

SMARTE 2.0 for Cray Research computer systems

SMARTE 2.0 provides powerful service environment

To improve the effectiveness of service delivery to our customers, Cray Research has developed new technologies to provide our service personnel with an advanced service environment. The System Maintenance and Remote Testing Environment (SMARTe) is a state-of-the-art maintenance system for Cray Research computer systems. With its graphical interface, automated system monitors, and powerful expert systems, release 2.0 of SMARTe allows Cray Research Customer Service personnel to support your supercomputer more effectively.

With your consent, SMARTe 2.0 is installed on the maintenance workstation (MWS) at your site. SMARTe automatically monitors UNICOS errors, Warning and Control System (WACS) faults and warnings, the hardware error logger, and diagnostic thresholds and notifies you and Customer Service personnel of potential faults in the Cray Research computer system.

Increasing service effectiveness

SMARTe 2.0 provides the following advantages:

- Increased system availability.* In many cases, SMARTe capabilities will allow Cray Research

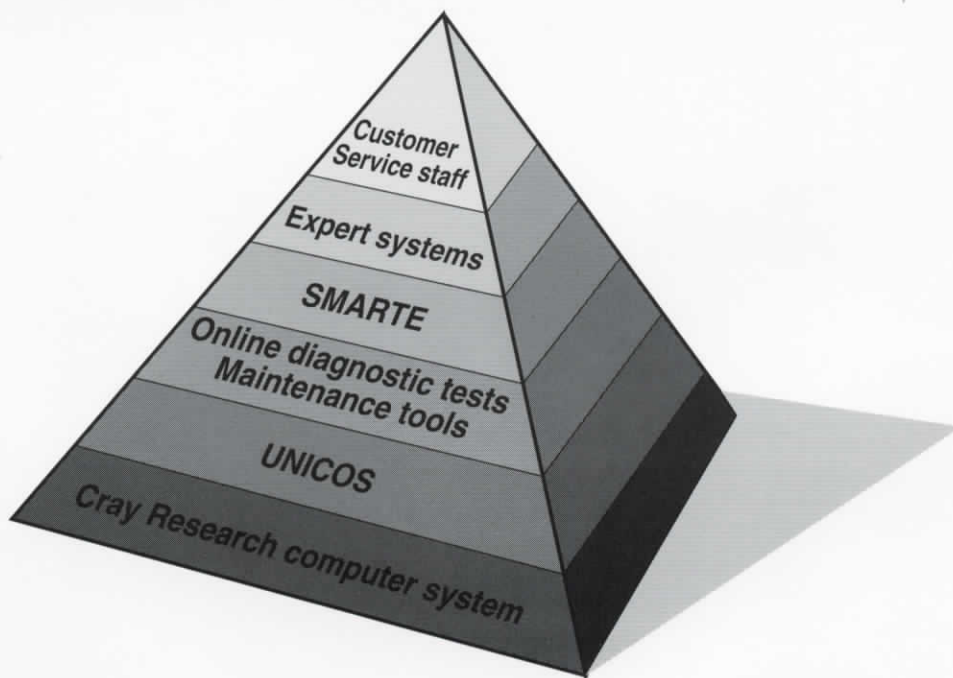
to apply extensive resources to a problem and return the system to you in a more timely manner.

- Increased service expertise.* By providing expert system assistance to your Customer Service representative, SMARTe helps assure quick diagnosis of system problems.
- Faster response to potential problems.* With automatic notification of system errors, SMARTe ensures that Customer Service representatives can respond quickly. For example, if your site is unattended on weekends and your system goes down on a Saturday, Cray Research is alerted and can make arrangements with you to restore normal operations before Monday.
- Early detection and notification of potential disk drive problems.* SMARTe can detect faulty disk storage devices and notify you and Cray Research, thereby reducing system failures.

Advanced features

SMARTe 2.0 provides the following features:

- Common user interface.* SMARTe provides a common X Window System interface from the MWS that allows access to online diagnostic tests, concurrent maintenance tools, expert systems, and utilities.
- Automatic error monitoring.* SMARTe automatically monitors errors and maintains error



SMARTe system overview

thresholds for hardware components and system software.

- Automatic notification of system errors.* SMARTe receives messages from various system monitors, both software and hardware, processes them against threshold values, and informs you and Cray Research when these thresholds are exceeded. With your consent, SMARTe automatically notifies Customer Service personnel of system errors by doing one or more of the following:
 - Displaying messages on the MWS and OWS consoles
 - Sending messages to a specified list of Customer Service personnel and customers using UNIX mail
 - Sending messages to a Cray Research service center
- Expert system error analysis.* SMARTe provides CPU, disk, and system error analysis using expert systems. When potential faults are detected, expert systems isolate and attempt to correct the faults. For CPUs this would include removing the CPU from service and for disks this would include rewriting data or IDs. Like all SMARTe features, you control whether this capability is used.
- Information reporting.* SMARTe reports error detection, isolation, and analysis information produced by online diagnostic tests, expert systems, the OWS, and UNICOS.
- Automatic scheduling.* SMARTe enables online diagnostic confidence tests to be automatically scheduled from the MWS.

- Hardware configuration display.* SMARTe can display a graphical representation of the Cray Research hardware configuration.
- Site configuration.* SMARTe provides site-configurable parameters for the SMARTe system, error thresholds, and expert systems.
- Remote support capability.* When used with the Cray Research Remote Support 3.0 (or later) software release, SMARTe enables Cray Research to troubleshoot, support, and maintain a Cray Research system from a remote location.
- Security.* Users must be validated as defined in the SMARTe user database. All SMARTe processes are monitored for illegal connections. If an illegal connection is detected, SMARTe disallows the connection, logs it, and notifies system administrators.

Systems supported

Currently SMARTe 2.0 supports the following systems running release 6.0 or later versions of the UNICOS operating system:

- CRAY X-MP EA
- CRAY Y-MP
- CRAY Y-MP EL
- CRAY Y-MP 2E and CRAY Y-MP 4E
- CRAY Y-MP 8E and CRAY Y-MP 8I
- CRAY Y-MP C90

For more information on SMARTe 2.0, please contact your Cray Research service representative.