

High-Value Virtualization Solutions

Intel® ESAA Brings Technology Within Reach

Virtualization comes to the rescue for strained IT budgets. Server consolidation can save thousands of dollars per server over a three-year period.¹ Businesses of all sizes can improve uptime by moving live Virtual Machines (VMs) between servers, avoiding both planned and unplanned outages. They can also eliminate the need for dedicated servers to host legacy applications, which streamlines their IT infrastructure.


Benefits like these are driving up demand for virtualization; IDC expects the number of new servers supporting virtualization to increase threefold between 2005 and 2010.² But because many customers may not have the experience or resources to implement virtualization themselves, they depend on resellers for answers. The Intel® Enabled Server Acceleration Alliance (Intel® ESAA) brings resellers together with hardware and software vendors to get pre-validated, high-value virtualization solutions to market.

Intel ESAA Enables Pre-Validated Solutions

Depend on Intel ESAA for pre-validated solution “recipes” that meet complex requirements with the latest technologies.

This program delivers instant access to pre-verified solution stacks supported by leading hardware and software makers that you and your customers can depend on for reliable, high-quality results. Intel ESAA helps you attract and retain customers with solution offerings that reduce the complexity and risk of virtualization.

Resellers can bring these solutions to market rapidly, with minimal engineering effort. And, because Intel ESAA stands behind the solutions after the sale, customers have access to a single point of expert product support.



“Intel® ESAA is a very good solution for MAXDATA, because the certification process, the recipes, are very easy to implement and we are able to have the same certification and the same solutions, as the big OEMs, in a lot less time.”

Silvio Weber, Product Development Manager,
MAXDATA International

Virtualization Cuts Costs and Delivers New Opportunities

Increase the value of server hardware by means of virtualization. This technology allows multiple, separate computing environments to co-exist on the same hardware platform. For example, it may be possible to replace eight separate servers with eight virtual VMs, all running on one physical server, even if they are based on different operating systems. Each VM can be powered up and shut down independently, letting them act like separate servers, even though they are installed on a single machine. Virtualization solves key issues faced by businesses of all sizes:

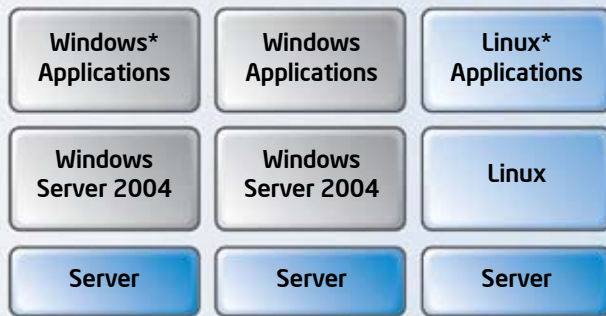
- **Cuts the costs of under-utilized hardware.** Estimates suggest that the average server is only 10-15% utilized,³ which means customers aren't getting maximum value from their hardware. Dedicated servers are often maintained to support legacy applications. Virtualization increases server utilization and allows legacy applications to run without separate dedicated servers.



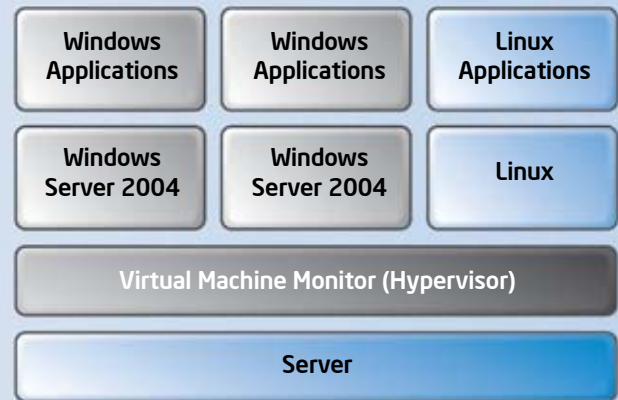
- **Cuts the cost of facilities infrastructure.** For networks of any size, the more servers a company has, the more expensive it is to provide the cabling, racks, and other infrastructural necessities for the environment. Virtualization decreases server count, reducing these expenses.

- **Cuts the cost of wasteful utility usage.** Running more servers than a company needs increases the amount of energy to power them and to cool the server room, increasing utility costs and environmental impact. Virtualization decreases energy use and reduces the number of machines that will eventually wind up in a landfill.

Without Virtualization



With Virtualization



Buying a multi-processor server to replace multiple uni-processor servers is economical for the customer and a sell-up opportunity for the reseller. For example, the physical server that is being virtualized will need more memory and redundant power supplies to increase its reliability. Note that any downtime on the physical server will affect all virtual servers running on it, so the server configuration should be chosen to minimize the mean time between failures.

Virtualization also provides customer advantages in terms of dependability that resellers can use to their advantage when selling solutions. For example, runtime migration of VMs between different physical servers provides business continuity for customers, even if a server has to go down for routine maintenance.

Intel ESAA Delivers Comprehensive Virtualization Solutions

Sell validated, certified solutions rather than individual components. Solution recipes from Intel ESAA enable resellers to provide a single source for hardware and software that is pre-certified to work together smoothly. That capability greatly enhances value to customers, even as it helps expand business for resellers. The program benefits from an ecosystem that Intel has been developing

for more than 30 years, giving resellers and their customers instant and preferred access to hundreds of industry-leading hardware and software providers.

Intel ESAA provides game-changing benefits to resellers that help them go beyond selling solely on the basis of price, by delivering high-value-add solutions and solving their customers' most difficult challenges. The recipes developed by Intel ESAA are held to rigorous standards for validation and certification of hardware and software components. At the same time, they dramatically lower the cost, time, and complexity associated with creating an integrated, validated solution stack. This program offers benefits to all parties involved in the sale, and resellers can join at no cost:⁴

- **Validated, certified solutions.** Resellers increase the value of their product offerings by selling comprehensive solutions that are pre-engineered to work together smoothly, reducing both their engineering burden and their customers' adoption risk.
- **Enhanced industry relationships.** Intel ESAA facilitates collaborations between hardware makers, software vendors, and solution resellers. Partnership with industry leaders gives smaller resellers access to the emerging technologies and the ability to deliver solutions at competitive price points.

- **Pass-through certification.** Many virtualization software makers require resellers to become certified in order to resell their products. As Intel ESAA members, resellers receive automatic certification, enabling them to bring virtualization products to market much more quickly and easily.
- **Pre- and post-sale support.** Resellers can obtain assistance in answering customer questions about solution integration prior to the sale. After the sale, the program ensures customers that they will receive integrated support from the hardware and software vendors whose products are included in the solution recipe.

Intel® Server Products Drive State-of-the-Art Results

Deliver industry-leading performance and power efficiency. Built-in energy-efficient performance cuts costs while conserving resources. Intel® Server Products provide an excellent foundation for Intel ESAA virtualization solutions, for customers of all sizes—from small businesses to large enterprises. Because they are developed in sync with Intel's processor roadmap, Intel Server Products provide very early access to the latest server technologies. Reliable, world-class support from Intel helps to ensure customer satisfaction after the sale.

The standards-based nature of the hardware helps to ensure its compatibility with future technologies, protecting end-customer investment. For resellers, Intel provides marketing and sales tools to help sell products and solutions. Comprehensive resources surrounding the sale, including Intel® Software Products and ecosystem enablement, help to build customer value further.

For even greater benefits and value from virtualization, all Intel Server Products include Intel® Virtualization Technology (Intel® VT).⁵ This set of processor features from Intel provides a hardware assist to virtualization, for improved performance and security in virtualized environments. For more information, see www.intel.com/go/virtualization.

With virtualization support enhanced by Intel VT, these server products are available in a broad range of robust capability profiles, carefully selected to meet the needs of individual Intel ESAA solution recipes:

- **Uni-processor server boards** provide value options for entry-level computing and workgroup servers, as well as being well-suited to low-cost nodes for grid and cluster configurations.
- **Dual-processor boards, blades, and server systems** target mainstream implementations such as Web, application, mail, and database servers, with very high flexibility in terms of form factors and capacity.
- **Four-way server systems** provide exceptional redundancy, manageability, and serviceability for mission-critical implementations and high-volume transaction servers.

Beyond these advanced capabilities, Intel designs every aspect of its server products, all the way down to the silicon itself. The result is early-to-market, purpose-built server products that provide unmatched flexibility and value from solutions backed by award-winning service and 24x7 support, as well as enabling activities that lead the industry.



Intel® Server Products are the hardware foundation for all Intel® ESAA solution recipes, delivering industry-leading multi-core performance, efficiency, and dependability.

Take the Next Step

Join Intel® Enabled Server Acceleration Alliance and help power the next wave of business computing, for businesses of all sizes: www.intel.com/go/esaa

Intel works with major virtualization software providers to advance the ecosystem and improve the level of interoperability within the industry:



www.intel.com/go/serverproducts

www.intel.com/go/virtualization

¹ Intel Corporation and Infosys Technologies, 2008. "Server Consolidation through Virtualization with Quad-Core Intel® Xeon® Processors."

² IDC, 2007. "Quad-Core Processors Bring Higher Performance and Lower Cost to Mainstream Computing."
www.intel.com/products/processor/xeon/idc_quadcore.pdf

³ Source: Gartner Research.

⁴ Independent Hardware Vendors and Independent Software Vendors must join TSANet and pay a \$1500 annual fee to be an Intel® ESAA member.

⁵ Intel® Virtualization Technology (Intel® VT), Intel® Trusted Execution Technology (Intel® TXT), and Intel® 64 architecture require a computer system with a processor, chipset, BIOS, enabling software and/or operating system, device drivers and applications designed for these features. Performance will vary depending on your configuration. Contact your vendor for more information.

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit www.intel.com/performance/resources/limits.htm or call (U.S.) 1-800-628-8686 or 1-916-356-3104.

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