Z01CCFP

NAG Parallel Library Routine Document

Note: before using this routine, please read the Users' Note for your implementation to check for implementation-dependent details. You are advised to enclose any calls to NAG Parallel Library routines between calls to Z01AAFP and Z01ABFP.

1 Description

Z01CCFP may be used in conjunction with the QR factorization routine F08AGFP (PDORMQR) or F08AUFP (PZUNMQR) to return the minimum size of the workspace (LWORK) required. See F08AGFP (PDORMQR) or F08AUFP (PZUNMQR) for further information on the description of the arguments to this routine.

2 Specification

```
INTEGER FUNCTION Z01CCFP(SIDE, M, N, IA, JA, IC, JC, IDESCA, IDESCC)
INTEGER                  M, N, IA, JA, IC, JC, IDESCA(*), IDESCC(*)
CHARACTER*1              SIDE
```

3 Usage

3.1 Definitions

None.

3.2 Global and Local Arguments

The following global **input** arguments must have the same value on entry to the routine on each processor and the global **output** arguments will have the same value on exit from the routine on each processor:

Global input arguments: SIDE, M, N, IA, JA, IC, JC, and the array elements IDESCA(1), IDESCA(3),...,IDESCA(8), IDESCC(1) and IDESCC(3),...,IDESCC(8)

The remaining arguments are local.

4 Arguments

1: SIDE — CHARACTER*1 *Global Input*

On entry: indicates whether the matrix Q_s (or Q_s^T) is to be applied from the left or the right by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

2: M — INTEGER *Global Input*

On entry: the number of rows in the matrix Q_s to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

3: N — INTEGER *Global Input*

On entry: the number of columns in the matrix Q_s to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

4: IA — INTEGER *Global Input*

On entry: the row index of the matrix Q_s that identifies the first row of the submatrix to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

5: JA — INTEGER *Global Input*

On entry: the column index of the matrix Q_s that identifies the first row of the submatrix to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

6: IC — INTEGER *Global Input*

On entry: the row index of the matrix C_s that identifies the first row of the submatrix to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

7: JC — INTEGER *Global Input*

On entry: the column index of the matrix C_s that identifies the first row of the submatrix to be used by F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

8: IDESCA(∗) — INTEGER array *Local Input*

Note: the dimension of the array IDESCA must be at least 9.

On entry: the descriptor array for matrix A defined for F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

9: IDESCC(∗) — INTEGER array *Local Input*

Note: the dimension of the array IDESCC must be at least 9.

On entry: the descriptor array for the matrix C defined for F08AGFP (PDORMQR) or F08AUFP (PZUNMQR).

5 Errors and Warnings

Not applicable.

6 Further Comments

Not applicable.

7 References

None.

8 Example

See Section 8 of the document for F08AEFP (PDGEQRF) and Section 8 of the document for F08ASFP (PZGEQRF).