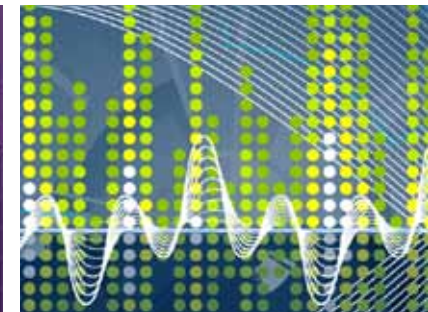




Build an enterprise-class infrastructure with  
**IBM Informix clusters**

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Informix clusters provide companies of all sizes with enterprise-class features.

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Make sure your data is always available with a business continuity strategy tailored to your needs.

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**G**etting the most value possible out of your IT investments is always important, but in the current business economy, it's imperative. Unfortunately, the demands of maintaining a robust IT infrastructure can make that difficult; it's more common to find a combination of inefficient operations and unnecessary costs, driven by an array of expensive, siloed, partially utilized IT resources.

In contrast, a distributed, clustered architecture delivers high availability, on-demand scalability and flexible configurations for backup and disaster recovery. Clustering techniques can be used with database applications to ensure high quality of service with maximum resource utilization for processes involving mission-critical data. Organizations of all sizes are using clustering strategies to build enterprise-class infrastructures while simultaneously maximizing the value of their IT assets.

This e-book explores four advantages of clustering, including data redundancy and parallel processing, and such benefits as high availability, rapid scalability, flexibility and maximum resource utilization. It also demonstrates how IBM® Informix™ clusters deliver a low-cost entry point to high availability that is difficult to achieve in a traditional architecture. Clustered Informix servers can help your organization react quickly to opportunities for growth, add capacity for processing and storage and ensure business continuity—all at the right level of investment for your business.



## **A flexible, always-on architecture for your business**

System downtime is costly: it means lost revenue, potentially lost customers and failure to meet service levels. For some businesses, it can also mean fines and other regulatory consequences.

A clustered IT architecture can reduce or eliminate downtime. The cluster links together a group of servers; if one server in the group goes down, another server picks up the load. Using this failover capability, customers with Informix clusters routinely achieve 99.999 percent data availability, working across any network and in global deployments.

Informix improves on the well-known benefits of clustering by adding both geographic and functional flexibility, helping organizations to ensure availability while maximizing the use of all cluster resources, no matter where they are located.

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## Locate servers anywhere

With other database clustering options, applications can share only disks and servers that are in close proximity. With Informix, servers accessing the same data can be located anywhere—whether servers are in the same room or across the globe, the failover capability still allows any server to take over for any other when necessary. You determine the server locations and configurations that best fit your enterprise, giving you an optimal combination of rapid data access and workload distribution.

Being able to locate servers anywhere also means your organization can share among business units the costs and benefits of Informix clusters. Having servers with access to the same data located in more than one location is a low-cost entry point to achieving enterprise-level high availability.

## Share storage among servers

Informix clusters give you similar flexibility with data storage. To ensure high availability, you can situate your storage devices anywhere in the world, according to the specific data processing needs of your business. You can have multiple servers access data stored in one location and have other, remote servers access a copy of that same data stored in another location.



# Continuous availability 2



Unique to Informix is the capability to support a configuration in which two servers can share a disk; a third remote server can share a copy of it; and a fourth server, somewhere else in the world, can share another copy of it. In this cluster of four servers, you get the flexibility of having some servers sharing the same storage and some being independent, thereby maximizing CPU utilization, power and storage resources. For example, you can distribute online transaction processing (OLTP) workloads to one server and analytics applications to another to boost throughput, yet both can share the same storage to minimize storage hardware expenses.

## Global deployment

With Informix, you can distribute your backup servers—and workload—around the world to help improve performance and protect against local disasters. This is another way Informix delivers enterprise-class business continuity planning at a mid-market price point.

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## Active-active configuration

In an Informix active-active configuration with two servers, either server is available to take over should one fail. This high-availability configuration protects your business against unplanned downtime and delivers enhanced safety and productivity. Because both servers can access the same data repository, data is always in sync for the server that takes over in case of failure.

Informix offers more flexibility in the active-active configuration because it is not limited to shared disk. It allows you to make remote servers, which may already be sitting mostly unused in your disaster recovery infrastructure, part of the cluster. In the Informix active-active configuration, all the servers are equal and you can distribute the workload among them to meet your business needs with maximum efficiency and low costs.



Adding servers to your infrastructure to meet an increased demand for throughput can be a complex procedure. Often you must rewrite applications to enable awareness of storage configurations or to take advantage of backup features and distributed workload-processing capabilities. With an Informix cluster, new servers can be added or removed with no application changes, so you can add capacity on demand.

### **Robust scaling**

Informix allows you to quickly add another server—especially by adding a blade to your IBM BladeCenter® configuration—or more storage. You can scale your workload across servers and locations to maximize performance and balance workload while reducing operational complexity.

In addition, Informix delivers near-linear scalability, facilitating workload planning and helping to ensure that, for example, doubling server resources results in a near-doubling of throughput.





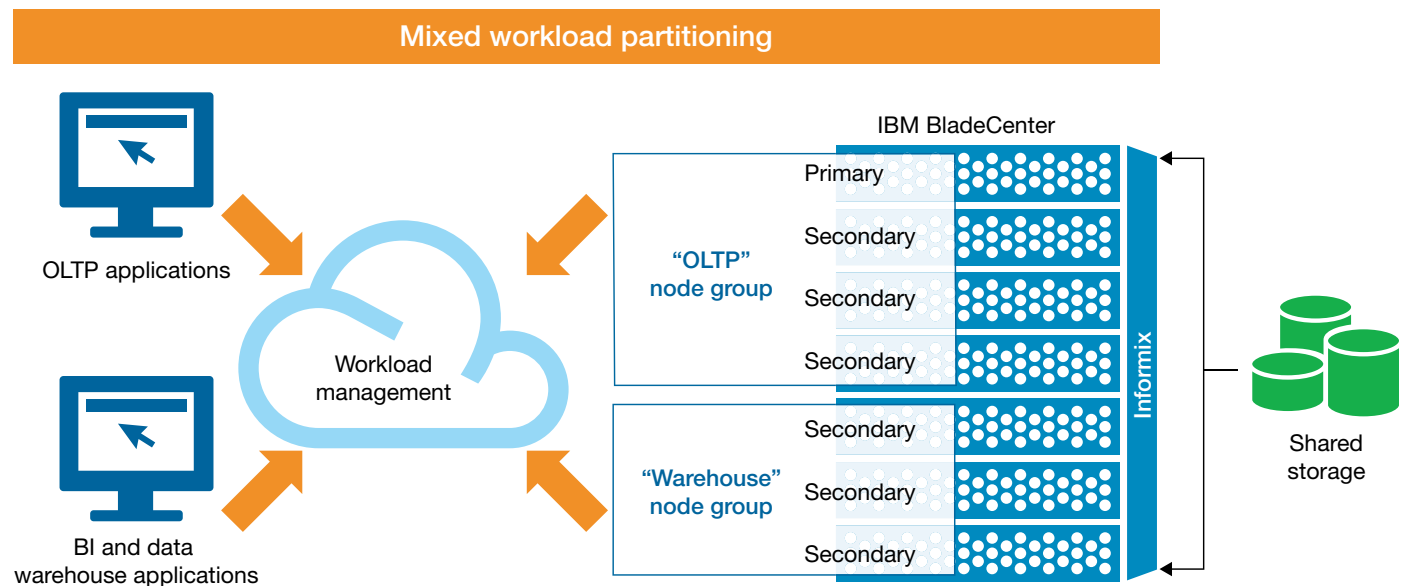
## Application transparency

Your applications need not be aware of storage configurations and do not have to be changed to take advantage of the backup and distributed processing capabilities of Informix.

## Distributed workloads

You can increase performance by configuring your system to direct different workloads to different servers to maximize throughput and productivity.

**Figure 1:** Workload partitioning enables the distribution of work across resources, enhancing flexibility and performance.





Distributing your workload among servers helps you maximize your ROI because a consolidated IT infrastructure requires less hardware to support greater workloads. In addition, your disaster-recovery hardware is doing productive work, not sitting idle.

The Informix workload manager capabilities can distribute your workload automatically, or it can be distributed according to business rules that you set up.

### **Choice of platforms**

Informix offers a strong advantage because it is truly vendor neutral. It delivers all its benefits whether running on IBM System x® servers, on IBM BladeCenter blade servers (including IBM POWER7™) or on a wide range of Intel®-based servers. It also allows you to choose the operating system that's the best fit for your environment with support for Microsoft® Windows®, Mac OS, IBM AIX® and multiple vendor versions of Linux® and UNIX®.

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# Cluster configurations

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*“Informix on the BladeCenter is what I consider my secret weapon. In fact, I almost don’t want to talk about it. It’s a great deal for partners to put together a configuration with a very fast database, your application, drop it off at a customer site, have it up and running and you get great IBM support behind it.”*

– **Lester Knutsen**,  
President, Advanced DataTools

High-performance, low-cost Informix cluster configurations are balanced for CPU and I/O capacity and available in a range of sizes. Cluster configurations enable you to protect your investment, ensuring that it is delivering maximum ROI, as well as grow capacity as you need it.

Combining Informix and IBM System x hardware in clusters can help reduce your costs through ease of management, remote administration and high-availability redundancy features that support business continuity. No special hardware or high-speed switches are needed. You can also choose to scale out on low-cost Intel-based servers to reduce IT infrastructure costs, and still take advantage of the wide range of business continuity configurations offered by active clustering technology.

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Informix clusters help optimize the utilization of your servers and storage system. By consolidating applications and data on fewer devices, you can reduce IT costs for hardware acquisition, energy and power consumption and ongoing support and maintenance. This adds up to a better ROI—and with enhanced availability, you're positioned to avoid the cost of outages and downtime. Informix is also compact and efficient: its small footprint requires modest amounts of disk space and processor power.

### **Nearly hands-free**

With many automatic features and continuous data availability, you can deploy more Informix databases with fewer administrators than is possible with other database solutions. The Informix GUI makes administration intuitive, easy and hassle-free.

No matter the size of your business, with Informix you can take advantage of a high-availability cluster with flexible backup options and workload distribution capabilities—all at a reasonable cost. You can add capacity on demand and seamlessly scale processing power, storage and backup hardware to deliver high-quality service, maximize ROI and meet the demands of a growing, changing business.



To find out more about Informix and Informix clusters, contact your IBM Business Partner or an IBM salesperson at 877-426-3774 and set up a proof-of-concept with your own data, or visit these resources:

- [Read about Informix clusters](#)
- [Learn more about the value of Informix](#)
- [Watch Informix demos](#)
- [Read IBM Redbooks® for Informix](#)



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