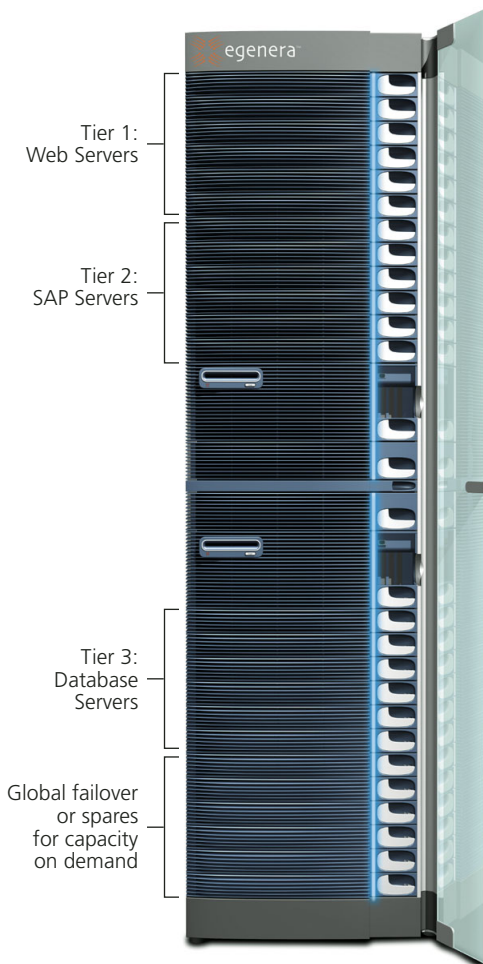


## Virtualization of SAP Infrastructure and Applications

Today's dynamic business processes and service-oriented applications require an adaptive computing architecture that accommodates change—enabling IT to align computing resources with business requirements.

Together, SAP, Egenera and Microsoft deliver an adaptive computing solution that overcomes the pain points of legacy servers through:

- Datacenter simplicity
- Resource sharing
- Better utilization
- Dynamic server repurposing
- Fast, easy provisioning
- Lower TCO (both capital and operating costs)
- Rapid time to market
- Low-cost high availability
- Automated management



### Comparison of Legacy Approach and Adaptive Computing

Legacy Approach	Adaptive Computing
Box-centric	Service-oriented; abstracts the hardware layer
Installation per server	Application service available in the network
Individual infrastructure and operation	Uses standard building blocks
Backup/recovery for each server	Backup across the entire logical landscape
Sizing per each component's estimated peak	Shared resource model possible
High availability requires additional, expensive hardware and increases complexity	Higher availability included

(Source: SAP)

### Adaptive Computing with Egenera

Adaptive computing decouples applications from designated physical resources and enables dynamic allocation of pooled processing, network and storage assets. SAP's approach combines partner solutions with the SAP NetWeaver® platform. The Egenera® BladeFrame® system, with its innovative Processing Area Network (PAN) architecture, extends adaptive computing in an SAP environment.

Egenera's PAN architecture enables adaptive computing by providing pools of processing, I/O and network resources connected via a high-speed, low-latency fabric. Egenera Processing Blade™ modules contain no disk drives, network interface cards or host bus adapters: nothing that would give a server a specific identity or state. Instead, all points of state and identity have been moved to the fabric switch, enabling virtualization of both servers and connecting datacenter infrastructure.

# SAP Adaptive Computing

## Valuable Synergies

As an SAP Global Technology Partner, Egenera has been granted the SAP Adaptive Computing Compliance certificate for Microsoft® Windows® platforms, ensuring high-quality and proven integration with SAP NetWeaver adaptive computing technologies.

Combining SAP adaptive computing with the Egenera PAN architecture creates a flexible, dynamic and cost-effective infrastructure for SAP applications. The joint solution reduces datacenter complexity; maximizes availability, scalability and performance; and simplifies management through a single point of control for applications, servers, I/O, and network and storage interfaces.

Adaptive computing on the Egenera BladeFrame is enabled by the integration of Egenera PAN Manager™ software with the SAP Adaptive Computing Controller (ACC). Seamless interoperability of these leading-edge management and virtualization solutions provides a central point of control and optimizes the dynamic allocation of Egenera virtual servers to SAP applications.

## Specific benefits include:

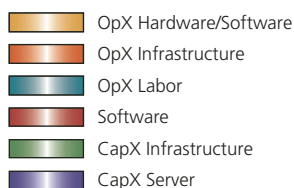
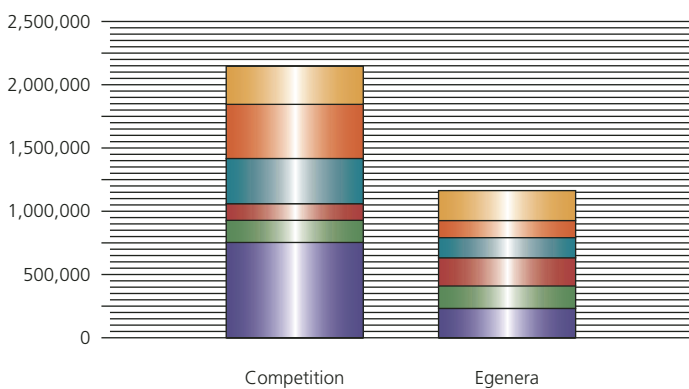
**Less Complexity, Lower Costs:** Capital spending for datacenter equipment drops significantly as over-provisioning and physical network infrastructure are eliminated. Consolidating servers and I/O connectivity also dramatically simplifies datacenter infrastructure. Compared to traditionally architected servers, Egenera can save up to 50 percent in total costs over a three-year period for SAP installations.

**Scalability:** The Egenera PAN architecture provides just-in-time scale up, scale down, configuration and reconfiguration of SAP applications. With server provisioning in just minutes, the environment can also be expanded easily to include new SAP components. Moreover, Egenera speeds SAP upgrades by reducing hardware setup and provisioning time.

**Availability:** Egenera's automatic, N+1 hardware failover enables datacenters to configure every SAP system—including development, test and training as well as production—for high availability at virtually no cost. This N+1 approach also applies to disaster recovery, enabling a single site to back up multiple datacenters.

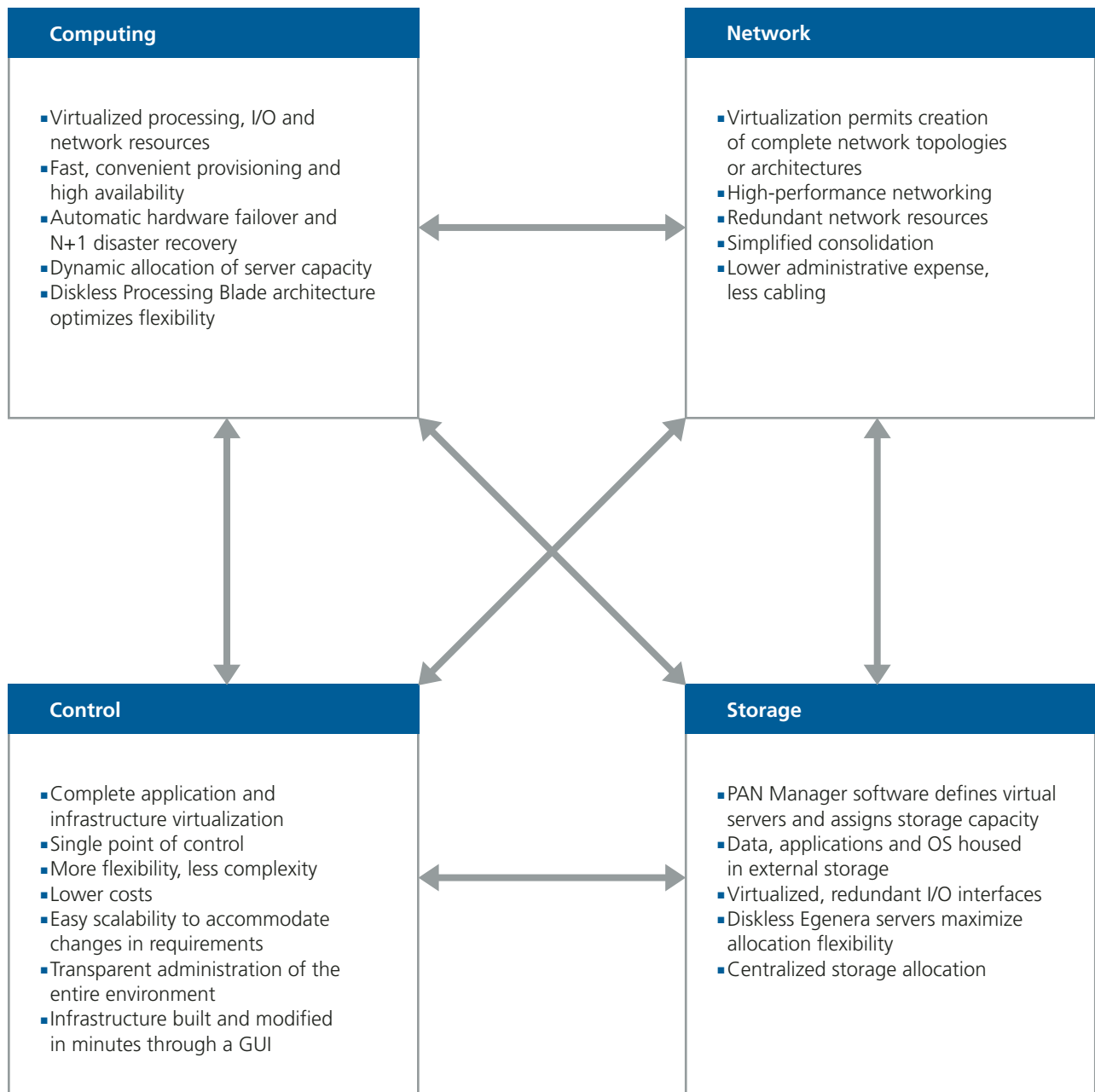
**Performance:** The virtualized Egenera architecture enables customers to easily right-size SAP applications—for the optimal combination of utilization, price and performance. From the ACC interface, a user can move an application from one Processing Blade to another, ensuring that response times consistently meet user expectations and service-level agreements. Automated load balancing further safeguards uptime.

**TCO Analysis:  
Running SAP on Egenera versus the Competition**  
(in dollars)



## Egenera PAN Manager and SAP Adaptive Computing Controller

The Adaptive Computing Controller, a component of SAP NetWeaver, features a virtualization layer that interfaces to Egenera PAN Manager software. The SAP Adaptive Computing Compliance Test confirms that ACC and PAN Manager interoperate seamlessly to dynamically allocate BladeFrame hardware resources to SAP applications. Additional benefits include:





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