influence on the cache structure/area when a subsequent nucleus starts.

Parameter	Specify . . .	Minimum	Maximum	Default
<u>DIRRATIO</u>	the directory portion of the directory-to-element ratio	1	32767	4
<u>ELEMENTRATIO</u>	the element portion of the directory-to-element ratio	1	32767	1

The DIRRATIO / ELEMENTRATIO ratio is optionally used in Adabas cluster environments to tune the cache structure/area for better performance.

Directory elements are used to keep track of the cluster member that has a particular RABN in the cache so that the RABN can be invalidated should another member modify it.

If the number of directory elements is insufficient, existing directory elements are reused and the RABNs associated with those directory elements are invalidated and can then no longer be tracked. When RABNs become invalid even though they have not been modified, they must be reread and registered again the next time they are referenced and validated.

It is generally better to reassign storage for data elements to keep more ASSO and DATA blocks in the cache structure/area than to define too many directory elements in the cache. More data elements than necessary can be used to keep additional RABNs to improve the cache efficiency.

The number of directory elements need not be greater than the sum of the sizes of all buffer pools divided by the smallest block size in use for ASSO and DATA.

Change the default value only when the coupling facility or system monitor reports that cache directory entries are being reclaimed or that entry space is being wasted. Such reports are available using the system activity monitor available with your operating system.

When connecting to the cache structure/area during startup, the ADAX57 message reports the number of directory and data elements allocated and the size of a data element.

Example:

```
ADAX57  dbid CONNECTED TO CACHE STRUCTURE cache-name
ADAX57  dbid DIRECTORY ELEMENTS           19,312
ADAX57  dbid DATA ELEMENTS              4,828
ADAX57  dbid DATA ELEMENT SIZE          1,024
```