

# **MIMIX Availability: The easy way to protect the availability of even the most complex IBM i environments**

## **Executive Overview**

WHITEPAPER

## Introduction

MIMIX® Availability™ for IBM i is purpose-built for the most demanding enterprises, providing innovative features that minimize administration while ensuring the integrity of your information, applications and servers. MIMIX easily integrates into complex environments and is scalable to meet the needs of small and medium-size businesses up to the largest of enterprises, providing simplified availability in a complex world.

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## The Availability Imperative

The pace and competitive landscape of global commerce today necessitates a flexible, resilient and available IT infrastructure that provides 24 x 7 x 365 access to applications and information.

Any disruption of the availability of your data, systems and applications poses a threat to your business operations. Furthermore, a disruption may increase costs, while potentially causing sizeable declines in your customers' satisfaction, your company's reputation and your company's revenues, thereby seriously reducing your company's profitability and possibly jeopardizing its viability.

Achieving the new levels of high availability required to support mission-critical systems puts increased demands on IT professionals. MIMIX Availability can help you meet those demands head-on.

*"Because many transactions that go through ERP applications we host come from the Web, there would be no way to recreate them if they were lost. So the zero RPO [recovery point objective] supported by MIMIX is important for our customers."*

— Odd Egil Byrkjedal,  
Key Account Manager,  
EVRY

### Availability for IBM i: More than 25 Years of Progress

Vision Solutions has provided availability and recovery solutions to the IBM i market for more than 25 years. During this time, we've learned a lot about what's required to continually lead the way in providing IT with solutions that enable business resiliency.

Today, we deliver the most advanced software-based availability solutions in the marketplace. MIMIX Availability, which serves more than 2,000 customers, is our flagship solution for IBM i.

Now, more than ever, Vision Solutions is committed to leading the way in providing innovative, affordable and easy-to-use availability solutions that enable IT professionals to enable business resiliency for competitive advantage.

—Doug Piper, Vice President of Product Strategy, Vision Solutions

## MIMIX Availability: The easy way to protect the availability of even the most complex IBM i environments.

MIMIX Availability for IBM i provides simple, yet robust availability by efficiently replicating business application transactions in real time to maintain a local and/or remote switch-ready recovery server(s).

In the event of a production server failure or any other type of unplanned outage, your organization will be able to continue business operations on the recovery server, without data loss and with minimal downtime.

MIMIX Availability also virtually eliminates downtime caused by planned maintenance activities such as daily backups (saves to tape), upgrades and housekeeping tasks, thereby keeping mission-critical applications running 24 x 7 x 365.

MIMIX Availability's features differentiate it from other products and allow it to meet the requirements of customers with some of the most complex of IBM i environments. It can address the needs of organizations of any size—from small and medium-sized businesses to major global corporations—that require, or may expand to require, the highest level of protection, performance, flexibility and manageability.

## Eight Reasons for MIMIX Availability

When evaluating any availability solution for IBM i, there are a handful of critical functions that must be considered. The next several pages provide an overview of the most essential availability functions and how MIMIX Availability addresses each:

1. Scalable, flexible replication technology
2. Convenient management with an intuitive interface
3. Easy to configure, monitor and control
4. Customizable, automated procedures
5. Auditing for data integrity and switch confidence
6. Ultimate protection with multiple HA/DR servers
7. Automated IBM i server optimization
8. Expert support and services

### 1. Scalable, flexible replication technology

MIMIX Availability has a strong architectural foundation built on the remote journaling technology native to the IBM i operating system. For each transaction performed on a business' production server, IBM i journals the changed data and sends it to a recovery server where MIMIX applies the changes to an active copy of the database.

Extensive experience with the IBM i operating system and its predecessors allows Vision to tailor MIMIX's replication technology to the operating system and tune it to achieve the highest possible level of replication and recovery performance. As a result, MIMIX is highly scalable, from entry-level servers with minimum hardware capability to the largest enterprise-class servers tasked with the most demanding throughput requirements. MIMIX's performance and scalability enable any business to meet even extremely short Recovery Time Objectives (RTOs) that may be stipulated in service level agreements and regulatory mandates.

MIMIX replicates at the transaction level, allowing it to be independent of the underlying hardware and operating system version. As a result, the production and recovery server in a MIMIX replication environment can have different Power Systems hardware, different CPU and memory configurations, different IBM i operating system levels, and different storage hardware, including a mix of internal and external storage.

MIMIX's platform-agnostic replication technology delivers complete flexibility when designing unique solutions for every business.

Because remote journaling sends the minimum amount of changed data to the recovery server, minimal bandwidth is required for replication. With greater network bandwidth flexibility comes the freedom to locate servers locally and/or remotely, across any geographic distance.

The flexibility afforded by MIMIX's hardware-agnostic and bandwidth-friendly technology extends to choice of physical, virtual or Cloud-hosted environments. MIMIX production and recovery servers can replicate from the ground to the Cloud, between Cloud-hosted servers, or from the Cloud to the ground. Thus, your business can choose the platforms that best meet your scalability, flexibility, financial and security needs.

With the broadcast capability built into remote journaling, MIMIX can also support replication to multiple servers, each with a real-time copy of production data. These servers can be used to increase HA/DR protection with multiple recovery servers ready to assume the production role, or they can be used as replicate servers that offload processing from the production server for data warehousing, queries, reports, month-end processing, saves to tape and more.

MIMIX's focus on performance delivers scalability that allows businesses of all sizes to achieve HA/DR protection for their servers – whether low-powered, entry-level servers or large-scale enterprise systems.

## **2. Convenient management with an intuitive interface**

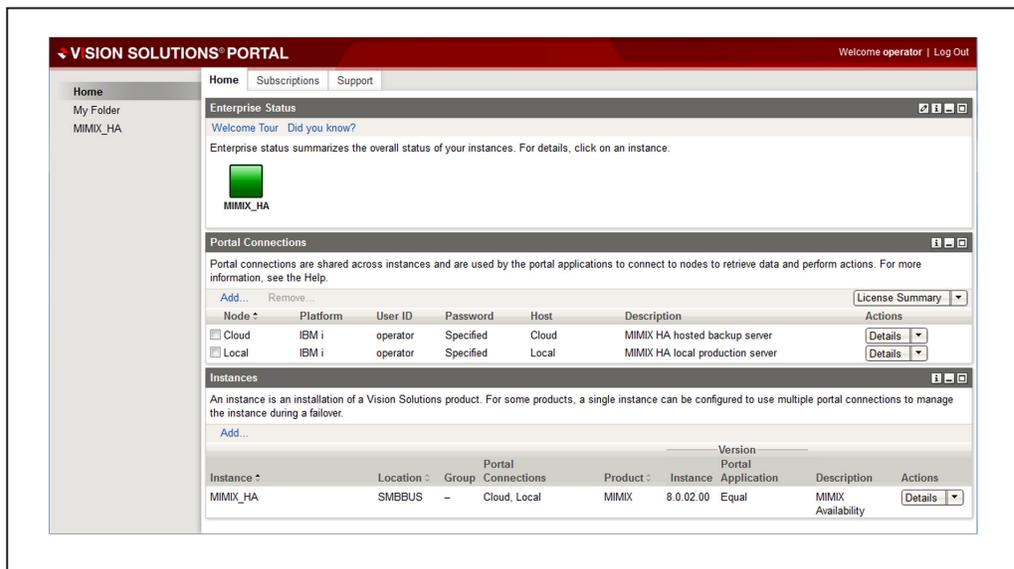
MIMIX Availability is managed through Vision Solutions Portal (VSP), an easy to use, highly configurable, browser-based user interface. Built on an industry-standard portal architecture, VSP enables user-selected “portlets” to be arranged visually to provide a customized view of the MIMIX environment for configuration, monitoring and management. VSP provides at-a-glance monitoring of the MIMIX status with color-coded enterprise level status displays. MIMIX Availability also allows lights-out monitoring with email notification of MIMIX events.

VSP is intuitive to use, and its high performance, push technology keeps information in the interface up to date. It also possesses an extensive context-sensitive help system with fly-over help notes that puts information at administrators' fingertips and allows them to use the interface to its fullest.

Status information is sorted by highest severity conditions, with smart prompting to assist in addressing the steps necessary for resolution of any issues.

VSP is kept secure by giving administrators control of which users can sign on to the interface and whether they can configure the interface or just monitor the system. Standardized views can be configured for use by groups of users. Product level security is honored by VSP to determine which users can perform actions such as switch.

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The Vision Solutions Portal home page provides color-coded, at-a-glance status for your MIMIX Availability protection. Clicking on the status icon takes you to more detailed pages for additional configuration and management of your environment.

### 3. Easy to configure, monitor and manage

Data-protection reports in VSP provide on-demand visibility into the protection status of libraries, folders and directories. They form the basis for easy configuration of the MIMIX replication environment.

Wizards enable libraries, folders, and directories to be added easily to the replication configuration. These wizards leverage built-in analysis and best-practice rules to create an optimal configuration.

MIMIX also allows management of the replication environment at the application level, providing high-level control of the multiple remote journal paths, the multi-threaded apply processes, and the configurations of multiple HA/DR servers. Management at the application level facilitates single-button operations for starting, stopping and switching the MIMIX environment.

A historical record of actions taken as well as graphs showing the current incoming transaction rate and apply backlog are also provided by VSP. This data can be analyzed to assess past performance and to plan for future operations.

#### 4. Customizable automated procedures

MIMIX Availability comes with pre-defined HA procedures that are each comprised of a series of steps. These procedures form the framework for customizable automation in MIMIX. Pre-defined procedures are provided for planned switches, unplanned switches, switch pre-checks, ending application group replication, ending target processes, and starting application group replication. Administrators can customize these pre-defined procedures, create new procedures, or create new steps within a procedure. MIMIX Availability includes templates for creating new procedures and for creating new steps in a procedure.

MIMIX Availability also provides tracking and logging of each procedure and step, giving you the ability to track a procedure's progress at a fine level of granularity and obtain logs of past procedure performance.

The automation capabilities of MIMIX Availability are very powerful, allowing you to increase the reliability and predictability of your availability operations. The use of standardized procedures eliminates human error. And the flexibility to modify and extend them as needed provides administrators with the power to tailor the process to meet their needs.

Single-button switches are performed from VSP with a simple click. And MIMIX Availability's fully tested, automated switch operations facilitate reliable, repeatable procedures, increasing the confidence that your HA/DR environment will be ready to switch at a moment's notice.

#### 5. Auditing for data integrity and switch confidence

Regularly monitoring replicated objects to identify any that have become out of sync with the production system and then bringing those out-of-sync objects back into synchronization is critical. The auditing that MIMIX Availability performs ensures the integrity of the objects on your recovery server and allows you to be confident that switches will complete successfully.

MIMIX Availability provides both scheduled audits and priority-based audits. Scheduled audits perform comprehensive, object-level audits on your replicated data. Eight individually scheduled audits are performed on each Data Group for thorough coverage. Objects that have become out of sync on the recovery server are automatically repaired.

Priority-based auditing maintains the audit status of every object and bases the individual object audit frequency on this status, improving audit performance and decreasing the amount of auditing required to maintain synchronization.

Administrators have the ability to customize audit frequency for new objects, changed objects, unchanged objects, and objects that have been audited in the past without differences. Priority-based auditing allows audits to complete more quickly and efficiently, an important consideration for very large environments.

MIMIX Availability also continuously monitors the data on the recovery server and notifies administrators of unauthorized changes and the identity of the user that made each change. Because MIMIX Availability detects object changes on the recovery server in real time, it gives you the option of automatically repairing objects based on policy, rather than waiting for the next scheduled audit. With self-healing audits and real-time monitoring, MIMIX Availability gives you total confidence that your recovery server is in sync and ready to switch.

## **6. Ultimate protection with additional servers**

With a single production server and a single recovery server located in the same datacenter, MIMIX Availability provides superior High Availability for your business. However, a third server located in a different geographical region adds true Disaster Recovery protection. Third servers are also desirable for an additional level of protection from downtime. With an added HA/DR server, your production server can be taken down for maintenance while maintaining HA protection with the other two nodes. The result is the ultimate in HA/DR protection.

MIMIX Global is a companion product to MIMIX availability that allows multiple backup servers to offer an even higher level of protection for your business, while also enabling multiple query servers to provide access to real-time business data.

With MIMIX Global, a switch or failover operation to any of a number of recovery servers will automatically adjust replication to all other HA/DR servers and query servers, keeping them in sync with the new production server. The complexity involved is hidden by seamless integration with the MIMIX VSP interface for easy switch management in multi-node environments.

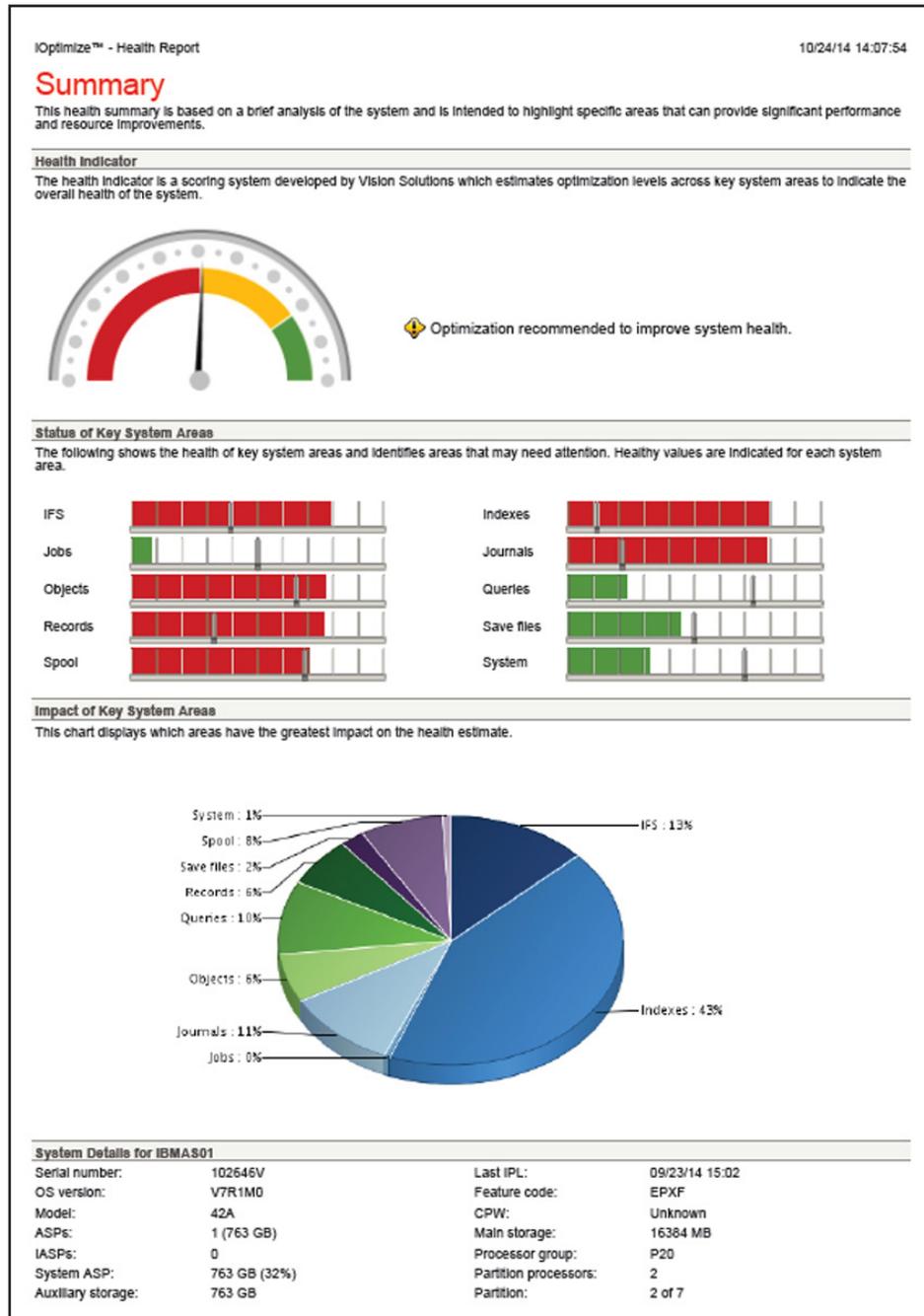
## **7. Integrated, automated IBM i server optimization**

An optimized, healthy production server is the building block of an efficient, reliable HA environment. MIMIX Availability is the only HA/DR solution that, through its iOptimize feature, includes broad platform optimization as a core part of its offering. iOptimize is an innovative, automated optimization tool that maximizes storage utilization, accelerates performance and enhances system resilience.

iOptimize continuously optimizes IBM i servers for improved efficiency and resource utilization to help improve disk, CPU and memory utilization; defer hardware upgrades and maximize your return on investment in hardware expenditures; improve interactive response times; shorten batch job run times; shrink nightly backup run times; improve high availability mirroring; and reduce or eliminate manual effort and downtime during optimization.

A comprehensive set of over 70 localizable, graphical health reports are also generated by iOptimize to assist administrators and management with making critical infrastructure decisions. When metrics are viewed in the browser-based VSP interface, actions can be initiated directly from those metrics. When exported, the reports can be used to identify trends and demonstrate compliance with CPU and disk SLAs.

Improving server health and accelerating performance with iOptimize results in less replication latency, faster replication and better storage utilization for a more efficient availability environment.



iOptimize uses the VSP user interface. Flexible sorting and display capabilities for optimization and monitoring make iOptimize simple to use. In addition, iOptimize provides more than 70 localizable, printable health reports. These reports can be used to demonstrate compliance with SLAs.

## The 8th Reason: Vision's People

Vision Solutions has served the needs of the IBM midrange availability market for more than 25 years. At the onset of our involvement in this industry, we pioneered infrastructure technologies to optimize performance and ensure efficient, reliable replication.

For more than two and a half decades, we have leveraged our close relationship with IBM and the insights gathered from working with thousands of customers worldwide to continually enhance our availability offerings.

MIMIX Availability—our flagship solution for IBM i—is an enterprise-class solution providing faster recovery, stronger data protection and a smarter way to manage high availability for IBM i. In this paper, we've discussed how MIMIX addresses the most important availability functions that must be considered when evaluating an IBM i availability solution. But Vision Solutions is more than just technology.

We are the global availability experts, with a worldwide network of certified partners to help you maximize your availability investment and a CustomerCare team that delivers around-the-clock, around-the-globe support with the most advanced and accessible tools—plus a team of veteran Professional Services experts with unmatched capabilities.

## Migrate, Protect & Recover... Anywhere.

### Vision Solutions

Vision Solutions is the premier provider of software solutions designed to protect data, minimize downtime and maximize resources for the modern data center.

We are the only company to deliver workload migrations, high availability, disaster recovery and data sharing – across multiple operating systems, on any hardware and on any physical, virtual or Cloud-based environment. Our solutions perform near-zero downtime migration of data, applications and servers to significantly reduce cost, risk and resource requirements.

We utilize real-time replication to prevent data loss and enable fast recovery to secondary servers in the event of a planned or unplanned failure at the primary site. Our software also enables different database platforms to seamlessly share and consolidate data in real-time for proactive, business critical decision-making.

Vision Solutions has been serving enterprises and managed service providers for over 25 years through our portfolio of MIMIX®, iTERA® and Double-Take® product brands.

For more information call: 1.800.957.4511 (toll-free U.S. and Canada)  
or visit [visionsolutions.com](http://visionsolutions.com)

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# MIMIX® AVAILABILITY™

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