Xen 4.1 Data Sheet

Xen 4.1 Hypervisor

Xen.org proudly announces the release of Xen 4.1 open source hypervisor. Xen 4.1 delivers the foundational platform needed by enterprise customers and cloud computing providers for their virtualization solutions.

The Xen 4.1 hypervisor is the fastest and most secure open source virtualization software available today, supporting a wide range of guest operating systems including Windows®, Linux®, Solaris® and various versions of the BSD operating system.

Xen is an open source project with broad industry support and products from a number of leading computing vendors including Oracle, Fujitsu, Novell, Citrix, Lenovo, Samsung, VA Linux and others. This enables the community to deploy their virtualization solutions based on vendor variants of the Xen hypervisor or on the open source version of Xen.

XL Toolstack

Xen 4.1includes a re-architected toolstack, that is based on the new libxenlight library, providing a simple and robust API for toolstacks. XL is functionally equivalent and almost entirely backwards compatible with existing XM domain configuration files. The XEND toolstack remains supported in Xen 4.1, however we strongly recommend that users upgrade to XL. For more information see the 4.1 Migration Guide on the xen.org wiki.

Credit 2 scheduler

The credit 1 scheduler has served Xen well for many years, but it has a few weaknesses for some use-cases. The credit 2 scheduler is a complete re-write which is designed for latency sensitive workloads (network traffic, audio) and a very large number of CPUs. The credit 2 scheduler is functional and stable and will perform better in some use-cases, but its algorithm needs further fine-tuning before it will become Xen's main scheduler.

CPU Pools

CPU pools provide a powerful, easy-to-use and new way to partition a machine and allocate VMs to CPU pools. In addition each CPU pool runs its own scheduler and can be configured to either choose credit 1 or 2 schedulers.

Large Systems

Xen 4.1 has been extended and optimized to take advantage of new hardware features that increase performance and scalability for large systems.

AVX

Support for xsave and xrestor floating point instructions has been added, enabling Xen guests to utilize Advanced Vector eXtension instructions available on newer Intel processors.

Memory Access API

A new API has been added enabling suitably privileged domains to intercept and handle memory faults. This allows third parties to invoke malware detection and other security software from outside the virtual machine.

Improved

During the release cycle of Xen 4.1, the Xen community has closely worked with upstream projects to ensure that Xen is supported from unmodified Linux distributions. For more information check XenDom0Kernels and XenDomUSupport on the Xen.org Wiki.

The Xen community is committed to working with all major upstream open source projects to ensure that Xen works out-of-the-box with all major operating systems, enabling users to get the benefits of Xen such as performance, reliability, security and feature richness without incurring the burden of having to use custom built operating system.

About Xen.org: *Xen.org is the home of the open source Xen® hypervisor, a fast, secure industry standard code base for operating system virtualization.Xen.org is community led and benefits from hundreds of contributors. Xen.org is guided by the Xen Advisory Board, which is drawn from key contributors to the project. For more information, visit* ***xen.org****.*