



# RED HAT DATABASE AVAILABILITY

## OVERVIEW

A highly available database is a business necessity. Continuous application availability. All day, every day. But with current technology, it's difficult to do. You need time. And a lot of money.

Some businesses look at the complexity and extra cost of setting up a highly available clustered database and decide not to do it, leaving their business at risk.

But with Red Hat Database Availability, you get the tools and help needed to turn your database into an always on, always available database. No more worries.

The solution is universal. It operates with any database. Oracle. Sybase. DB2, MySQL, EnterpriseDB. And others.

Manage outages for hardware/software upgrades and maintenance. Reduce your unplanned downtime to a few seconds a year—short enough to avoid business disruption, end user complaints, lost revenue or opportunity.

And this is all possible with the Red Hat Database Availability solution. A more reliable infrastructure improves service levels and frees up budget and time to devote to other pressing projects.

## SAVE \$210,000

Red Hat Database Availability can save you up to \$210,000 on the cost of deploying a proprietary clustered database.

How? By using our best practices for combining a single instance database with the virtualization and high-availability capabilities of Red Hat Enterprise Linux Advanced Platform. This eliminates the need for special add-on proprietary clustering products and saves you \$210,000 on a typical two-server database configuration.

The same capability. The same protection. The same service level. But a different economic model. Red Hat solutions, changing the economics of IT.



## FLEXIBILITY

Red Hat Database Availability allows you to take advantage of any of the following high-availability strategies:

- **Single system with additional components to enhance standard systems availability**

Red Hat includes capabilities for redundant hardware support.

- **Single system operation with cold or warm standby or recovery service**

Red Hat simplifies synchronizing programs and data across two systems.

- **Single fault tolerant system**

For customers who need the highest possible availability, Red Hat partners with hardware manufacturers who deliver fault tolerant servers. Red Hat products are supported on their fault-tolerant hardware.

- **Multiple systems coupled in clusters**

The Red Hat marriage between clustering and virtualization provides the reliability of clusters with the agility of virtualization in one simple solution.

- **Single or multiple systems connected in Disaster Tolerant/Recovery configuration**

Red Hat enables this by teaming with storage partners to provide data synchronization in real time.

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## THE SOLUTION

It starts with the Red Hat Enterprise Linux Advanced Platform, a secure, high-performance operating system. Included is a scalable file system that delivers high data availability. Plus, it comes wrapped with the training and services needed to give your technical staff the benefit of our 14 years of industry-leading experience in extracting real value from open source technologies.

## PRICING

Red Hat Database Availability pricing is designed to be affordable, predictable, and uncomplicated.

### Red Hat Database Availability

List Price: \$35,000 first year

This turnkey solution includes:

- **Platform (operating system):**

2 Red Hat Enterprise Linux Advanced Platform entitlements for 1 year

- **Storage:**

Red Hat Global File System  
Red Hat Volume Manager

- **High availability:**

Red Hat Cluster Suite  
Conga

- **Support:**

24x7 Premium support from  
Red Hat Certified Engineers

- **On Site Deployment and Knowledge Transfer:**

Implementation engagement by Red Hat Global Professional Services including on site Knowledge Transfer

- **Skill Building:**

Training up to Red Hat Certified Engineer status concentrating on building the skills necessary for deploying and maintaining this solution



## HOW DOES IT WORK

### Diagram 1

Red Hat Database Availability is set up for normal operation. Three key RHEL AP features are at work.

The first is Red Hat Cluster Suite, which is guarding against the failure of any single hardware component compromising data availability.

The second is Red Hat Global File System, which is ensuring that the reading and writing of data is synchronized, securing that data's integrity.

The final element is the Red Hat virtualization technology. This allows each server to have one active database engine and one paused virtual failover engine.

### Diagram 2

A server has failed. Red Hat Cluster Suite instantly detects the failure and begins the failover process. Because Red Hat Global File System ensures that all the log files and data files are available to all servers, recovery can begin immediately. The virtual failover database engine on the remaining server is resumed and put into operation quickly. This eliminates the time ordinarily needed for a reboot. Within minutes, service is restored.

### Diagram 3

Once the failed server is repaired, the virtual failover database engine can be "live" migrated back to the original server without any disruption.

Diagram I

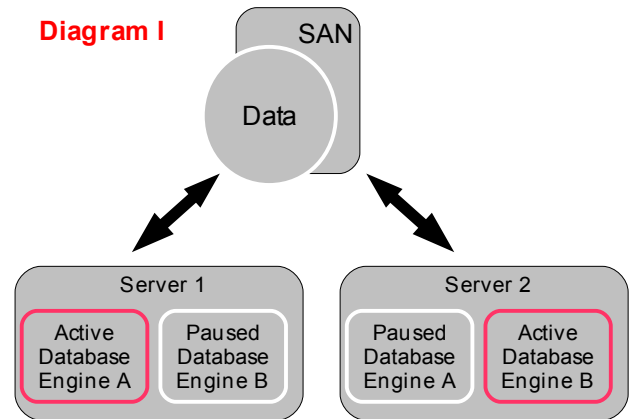


Diagram II

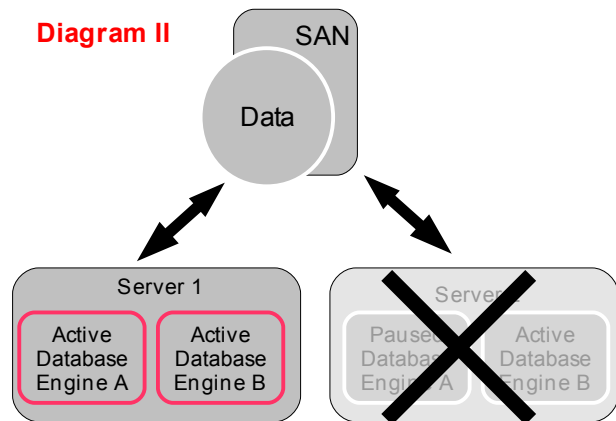
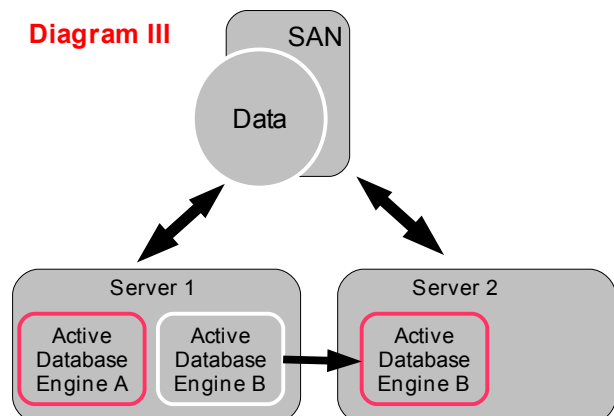


Diagram III





### COST SAVINGS DETAIL

Here's a detailed look at how Red Hat Database Availability saves you \$210,000 over a typical proprietary clustered database installation.

Start by assuming both solutions use the same server and SAN hardware. Next assume that both solutions use Red Hat Enterprise Linux Advanced Platform for the base operating system.

Add a leading proprietary clustered database to one solution and Red Hat Database Availability to the other.

Here's the difference. Red Hat Enterprise Linux Advanced

Platform already contains components that replace specific additional cost functionality provided by leading proprietary clustered databases.

Also, with the training and knowledge transfer provided in Red Hat Database Availability, your IT organization can master the installation and management of these components.

This yields a savings of \$210,000. Plus, you don't have to pay proprietary clustered database vendors for the expensive consulting services to properly install their complex options.

|  | Qty | List Price | Price for a Proprietary Database Solution | Price for a Red Hat Solution |
|--|-----|------------|---|------------------------------|
| Standard commodity 4-CPU servers                             | 2   | \$20,000   | \$40,000                                  | \$40,000                     |
| Standard SAN storage hardware                                | 1   | \$40,000   | \$40,000                                  | \$40,000                     |
| Red Hat Enterprise Linux Advanced Platform                   | 2   | \$2,499    | \$4,998                                   | \$0                          |
| Red Hat Database Availability                                | 1   | \$35,000   | \$0                                       | \$35,000                     |
| Leading Proprietary Clustered Database (add on component #1) | 8   | \$40,000   | \$320,000                                 | \$320,000                    |
| Leading Proprietary Clustered Database (add on component #2) | 8   | \$20,000   | \$160,000                                 | \$0                          |
| Leading Proprietary Clustered Database (add on component #3) | 8   | \$10,000   | \$80,000                                  | \$0                          |
|  |     |            | <b>\$644,998</b>                          | <b>\$435,000</b>             |

Savings = \$644,998 - \$435,000 = **\$210,000**

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