About This Manual

Objective

This manual introduces the array-processing features of CM Fortran in a task-oriented way. It is a companion volume to the *CM Fortran Language Reference Manual.*

Intended Audience

This manual is intended for new users of CM Fortran. It focuses on the semantics of the language, with occasional notes on performance implications and on using the CM Fortran libraries.

More advanced users should consult the *CM-5 CM Fortran Performance Guide* and the *CM Fortran Libraries Reference Manual* for further information.

See the *CM-5 User's Guide* for an overall introduction to using CM software.

Revision Information

This manual supersedes the *CM Fortran Programming Guide*, Version 2.1, January 1994.

Organization of This Manual

Part I Getting Started

A gentle introduction to CM Fortran array operations and to the programming models — global data parallel and local message passing — that are available on CM systems.

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Part II Programming in CM Fortran

The major array-processing features that CM Fortran adds to Fortran 77, plus some very simple programs that illustrate their use.

Part III Advanced Topics

Two techniques for exploiting locality in CM systems: using directives to control data distribution in parallel memory, and using global/local programming to drop control to the individual nodes as needed.

Related Documents

- *Getting Started in CM Fortran*. Introduces the CM Fortran language. It is a condensed version of this programming guide.
- *CM Fortran Language Reference Manual.* Defines the CM Fortran language, specifying the complete syntax and semantics of every feature and compiler directive.
- *CM Fortran User's Guide*. Describes the CM Fortran compiler command and switches, various program development tools, and some details of the implementation.
- *CM Fortran Libraries Reference Manual*. Describes the CM Fortran utility library, the global/local library, and library cmf77, a set of interfaces to SunOS system calls.

  The CM libraries — scientific software, message passing, visualization, and low-level parallel I/O — are described in separate volumes.
- *CM-5 CM Fortran Performance Guide.* Provides information for getting best performance from CM Fortran programs on the CM-5 (with emphasis on the global data parallel models).
- *CM Fortran Array Operations Quick Reference Guide.* Lists the syntax for all array-processing features.
- *CM Fortran Release Notes.* Summarizes the new features in the current release, describes any pitfalls in porting programs from previous releases, and lists current restrictions on using the software.

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