UNISOL® SysAdmin

1. UNISOL® SysAdmin™ Overview

SysAdmin helps systems administrators manage their UNIX systems and networks more effectively.

SysAdmin is a comprehensive system administration package which provides a secure menu interface to privileged commands. Functions include account maintenance, local and remote backups, tape library management, network administration, performance monitoring, and, security auditing.

SysAdmin can be used on either ASCII terminals or workstations, and is compatible with curses, X11R4, Motif, or OpenLook.

SysAdmin provides a flexible, easy to use interface and allows the system administrator to:

- Delegate routine system operation and maintenance tasks, without compromising system integrity.
- Reduce operator intervention and human error.
- Minimize support & operational costs.
- Standardize system maintenance procedures across UNIX® machines and operating system versions.
- Perform frequent system security audits.

SysAdmin includes documentation, 30-day start-up support, and a 90-day limited warranty. On-going support and maintenance is available on an annual contract basis.

2. SysAdmin Product Features

SysAdmin provides a secure menu interface to simplified system management for system administrators and other operations personnel. SysAdmin can be configured as a 'server' machine to manage a network workgroup of machines or workstations, or use a 'client' machine in which the users have some control over their own network and authentication databases.

SysAdmin is licensed as a base package with a number of optional modules available to tailor the functionality (and price) of the product to each site's individual requirements. The base package features are summarized as follows:

2.1 Backup, Archive, Restore and Tape Management

SysAdmin performs multi-volume, multi-level backup and restore of files and filesystems, including unattended backup and support of stacker units. Built-in dump log maintenance provides on-line catalogs of the dumped files and allows the easy restoration of accidentally removed files. Both local and remote filesystems and tapes are supported, as well as generic/specialized backup methods for databases and raw partitions. The tape manipulation commands include reading/writing/copying of tar/cpio/foreign tapes.

SysAdmin can also ease disk space problems via the automatic or user controlled migration/archival of files from disk to tape.

An optional, integrated, Tape Library Management module keeps track of your backup and archive tapes as well as other user tapes and provides easy search capabilities from the application management interface or the shell. Licensees of the Tape Library Management option also receive the UNISOL BART™ product for high-performance unattended network backups.

2.2 User Management

SysAdmin supports the creation, deletion and maintenance of user accounts, groups, and passwords on local and remote machines. A domain-based distributed account management scheme is also available that supports multilevel administrative domains with local control for each domain, and provides "immediate" updates over the network using a client-server architecture. A queueing mechanism gracefully handles downed machines and networks.

2.3 Security

Automatic monitoring and correction of common security holes enhances system security and allows the maintenance of a stable and secure environment. Command execution can be restricted by user id, group id, or date and time.

2.4 File System Maintenance

Creation and checking of filesystems, filesystem mounting, physical dump and restores, device creation/definition and floppy formatting and duplication simplify the maintenance of file systems and system devices.

2.5 Administrative Functions

SysAdmin simplifies system management by providing a simple interface to: Process management, file and directory management, cron management, system reboot and shutdown, message broadcasting, and, electronic mail.

2.6 Resource Management

SysAdmin allows the generation of standard UNIX accounting reports (disk space, connect and cpu resources), the creation and management of printers and printer queues, terminals and terminal characteristics and the configuration and debugging of UUCP (standard and HDB).

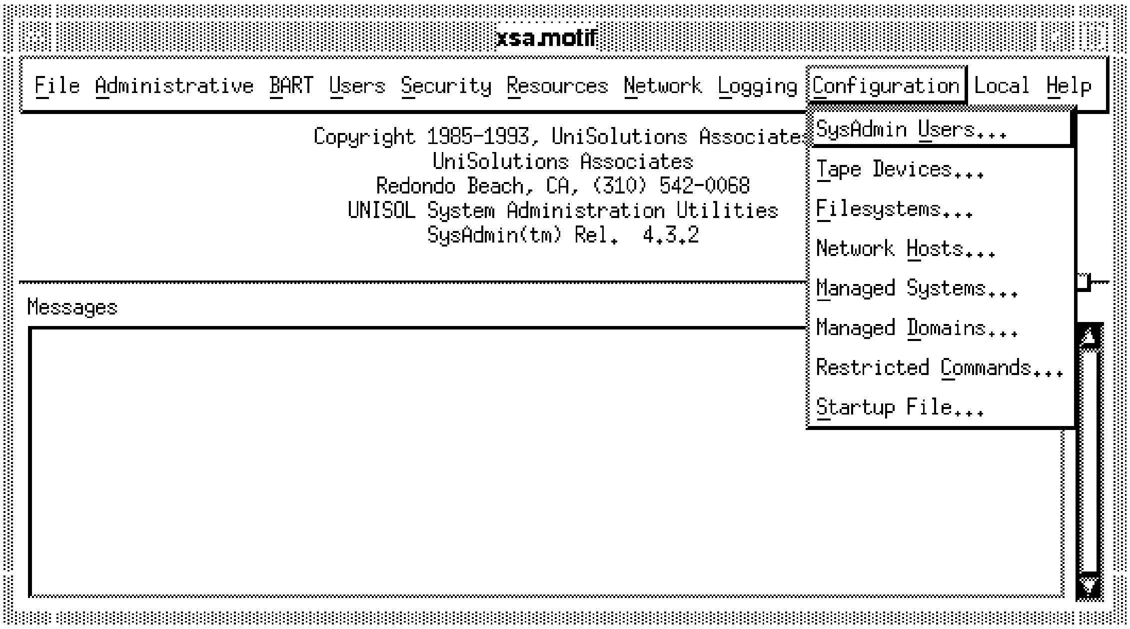
2.7 User-Extensible

SysAdmin is delivered with a development library and a User Interface Toolkit for workstations (X, Motif, Open Look) and CRTs (curses). Menus and functions can be easily added, allowing the easy modification and enhancement of the product to local requirements while retaining the same look and feel as the rest of the product. The software package also includes the UniMenu™ menu system, a flexible front-end to UNIX commands and applications, which is user configurable from ASCII files.

2.8 Installation and Configuration

SysAdmin can be installed and configured in just a few minutes, and, with the new product configuration menu the SysAdmin control and configuration files can be easily maintained as additional hardware and networked systems are installed. A portion of a Motif screen of the product configuration menu is seen below:

UNISOL® SysAdmin



3. SysAdmin Options

3.1 Network

Allows the configuration and monitoring of all hosts within the local area network from a central location, including the facility to manage the time on all client hosts.

3.2 NFS

Allows the setup, configuration and administration of NFS mounted filesystems and exported filesystems, both on the local machine and any client machine in the local area network.

3.3 NIS

Formerly called 'Yellow Pages', this option allows the configuration and maintenance of the 'yp' databases for any given domain within a local area network. NIS Databases can be transfered, pushed, queried or rebuilt to any systems on the network.

3.4 Disk Quota

Allows the administration of UID-based disk quotas for any given filesystem on the local node. This option depends on kernel support for filesystem quotas on any given machine (generally available on BSD systems), and does not actually implement the required low-level kernel support routines.

3.5 Remote System Management

Allows the installation and updating of any software package within the local area network. Administrators can also define their own managed objects for export to clients of the machine that SysAdmin is running on. Remote account (user and group) management is also included with this option.

3.6 Tape Library Management

This option integrates SysAdmin primitives into a managed tape library database which allows detailed information to be stored about each tape used by SysAdmin. A user friendly front-end for non-SysAdmin tapes is also provided, as well as command line access to the database to enable users to write their own applications using the tape library. Automatic expiration of tapes, and off-site storage movements are also available through this option. Licensees of the Tape Library Management option also receive the UNISOL BART™ product for high-performance unattended network backups.

3.7 System Performance Monitoring

Allows the monitoring of system activity and summarizes system performance data at user selected intervals. Ad hoc monitoring and reporting is also supported allowing for live monitoring and the generation of short-term reports. Produces graphs of system activity suitable for management presentations or as an aid to capacity planning.

The resources monitored fall in the following categories:

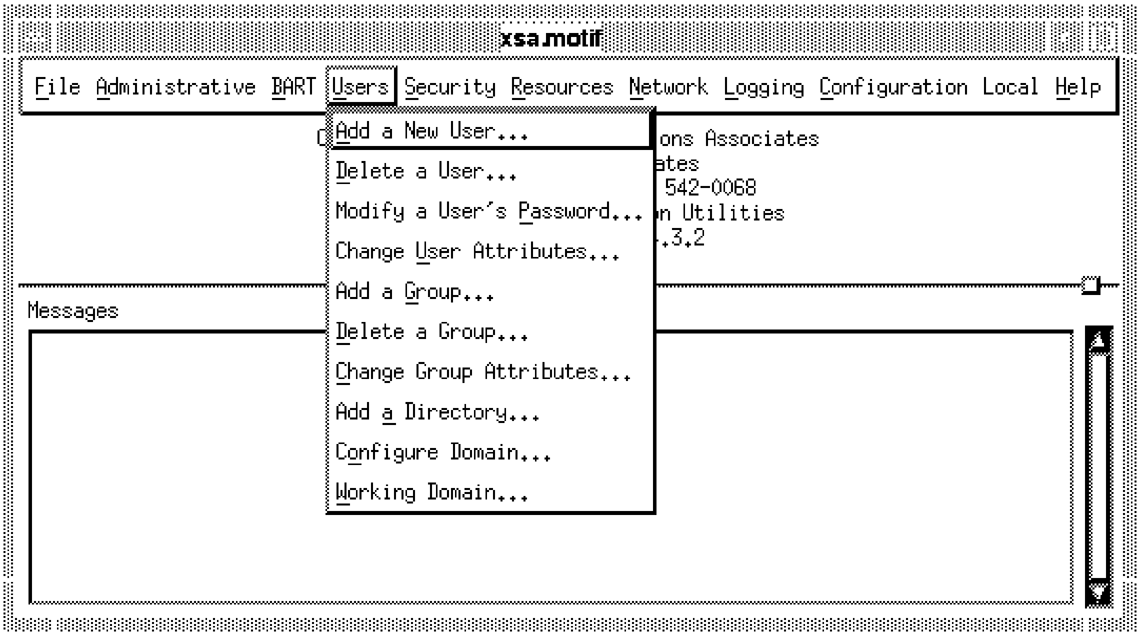
Processes (running, blocked, swapped),
Memory Usage (used, free),
Paging Activity (pages in, out),
Disk I/O (number of operations),
Faults (interrupts, syscalls, contexts),
CPU usage (user, system, idle time),
System Tables (texts, inodes, files...),
User Logins and **Load Average**.

4. SysAdmin User Interface

SysAdmin provides a secure user interface, validating each user at application startup time and determining their privilege level for the rest of the session. System managers may delegate system tasks to other administrators or operators without losing control of the system.

SysAdmin provides user-level commands for tasks that can be accomplished from a shell script or from the shell, however, the full range of SysAdmin's functionality can be accessed from SysAdmin's graphical user interface. The user interface supports character terminals with a curses front-end, as well as bit-mapped displays with a Motif or an Open Look front-end. The Motif and Open Look interfaces also allow cursor manipulation of the menus and forms and use mnemonics and user-defined accelerators. In addition, context-sensitive help makes learning how to use the product a breeze.

The following portion of a Motif screen shows the main product window, the menu bar and an expanded User Management menu showing the functions used to add and remove user accounts and groups and modify user and group database entries:



5. Summary

SysAdmin is an integrated and comprehensive system administration product that can be used in both single-machine environments as well as in large heterogenous networked environments. It provides the same management interface regardless of the underlying operating system and is available in most UNIX system platforms.