UNIX SVR4

.....from the experts in UNIX

- Inherent high performance design
- Advanced UNIX system features
- Supported by ICL's extensive services and training
- Conforms to all major international standards
- Demonstrates ICL's expertise in UNIX
- Easy to install, upgrade, configure and administer
- Full set of comprehensive documentation
- Flexible and comprehensive networking capabilities

ICL

UNIX SVR4

UNIX[1] System V Release 4 (UNIX SVR4) - recognised worldwide as a mature, high quality operating system - is the de facto standard in Open Systems computing. This multi-tasking, multi-user environment is well suited to a myriad of tasks, from a personal workstation to back-end servers running transaction based applications.

UNIX SVR4 from ICL is based on UNIX Systems Laboratories' (USL) implementation of the UNIX SVR4 operating system. UNIX SVR4 has several major benefits over other variants of UNIX and proprietary operating systems.

UNIX Evolution

UNIX SVR4 is a unification of all major UNIX system derivatives (including SunOS, Berkeley BSD, Microsoft[3] Xenix, System V Release 3) which together represent over 80% of the worldwide installed UNIX base, resulting in a greater application choice for the end user (currently around 18,000 applications) and a richer environment for the software developer.

The combined development effort of USL and many vendors means that UNIX SVR4 is a facility rich and high quality product.

UNIX Backing

UNIX SVR4 is the only truly open operating system - backed by Unix International (UI) and over 260 UNIX system suppliers, software and application developers, and end users.

The future of UNIX SVR4 is defined by the Unix International Roadmap, which outlines the delivery schedule of new products and standards. This published roadmap gives UI members a two year rolling perspective allowing time for planning capital programmes and skills resourcing, and helping users to overcome technological dead ends. Hence, as UI moves forward with UNIX SVR4.1 ES (Enhanced Security), and UNIX SVR4.2 ES/MP (Enhanced Security/Multi-Processing), so will ICL.

International Standards

UNIX SVR4 conforms to all the major international standards including:

- X/Open[2] Portability Guide XPG3 Interface Standards (ICL's UNIX systems are XPG3 Plus conformant)
- SVID Issue 3
- POSIX IEEE 1003.1 Portable Operating System Standard
- ANSI X3J11 C Language Standard
- FIPS 151-1 (U.S. Federal Government Standard).

ICL has been a leading initiator and contributor in the definition and setting of standards for many years. Continued adherence to standards ensures that UNIX System V systems will be able to run applications written to these standards, and that interoperability between systems is assured, thus protecting your investment.

UNIX
INTERNATIONAL

ICL's Added **Value**

ICL is committed to bringing the best in UNIX technology to its customers. Hence, ICL becomes involved early in the life cycle of emerging standards, working to develop products that will intercept - and later, merge with - the new standards to ensure the best of both new, and existing standard technology for its customers.

ICL's strategy dictates that value is added to the UNIX SVR4 operating system in the key areas of ease of use, resilience, security and performance, using our extensive UNIX expertise and leading edge technology.

Resilience

In any business, the ability to continually access vital information is key. Maintaining system availability is the answer to this requirement.

Achieving maximum system availability is a combination of both reducing the probability, and reducing the severity, of planned downtime or unplanned system failure.

ICL recognises this by providing several additional features for high system availability.

Commercial File System

VxFS is a commercial file system designed to offer greater system resilience through a variety of features.

In the event of a system failure, VxFS will restore each UNIX file system in a few minutes, compared with approximately half an hour for conventional file systems, whilst maintaining data integrity by guaranteeing that all the system files are intact.

On-line file reorganisation results in improved performance by reducing fragmentation of the disks.

These features reduce system reboot time and largely eliminate the need to take the system down to perform routine file maintenance.

VxFS is ideally suited for servers running database and transaction management software, office applications including ICL's OFFICEPOWER® office software, real time, and other production applications.

Mirrored Disks

The disk mirroring facility of VDK (Virtual DisK) provides high system reliability by maintaining two mirrored images of a disk. If a disk should fail, users can continue working uninterrupted on a mirrored copy.

Symmetric Multiprocessing

Symmetric multiprocessing (SMP) allows any task to be processed by any processor, giving balanced system performance for mixed workloads and large numbers of users. In the unlikely event of processor failure, the system can be brought back on line with the faulty processor 'configured out'. This 'configuring out' of boards also applies to memory and I/O controllers.

The SMP implementation is fully transparent to applications, hence the benefit of portability is not lost.

Uninterruptible Power Supply

System failure due to a mains power cut can be countered with an Uninterruptible Power Supply (UPS), offered on all ICL's UNIX systems. This facility provides battery maintained operation during a mains failure, and will automatically start a controlled shutdown when a battery low condition is detected. Once power is regained, the system can be restored quickly and cleanly.

Ease of Use

Installation and Upgradeability

ICL's UNIX SVR4 has been thoughtfully packaged in simple modules, enabling the installation of whichever facilities you require, chosen through the use of a menu driven interface. Once installation has begun, your administrator is free to complete other tasks.

Upgrades maintain the same benefits of system component modularity, chosen with the same familiar menu interface. Only those files that need to be upgraded are actually overwritten, thus saving time in getting the system up to date.

System and Network Management

ICL has enhanced the system administration facilities, in addition to those already available, in the following areas:

- on-line help facilities provided throughout enable access to reference material at a single keystroke
- enhanced configuration facilities make configuring easier, leading to fewer mistakes, and enabling system administration to be under-taken by personnel with less training
- system utilities enable additional support for industry available terminals
- Backup, restore and archive facilities are available through an easy to use menu
- system accounting tools allow system managers to control the usage of resources
- profiling routines measure various aspects of system utilisation and aid in system performance tuning.

Network configuration

Easy configuration of complex networks involving ICL's OSI communications products, as well as conventional networking facilities, is possible via a menu-driven network configuration tool with additional extensive on-line help facilities.

Integration with MS-DOS

An extensive range of complementary PC/UNIX integration and emulation products extend the reach of the UNIX environment enabling access to remote information and resources. These products, marketed under ICL's DESKPOWER umbrella, include PC-Interface (PC-I), LAN Manager for UNIX (LM/X), Netware for ICL, PC-NFS, VT220+, XVision, 7561 Window and 3270 Window.

Incorporation of valuable information normally residing on MS-DOS[3] systems is simple. UNIX SVR4 provides the facility to read and write MS-DOS diskettes easily and quickly.

The option of VP/iX* enables further PC/UNIX integration by enabling MS-DOS applications to run concurrently with multiple UNIX system processes.

Enhanced documentation set

ICL's high quality UNIX SVR4 manuals accompany the modular packaging. These provide a comprehensive reference source for basic system administration tasks, to a full explanation of all of ICL's added value features.

Enhanced Text Editor

When administration calls for file editing, an enhanced and simple to use text editor is available as an alternative to vi, enabling personnel with minimal training to undertake these tasks.

Tuning for Performance

ICL understands that system performance is not just about using the latest technology, but also about optimising the operating system environment to make the most of that technology.

As a result, ICL has put a lot of effort into extensive system tuning, paying attention to all areas of the system including processor/memory access, disk access, and I/O access and throughput. This, in conjunction with features such as the optimising C compiler, means UNIX SVR4 is an inherently high performance system.

In addition, the UNIX SVR4 SMP system has undergone rigorous benchmarking tests resulting in specific improvements to ensure that the high throughput required from relational database applications is achieved.

Further increases in SMP performance have been gained through intricate tuning and symmetricisation of the kernel.

Finally, ICL has implemented a means of maintaining an affinity between user processes and a particular processor, resulting in performance improvements in a multiprocessor environment by reducing the redundancy of cached data.

Significant improvements in performance can also be realised with the VDK striping and concatenation facilities.

Simultaneous access of several devices through striping improves disk performance by enabling faster reads and writes, also increasing the ability to manage larger files faster.

Concatenated disks allow a single file system to span multiple disks, thus providing the ability to increase the file system size with no loss of efficiency.

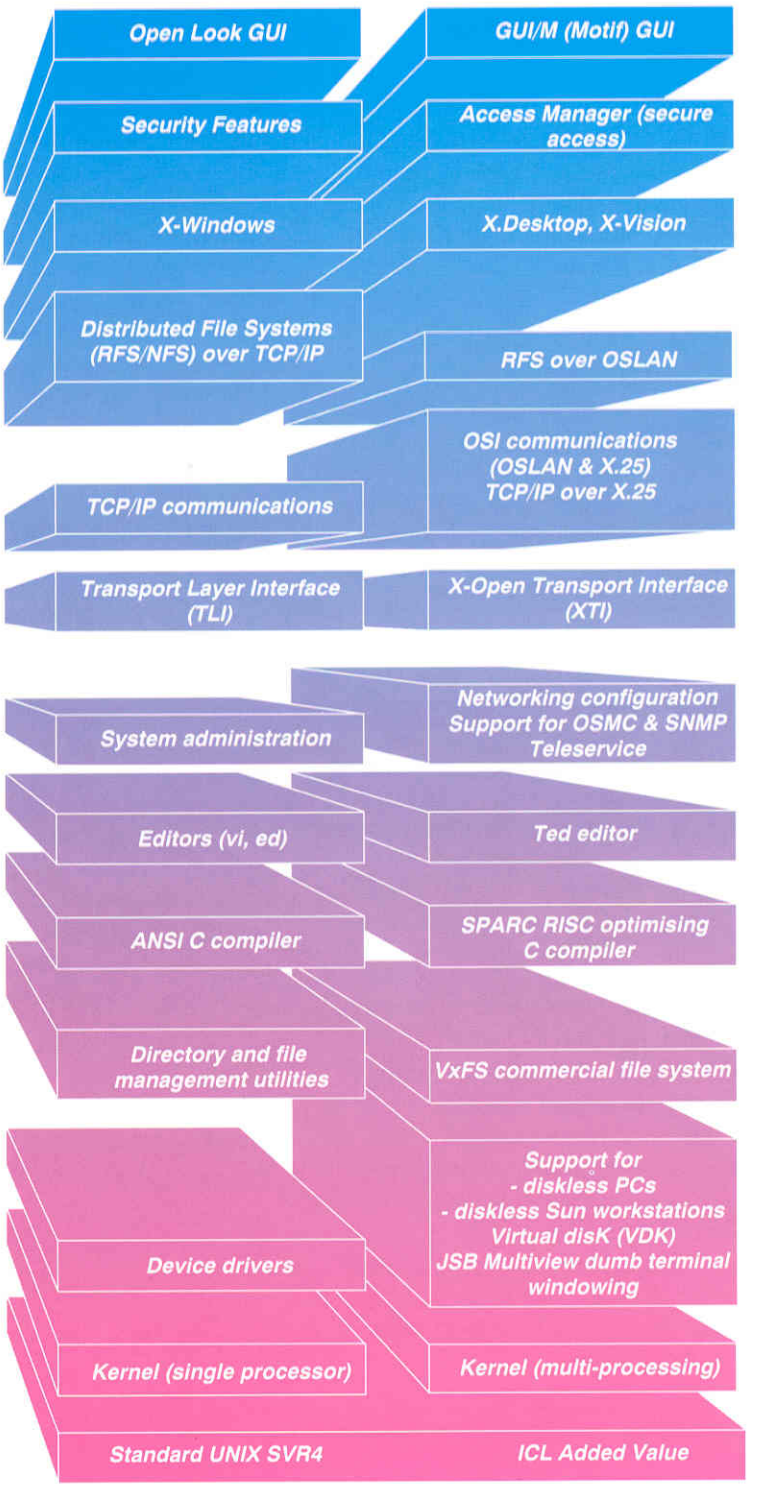
ICL's UNIX SVR4 supports more high performance devices than any other UNIX system. A wide choice of drivers is available for all popular industry standard disks, memory, and communications boards, peripherals and backup devices.

Leading Edge Technology

ICL's UNIX System V Release 4 is available on state of the art SPARC based systems, as well as industry standard Intel systems. This combination of high performance hardware and software forms the perfect base for your information technology solution.

ICL's expertise in UNIX System V is exemplified and endorsed by its work with USL in producing the reference sources for UNIX SVR4, UNIX SVR4.1 ES and Tuxedo[1] on SPARC based systems.

ICL will continue to use its expertise to develop future releases of UNIX System V to offer the best in choice and benefits.



Application Binary Interface

The UNIX SVR4 Application Binary Interfaces (ABIs) provide binary portability within an architecture (SPARC or Intel, in the case of ICL) allowing off the shelf applications written to the SPARC or Intel ABIs to be run on any SPARC or Intel based system running UNIX SVR4.

In addition, ICL's SPARC ABI conforms to SPARC International's SCD (SPARC Compliance Definition) 2.0 which ensures binary applications portability between all SPARC systems vendors including Sun, and their UNIX implementation branded Solaris 2.0.

UNIX SVR4 Enhancements

UNIX SVR4 includes several major enhancements over previous versions of UNIX including:

- improved performance through the addition of the STREAMS mechanism which allows communications drivers to be modular, easier to implement and more portable
- improved system management with enhanced system administration facilities
- internationalisation enabling handling of international character sets
- improved support for real-time transaction processing applications with a high level of data integrity
- improved security by the use of encrypted password files, and login facilities.

UNIX Networking

UNIX SVR4 includes comprehensive networking capability as standard, such as TCP/IP and NFS (including Network Information Services (NIS) and locking features), enabling interworking between other ICL and non-ICL UNIX systems.
UNIX SVR4's flexibility allows further implementation of OSI and de facto networking facilities, thereby providing a wealth of communications functionality.

Scaleability

UNIX SVR4's scaleability means it is available on a wide variety of platforms from laptops, PCs, and mid-range servers, through to supercomputer systems. The availability of a single operating system on such a range of platforms reduces the variants of a particular program required to perform a particular function, leading to benefits of reduced development, training, and inventory for software vendors and application developers.

ICL has also developed many additional value-added features to UNIX SVR4 without compromising either its openness or its adherence to existing UNIX standards.

UNIX
SYSTEM LABORATORIES

X/Open

Services and **Training**

Services

ICL offers a comprehensive choice of Bronze, Silver and Gold support services to complement your existing skills levels. The complete range of Total Systems Services includes:

- site preparation and environmental services
- systems installations
- network installations
- equipment maintenance
- systems software support and maintenance
- transition services
- exploitation services.

Training

ICL provides an excellent range of standard, frequently scheduled UNIX courses, which can be tailored on request to meet your needs exactly. Further options of training on a site of your choice, and UNIX Training Consultancy means that your every requirement can be satisfied.

ICL's UNIX training portfolio includes:

UNIX - A Strategic Overview
UNIX Strategic and Technical Awareness
UNIX Foundation, Shell Programming and Utilities
UNIX Communications and Networking
UNIX System V Release 4 New Facilities
UNIX System V Release 4 Foundation
UNIX System V Release 4 Graduation
UNIX System V Release 4 Foundation, Shell Programming and Utilities
UNIX System V Release 4 Advanced Utilities and Features Workshop
UNIX System V Release 4 Systems Administration
UNIX System V Release 4 Advanced Systems Administration.

UNIX SVR4 from ICL is available on:

DRS® 6000 Series
DRS 3000 Series
ICL Personal Computers from the CX, CXe, FX, and MX ranges

* VP/IX is only available on DRS 3000 systems.
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