

## Features of Sun's Supported Operating Systems

Last updated October 2nd, 2008

| <i>Feature</i>                                 | <i>Solaris 10</i>   | <i>OpenSolaris 2008.05</i>  | <i>Red Hat Ent. Linux 5.1</i>   | <i>MS Windows 2003 Server<br/>Datacenter Edition</i>   |
|--|---|---|---|--|
| Open Source development model                  | Yes, OpenSolaris<br><a href="http://www.opensolaris.org">www.opensolaris.org</a>  | Yes, OpenSolaris<br><a href="http://www.opensolaris.org">www.opensolaris.org</a>  | Yes, Fedora Linux kernel<br><a href="http://fedoraproject.org">fedoraproject.org</a>  | No   |
| Open Source Initiative (OSI) compliant license | Yes, Common Development and Distribution License (CDDL)<br><a href="http://www.sun.com/cddl">www.sun.com/cddl</a>   | Yes, Common Development and Distribution License (CDDL)<br><a href="http://www.sun.com/cddl">www.sun.com/cddl</a>                             | Yes, GNU Public License (GPLv2)<br><a href="http://www.fsf.org/licensing/licenses/info/GPLv2.html">www.fsf.org/licensing/licenses/info/GPLv2.html</a> | No   |
| CPU Architectures supported                    | UltraSparc, Sparc-64, Sparc-CMT, Intel x86-64, AMD  | Intel x86-64, AMD, In development IBM PowerPC and Z-Series<br>Sparc support planned in early 2009   | Intel x86-64, Intel Itanium2<br>AMD, IBM Power, Z-Series  | Intel x86-64, Intel Itanium2, AMD  |
| Platforms Supported                            | Over 1082 total (985 X86) including from Sun, IBM, HP, Dell and others (Oct 08)<br><a href="http://www.sun.com/bigadmin/hcl">www.sun.com/bigadmin/hcl</a> | Over 3050 X86 including from Sun, IBM, HP, Dell and others (Oct 08)<br><a href="http://www.sun.com/bigadmin/hcl">www.sun.com/bigadmin/hcl</a> | 695 Total<br>665 X86 (Oct 08)<br><a href="http://hardware.redhat.com">hardware.redhat.com</a>   | 7,993 x86-64, Itanium<br><a href="http://www.windowsservercatalog.com">www.windowsservercatalog.com</a>  |
| Applications available                         | 6620 Total (October 08)<br>3527 on x86-64 platform<br><a href="http://www.sun.com/bigadmin/apps">www.sun.com/bigadmin/apps</a>                            | OpenSolaris is binary compatible with Solaris 10. Existing applications should continue to run even.  | 805 (RHEL 5 x86-64 Oct 08)<br><a href="http://www.redhat.com/apps/isv_catalog">www.redhat.com/apps/isv_catalog</a>                                    | 5,612<br><a href="http://www.windowsservercatalog.com">www.windowsservercatalog.com</a>                  |
| Average support life cycle                     | 10-12 years<br><a href="http://www.sun.com/software/solaris/lifecycle.xml">www.sun.com/software/solaris/lifecycle.xml</a>                                 | 18 months<br><a href="http://www.opensolaris.com/learn/faq">www.opensolaris.com/learn/faq</a>   | 7 years<br><a href="http://www.redhat.com/rhel/server/details">www.redhat.com/rhel/server/details</a>   | 10 years<br><a href="http://support.microsoft.com/gp/lifepolicy">support.microsoft.com/gp/lifepolicy</a> |
| OEM Partners                                   | Sun, Fujitsu/Siemens, IBM, Intel, Dell  | TBD   | Sun, Dell, IBM, HP, Fujitsu, Hitachi, NEC, AMD  | Sun, Dell, IBM, HP, Fujitsu, Hitachi, NEC, AMD, Intel and more   |
| First shipped                                  | March 2005  | May 2008  | March 2007  | April 2003   |
| Freely downloadable                            | Yes   | Yes   | No  | No   |
| Commercial List License cost                   | \$0<br><a href="http://www.sun.com/service/subscriptions">http://www.sun.com/service/subscriptions</a>  | \$0<br><a href="http://www.sun.com/service/subscriptions">http://www.sun.com/service/subscriptions</a>  | Requires Subscription   | \$2,999  |
| 1 year premium support                         | \$1080  | \$2160<br><a href="http://www.sun.com/service/opensolaris/index.jsp">www.sun.com/service/opensolaris/index.jsp</a>                            | \$1299  | NA for Datacenter Edition  |

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| up to 2 sockets<br>(List price)  |  |  |   |   |
| 1 year premium support unlimited sockets<br>(List price)                     | \$1980   | NA   | \$2,499   | \$2243  |
| GSA contract price<br>1 year premium support up to 2 sockets<br>(List price) | \$599  | N/A  | \$934.78  | \$713<br>Quotes obtained from GSAadvantage.gov and may vary based on Enterprise Licensing and hardware bundling   |
| OS unique advanced technologies  | <ul style="list-style-type: none"> <li>● Dynamic Tracing</li> <li>● ZFS</li> <li>● Solaris containers virtualization</li> <li>● Network Virtualization</li> <li>● Resource management with fair share scheduling and dynamic CPU pools</li> <li>● Predictive Self healing</li> <li>● Dynamically loading kernel</li> <li>● Service Management Facility</li> <li>● Secure by Default</li> <li>● Cryptographic framework</li> <li>● Digitally signed executables</li> <li>● Memory Placement Optimization</li> <li>● Massive scalability</li> <li>● SAMFS/QFS (optional)</li> <li>● Solaris Trusted Extensions</li> <li>● Guaranteed Binary Compatibility</li> <li>● Microstate Accounting</li> <li>● CPU Caps</li> <li>● Solaris 8 and 9</li> </ul> | <ul style="list-style-type: none"> <li>● Dynamic Tracing</li> <li>● ZFS</li> <li>● ZFS desktop auto snapshots</li> <li>● Solaris containers virtualization</li> <li>● Network Virtualization</li> <li>● Resource management with fair share scheduling and dynamic CPU pools</li> <li>● Predictive Self healing</li> <li>● Dynamically loading kernel</li> <li>● Service Management Facility</li> <li>● Secure by Default</li> <li>● Cryptographic framework</li> <li>● Digitally signed executables</li> <li>● Memory Placement Optimization</li> <li>● Massive scalability</li> <li>● Solaris Trusted Extensions</li> <li>● Microstate Accounting</li> </ul> | <ul style="list-style-type: none"> <li>● SE-Linux based multi-level security</li> <li>● Global File System</li> <li>● Distributed Lock manager</li> <li>● Block level storage encryption</li> <li>● ext3 file system</li> <li>● Xen community based virtualization</li> </ul> | <ul style="list-style-type: none"> <li>● Active Directory</li> <li>● Windows Terminal Services</li> <li>● IIS</li> <li>● Secure by default</li> <li>● Message Queuing</li> <li>● File Server Resource Manager</li> <li>● NUMA Controls</li> <li>● Distributed File System</li> <li>● CIFS</li> <li>● XML and UDDI services</li> </ul> |

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|--|--|---|---|---------------------------|
|  | <ul style="list-style-type: none"> <li>containers</li> <li>● Linux Application compatibility</li> <li>● Real-Time computing support</li> </ul> | <ul style="list-style-type: none"> <li>● CPU Caps</li> <li>● Real-Time computing support</li> <li>● In kernel CIFS support</li> <li>● Xen Community based virtualization</li> <li>● Image Packaging system</li> <li>● Network Auto Magic configuration</li> <li>● Gnome 2.24 with improved accessibility</li> <li>● Suspend/Resume</li> </ul> |   |                           |
| Multi-level Security                       | Yes, Trusted Extensions including Trusted NFS, networking, printing, CDE and Gnome   | Yes, Trusted Extensions including Trusted NFS, networking, printing, CDE and Gnome  | Yes, SELinux.<br>No GUI support   | No                        |
| Unix03 standards compliant                 | Yes<br><a href="http://www.opengroup.org/openbrand/register">www.opengroup.org/openbrand/register</a>  | TBD   | No  | No                        |
| Indemnification                            | Yes<br><a href="http://www.sun.com/software/solaris/support.jsp">www.sun.com/software/solaris/support.jsp</a>                                  | TBD   | Yes<br><a href="http://www.redhat.com/rhel/details/assurance/">www.redhat.com/rhel/details/assurance/</a> | Yes                       |
| Binary compatibility guarantee             | Yes<br><a href="http://www.sun.com/software/solaris/guarantee.jsp">www.sun.com/software/solaris/guarantee.jsp</a>                              | OpenSolaris is binary compatible with Solaris 10 but no guarantee has yet been published.   | No  | No                        |
| Foreign Language support                   | 37 languages, 123 locales  | 37 languages, 123 locales   | 19  | ~93 languages and locales |
| Real-time scheduling and interrupt control | Yes, since Solaris 8   | Yes, since Solaris 8  | planned   | No                        |
| 64-bit addressing                          | Yes, since 1996  | Yes, since 1996   | Yes   | Yes                       |
| Maximum CPU cores                          | 256 on current hardware  | 256 on current hardware   | 64 certified on X64   | 64                        |
| Maximum RAM                                | 2 TB on current hardware   | 2 TB on current hardware  | 256 GB on X64   | 1 TB                      |
| File System and Volume manager Support     | Solaris Volume Manager<br>Unix File System<br>ZFS  | Unix File System<br>ZFS<br>NFSv4  | Ext2, Ext3<br>ReiserFS<br>NFSv4   | FAT32<br>NTFS<br>DFS      |

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|-----------------------------------|---|--|--|--|
|                                   | NFSv4<br>FAT32<br>Sun Cluster Global File System (optional)<br>QFS/SAMFS (optional)<br>Lustre (Optional)<br>Veritas Volume Manager (Optional)   | FAT32<br>CIFS  | LVM<br>FAT32<br>Global File System<br>Distributed Lock Manager<br>Lustre (Optional)<br>Veritas Volume Manager (Optional) | Storage manager<br>File Server Resource Manager<br>Veritas Volume Manager (Optional) |
| Maximum File Size                 | 2 <sup>64</sup> bytes (ZFS)   | 2 <sup>64</sup> bytes (ZFS)  | 2 TB (ext 3)<br>8 EB (GFS)   | 2 TB (NTFS)  |
| Maximum file system size          | 2 <sup>64</sup> bytes (ZFS)   | 2 <sup>64</sup> bytes (ZFS)  | 16 TB (ext3)<br>8 EB (GFS)   | 256 TB (NTFS)  |
| Sun Ray ultra-thin client support | Yes, server and client  | Yes, server and client   | Yes, server and client   | Yes, client access via RDP   |
| Virtualization options            | Solaris Containers (Sparc and X64)<br>Dynamic System Domains (Sparc)<br>Logical Domains (Sparc CMT)<br>VMware (X64)<br>Qemu (X64)<br>Win4Solaris (X64)<br>Xen (planned) (X64)<br>Microsoft Virtualization support                 | Solaris Containers (Sparc and X64)<br>VMware (X64)<br>Qemu (X64)<br>Win4Solaris (X64)<br>Xen (X64)<br>Microsoft Virtualization support | Xen (X64)<br>VMware (X64)<br>Qemu (X64)  | VMware<br>Microsoft Virtual Server<br>Virtual Iron                                   |
| Online updating                   | Yes   | Yes  | Yes  | Yes  |
| Common Criteria Evaluations       | Yes, EAL 4+ CAPP and RBACPP , LSPP<br>Strong security target including graphical components, networking, printing<br><a href="http://www.sun.com/software/security/securitycert/">www.sun.com/software/security/securitycert/</a> | No   | Yes EAL 4+ CAPP, RBACPP and LSPP completed on HP and IBM platforms. Graphical components excluded.                       | Yes EAL4+ CAPP, RBACPP   |
| Application containment           | Role Based Access Control<br>Process Right Management<br>Solaris Containers<br>Multi-Level Security Containers  | Role Based Access Control<br>Process Right Management<br>Solaris Containers<br>Multi-Level Security Containers                         | Role Based Access Control<br>Type Enforcement  | Role Based Access Control  |
| Volume manager included           | Yes, Solaris Volume Manager or ZFS  | Yes, ZFS   | Yes  | Yes  |

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|---|--|---|---|--|
| Role Based Access Control               | Yes  | Yes   | Yes   | Yes  |
| Firewall included                       | Yes  | Yes   | Yes   | Yes  |
| AMP stack                               | Yes  | Yes   | Yes   | No   |
| iSCSI, multi-pathing I/O, InfiniBand    | Yes  | Yes   | Yes   | Yes  |
| Package management                      | System V Packages  | Image Packaging System<br>System V Packages   | RPM, YUM  | Windows Registry/Installer<br>InstallShield  |
| NFSv4, IPv6, IPsec, IKE                 | Yes  | Yes   | Yes   | IPv6, Ipsec, IKE   |
| gcc compilers                           | Yes  | Yes   | Yes   | Gnu SDK and utilities  |
| Desktop Environment components included | Common Desktop Env./Multi-level CDE<br>Gnome/Multi-level Gnome<br>StarOffice<br>GIMP<br>Mozilla<br>Evolution<br>Firefox<br>Thunderbird<br>and more | Common Desktop Env./Multi-level CDE<br>Gnome/Multi-level Gnome 2.24<br>StarOffice<br>GIMP<br>Mozilla<br>Evolution<br>Firefox<br>Thunderbird<br>and more | Gnome<br>OpenOffice<br>GIMP<br>Mozilla<br>Firefox<br>Thunderbird<br>Evolution<br>and more | Windows user interface<br>Internet Explorer<br>MS Office (optional extra charge)<br>MS Outlook (optional extra charge) |

References:

<http://www.microsoft.com>

<http://www.redhat.com>

<http://www.sun.com/solaris>

<http://reg.dlt.com/contracts-Redhat-BPA.asp>