

PROFESSIONAL EDITION



On-Line! Detective

for SUN Workstations and Servers

A comprehensive knowledge -
base delivering superior reference
and diagnostic information for
Sun™ system support



Fast Access to Information

System Administration / Solaris™

Field Engineering / System Troubleshooting

Unique Diagnostic Routines

Comprehensive Part Information

Configuration Rules, Guidelines, & Tech-Tips



The CHE On-Line! Detective

is

Your SUN Microsystems Server Expert



What is the Detective?

The **Detective** is a comprehensive knowledge-base containing superior reference and diagnostic information for the SUN Microsystems Server environment. The **Detective** uses a unique combination of organized menus, photographs, flowcharts and hypertext to interlink relevant information and procedures. The **Detective** is a virtual SUN Systems expert. The **Detective** covers the hardware, operating systems, SCSI technology, connectivity, third-party products, advanced troubleshooting, system tuning, FRU removal and replacement, system administration and much more!



Who uses the Detective?

System administrators, help-desk professionals, system maintainers, Sun training organizations and brokers/integrators around the world turn to the **Detective** for information regarding their Sun environment. The **Detective** contains the information and the support methodologies necessary to make all users more effective. The **Detective** also serves as a very effective training tool for those supporting, maintaining, or selling in a Sun environment.

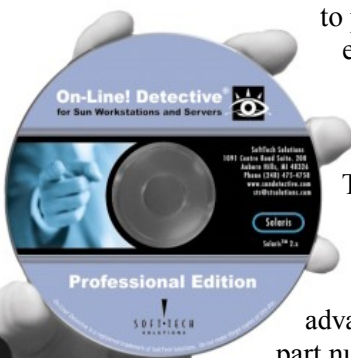


Why is the Detective so valuable?

The **Detective** combines years of internal research and input from thousands of technical users. This process translates into an incredible benefit for all end-users, extending your skills to an unparalleled level of knowledge and expertise.

The **Detective** provides answers to those that need it fast, saving valuable resources in the process. With the **Detective** knowledge-base, those within your organization will have the tools to perform their tasks with efficiency and exact precision. The **Detective** eliminates guesswork by providing a step-by-step guide for situations that require: troubleshooting, component removal and replacement, system configuration, system administration and much more.

The **Detective** standardizes the approach to troubleshooting and resolving most SUN Server system and Solaris related issues. It provides unique diagnostics routines to pinpoint a problem's root-cause and offers sequential steps for resolution. The **Detective** covers both basic and advanced tasks including first level diagnostics, system and OS configurations, part number lookup and many other tasks for effective system administration, maintenance and reselling of server systems.

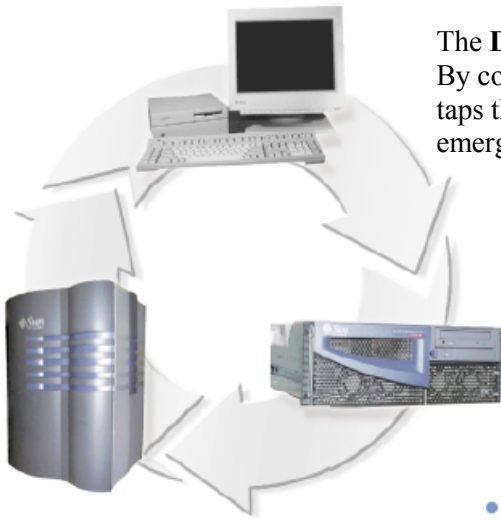


Look inside this brochure for a complete breakdown of these incredible features!

checonsulting.com

CHE On-Line! Detective ~ Professional Features

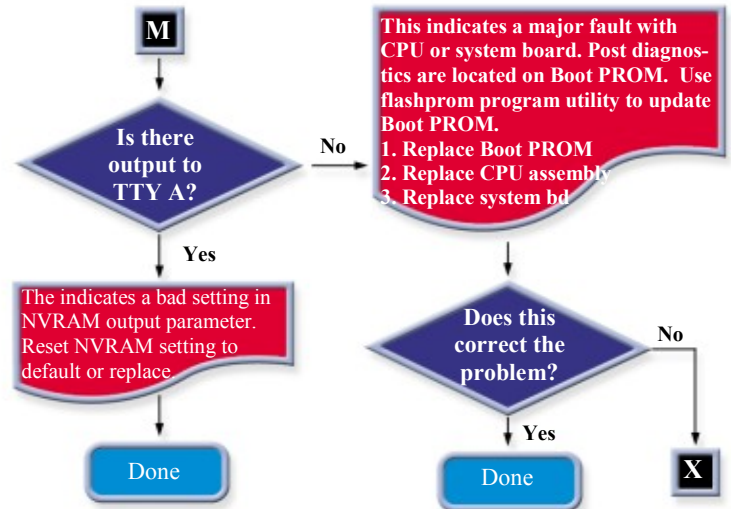
Total System Coverage



The **Detective** provides access to the complete spectrum of SUN Server systems. By covering all systems and retaining retired hardware information, the **Detective** taps the knowledge of seasoned experts and serves as your best source for emerging systems.

Features:

- Workstations - IPX to the Sun Blade 2500
- Servers - SS1000 to the Sun Fire 12K/15K
- Rackmount systems
- Netra workstations and servers
- Storage devices and disk arrays
- Over 6,000 Sun parts
- Solaris administration
- All peripheral boards (SBUS, PCI, UPA, etc.)
- Third-party devices and cables
- Two formal releases annually
- Interim updates via secured FTP site
- Single source for all Sun information



Hyperlinks to procedures

Parameter	Description	Default
autoboot?	If true, boot automatically after (POST).	True
bootcommand	The first command executed after POST if "autoboot?" is true.	boot
boot-device	Using the default setting the system will look for the boot-device in the following order: 1, disk (disk connected to the first local on-board controller) 2, disk0 (disk connected to a disk board (interrupter 4,5,6,7)) 3, disk0a (a disk connected to an EP controller) 4, disk0s (a disk connected to an optical controller e.g., disk array) 5, Net (a boot server on the network)	disk disk0 disk0a disk0s net
bootmem	Boot source (default device is 0).	virtio
boot-rom-dtag	Diagnostic boot source.	net
configuration-policy	This parameter determines how the system will handle a faulty component (Enterprise only). component - ASIR removes the faulty component and continues to run. board - ASIR removes the faulty component and the system board that houses the component. system - a faulty component will remove the system from operation and allow the redundant system to operate. all - do not remove the faulty component from the system.	component
diag-level	min will run a minimum set of power on all tests. max will run an extended set of POST tests.	min.

Total System Coverage

The **Detective** provides the clarity and methodical procedures needed to interpret "cryptic" error messages. Our goal is to help you keep your system up and running by quickly and accurately determining problem origin. In addition, the **Detective** features unique tech-tips and dynamic troubleshooting flowcharts you won't find anywhere else!!

Features:

- System log interpretation
- POST listing and analysis
- LED interpretation (Keyboard LEDs & other diagnostic indicators)
- OpenBoot PROM diagnostic commands
- System troubleshooting flowcharts
- Component troubleshooting flowcharts
- Unique troubleshooting techniques
- Keyboard diagnostic commands
- NVRAM configuration parameters
- Technical tips from actual problems
- Forth ToolKit diagnostic tools

CHE On-Line! Detective

System Administration / Solaris

By covering both software and hardware issues, the **Detective** provides those responsible for server system support, the tools to effectively administrate, troubleshoot, and maintain all aspects of the SUN environment. These include hard-to-find fixes and techniques known and used by only the most experienced administrators.

Features: Solaris

- Solaris Certification ●
- Solaris overview ●
- Installing and upgrading the operating system ●
- System administrators' daily duties ●
- System panic error information ●
- Solaris patch information ●
- Cryptic system log errors interpreted ●
- Handling system crashes, hangs, lockouts, threads, race conditions and dumps ●

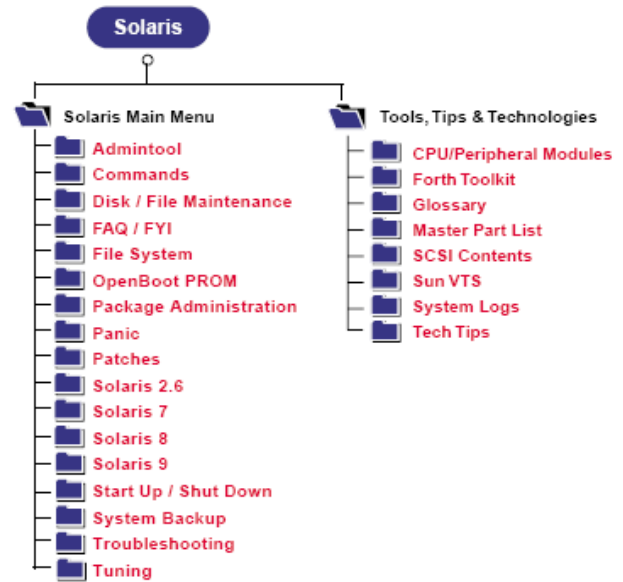
Administration

- Backup ●
- Security ●
- Administration tools ●
- Startup/Shutdown ●
- Sun VTS user instruction ●
- SunDiags™ user instruction ●
- UNIX file structure ●

System Tuning

- Configuration rules and guidelines ●
- Configuring the NVRAM ●
- Determine SCSI transfer rates ●
- Software tuning techniques ●

... and Much More!



Field Engineering / System Troubleshooting

With the **Detective**, you have the confidence to open any system with expert-like familiarity. The goal of effective Field Engineering is to identify and implement the right procedures the first time. By systemizing the entire repair process, the **Detective** can help you avoid indecision, professionally compromising mistakes, and time wasted from "trial and error" methods of repair. The **Detective** troubleshooting techniques and service tips were specifically developed by service personnel to ensure fast and accurate fault isolation. These are features any level support Engineer will appreciate.

Features:

- Troubleshoot utilizing a laptop
- Active troubleshooting flowcharts with links to procedures
- Troubleshooting guide and flowcharts by component and system
- FRU removal and replacement procedures
- Hot-swap procedures, techniques, and guidelines
- Thousands of tech tips from the experts
- Systemization of the entire repair process
- Comprehensive part information
- Traverse the device tree to locate faulty components
- Jumper setting locations and definitions
- SCSI device configuration rules and guidelines
- SCSI technology overview
- Detailed photographic component identification
- Commands (test-all, show-tty-mesgs, show-devs, probe-scsi-all, etc.)
- Little-known, yet powerful UNIX diagnostic commands

Professional

Edition

Comprehensive Part Information

Simply stated, the **Detective** is the most comprehensive, single-source for SUN Servers and related third-party information... period. Via the **Detective's** "fast access to information" navigation, users have links to detailed part descriptions, configuration guidelines, useful substitute options, and replacement procedures. See what leading technology organizations have already discovered: that these powerful features have helped increase repair options, optimize inventory and improve profitability.

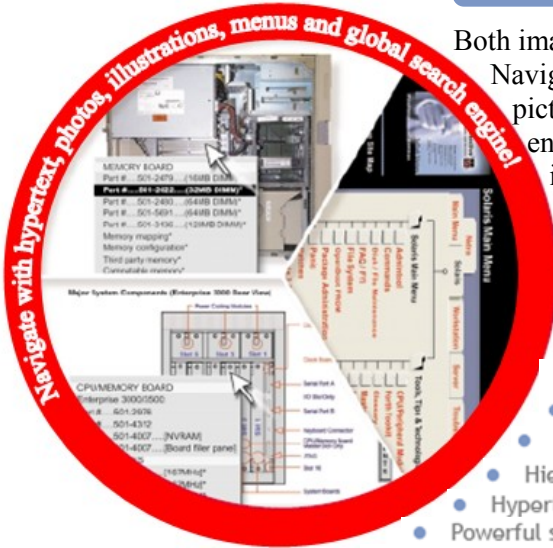


Features:

- All Sun part numbers
- Third-Party part numbers
- "X-Options" cross-referenced with 7-digit numbers
- FRU configuration breakdown
- Substitute & compatibility references
- Parts categorized by type & system
- Master part list

Fast Access to Information

Both images and documentation use hypertext-links. This allows for easy Navigation and quick jumps to related information. Whether you like traversing pictographically, browsing by system menus, tables and lists, or using a search engine, the **Detective** is organized and engineered to retrieve critical information fast.



Features

- Relevant information logically organized
- Information organized by system and components
- Multi-view photographs of systems detailing major components
- Active-image pop-ups provide pertinent information and related links
- Exploded view illustrations with navigational links
- Hypertext throughout documentation
- Hierarchical menu structure
- Hypertext table of contents and alphabetical index
- Powerful search engine
- Site map
- Electronic note and bookmark capabilities
- Extensive technical glossary

Configuration Rules, Guidelines, & Tech Tips

Features:

- System configuration rules and guidelines
- Component compatibility guidelines
- Minimum and maximum configurations
- Third-party component options
- System and component-specific tips and cautions
- Architecture references
- Hardware positioning guidelines for optimal performance
- SCSI device targeting guidelines
- SCSI rules and guidelines

UltraSPARC (CPU) Configurations and Rules (Exx00)

Speed	Part Numbers	Systems	Cache Size	OBP Revision	Solaris™	Patches	Clock Board	System Board
167 MHz	501-2941	Exx00	512 KB	3.2 ver 6	2.5.1	-	501-2975 501-4296 501-4946	All
167 MHz	501-2959	Exx00	1 MB	3.2 ver 6	2.5.1	-	501-2975 501-4296 501-4946	All
250 MHz	501-4174	Exx00 E10000	1 MB	3.2 ver 6	2.5.1	103640-06	501-4286	All
250 MHz	501-4249	Exx00 E10000	4 MB	3.2 ver 7	2.5.1	103640-06	501-4286	501-2976 501-4312 501-4862
250 MHz	501-4836	Exx00 E10000	4 MB	3.2 ver 7	2.5.1	-	501-4296 501-4946	501-2976 501-4312 501-4882



“Super Product! The On-Line! Detective saved me troubleshooting time over and over”... “It is easy to use and allows us to find critical information quickly.”

Deployment / Updates

The **Detective** stays current with (1) formal (CD) release annually and interim updates available on CHE’s FTP site. The **Detective** is deployable on all Solaris and Windows operating systems.

Technical Support



CHE Consulting, Inc.
1576 Fencorp Drive
Fenton, MO 63026



Web: www.checonsulting.com
E-Mail: info@checonsulting.com



Phone: (636) 305-9669
Toll Free: (800) 427-6007



Hours: 24/7 365 days a year

About CHE Consulting, Inc.

Since 1997, CHE has provided enterprise systems maintenance support services. Our company understands your objectives as a Client to achieve cost savings, without degradation of service, and administrative convenience by contracting with a full service, professional, systems support maintenance services provider.

Providing services in forty-two (42) states, nationally, CHE is able to provide a consolidated approach to systems maintenance as an alternative to the OEM’s extended warranty programs. CHE is able to directly support the following equipment platforms; IBM, HP, EMC, SUN, STK, Compaq, McData, Brocade, Dell, and many others. With our infrastructure, CHE is able to provide the most responsive and comprehensive level of maintenance service in the industry.