

# f90\_preconn\_io: Automatic File Preconnection Module

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## 1 Name

f90\_preconn\_io — Module controlling automatic file preconnection

## 2 Usage

```
USE F90_PRECONN_IO
```

## 3 Synopsis

### Generic Procedures

GET\_PCIO\_OPTIONS, IOINIT.

## 4 Procedure Descriptions

Note that in the descriptions below, LOGICAL(\*) means any kind of LOGICAL. Also, note that although the VERBOSE argument is an optional argument, the actual argument is not permitted to be a non-present optional dummy argument.

```
SUBROUTINE GET_PCIO_OPTIONS(BLANK,POSITION,PREFIX,VERBOSE)
CHARACTER(*),OPTIONAL,INTENT(OUT) :: BLANK,POSITION,PREFIX
LOGICAL(*),OPTIONAL,INTENT(OUT) :: VERBOSE
```

Returns the current settings for file preconnection; the meanings for these settings are described under the IOINIT routine. Both the BLANK and POSITION values are returned in upper case, even if lower case was used in a call to IOINIT to set them.

```
SUBROUTINE IOINIT(BLANK,POSITION,PREFIX,VERBOSE)
CHARACTER(*),OPTIONAL,INTENT(IN) :: BLANK,POSITION,PREFIX
LOGICAL(*),OPTIONAL,INTENT(IN) :: VERBOSE
```

This procedure controls automatic file preconnection. Files can be automatically preconnected when a logical unit is initially referenced without an OPEN statement; preconnection does not occur again after file CLOSE.

The name of the file to be preconnected is determined first by searching for an environment variable of the form FORT $nn$  where  $nn$  is the two-digit logical unit number; e.g. FORT03. If this environment variable is found its value is used as the filename; otherwise the name “fort. $n$ ” is used; e.g. ‘fort.3’. The file is opened either with FORM=’FORMATTED’ or FORM=’UNFORMATTED’ depending on whether the initial reference is with a formatted or unformatted i/o statement.

The BLANK and POSITION arguments control the BLANK= and POSITION= keywords in the implied OPEN statement when the file is preconnected; initially these are set to BLANK=’NULL’ and POSITION=’REWIND’. Note that these have no meaning (and no effect) for unformatted files.

The `PREFIX` argument changes the *prefix* used to find the environment variable containing the preconnected file name. Initially this is 'FORT'. Only the first 30 characters of `PREFIX` are used.

The `VERBOSE` argument controls activity reporting; if it is `.TRUE.`, subsequent preconnection activity will produce informative messages on the standard error unit.

## 5 Example

```
USE F90_PRECONN_IO
CALL IOINIT(BLANK='ZERO',PREFIX='MYFILE')
READ (99,10) I,J,K,L,M
10 FORMAT(I3,I1,I3,I1,I3)
```

When the `READ` statement is executed, the environment variable `MYFILE99` is interrogated to discover which file is to be automatically preconnected to unit 99. The unit will be connected with `BLANK='ZERO'`. If no environment variable is found the file 'fort.99' will be opened.

## 6 See Also

`nag_modules(3)`, `nagfor(1)`.

## 7 Bugs

Please report any bugs found to 'support@nag.co.uk' or 'support@nag.com', along with any suggestions for improvements.