Ensuring real business continuity for mission-critical SAP solutions

Increasing availability by exploiting the IBM z Systems Coupling Facility

Highlights

- Minimizes downtime for SAP systems, helping companies reduce the risk of foregone revenues and reputational damage

- Protects key components with automated failover and recovery

- Enables transactions to be completed quickly, even if hardware or software failures occur mid-transfer

"As one of Argentina's major banks, it is critical that we can rely on an IT infrastructure that is reliable and resilient, and that we and our clients can operate 24/7."

— Diego Revello, ITC Manager, Banco Galicia

Many companies run their business-critical processes on SAP software, which manages everything from finance and accounting to supply chains. For global enterprises, SAP system downtime—planned or unplanned—may be commercially unacceptable.

In the case of unplanned outages, through physical disasters or system errors, the financial impact of lost transactions and unavailable systems can rapidly run out of control. Potential sales can be lost, impacting revenues, and customer confidence can be severely shaken. The time and cost of the subsequent recovery may be relatively cheap compared with the wider, long-term reputational damage.

Even scheduled outages, such as those often incurred during hardware and software upgrades, are becoming commercially unviable. Customers, suppliers and partners expect to be able to transact business at any time, 24x7, and one person's off-peak downtime is another person's prime time.

In practice, system outages may occur for any number of reasons. Fire and flood may strike, or system components may fail. To mitigate the risk, IBM® offers proven, mature technologies that enable continuous operations by protecting key components with automated failover and recovery. These solutions are designed to reduce business risk for large enterprises relying on mission-critical SAP solutions.

Increasing availability of SAP systems

In SAP solution landscapes, two key components govern the ability to recover from an outage: the database itself, and the state of the SAP Enqueue (ENQ) server that synchronizes access to business data. For continuous operations and rapid recovery from problems, both the database and the ENQ server must be fully protected.

For organizations deploying the IBM z Systems® platform, IBM offers Parallel Sysplex® with DB2® data sharing. This is a specific technology that enables unparalleled business continuity and disaster recovery.

The underlying z Systems technology can be exploited to protect the SAP ENQ server, offering greatly enhanced protection from the business risks of system outage.

An SAP ENQ server running on z/OS® can directly exploit the z Systems Coupling Facility (CF) as persistent storage for replication of the enqueue table. Instead of sending replication requests to a replication server on a remote host, the ENQ server writes the replication data directly into the CF, and a separate SAP ENQ replication server is no longer required.

This approach simplifies the system landscape, cuts operational costs by eliminating the need to maintain a separate replication server, and improves total ENQ server availability.

In case of failover, the ENQ server can be restarted manually or by the automation software on another (arbitrary) LPAR within the z Systems Parallel Sysplex, and read the replication data from the CF.

Enhanced business continuity decreases business risk

Deploying the SAP ENQ server on the IBM z Systems platform takes advantage of these technologies to provide extremely high availability, and enables simplified, automated failover processes. Hosted within z/OS, the ENQ uses the same, proven Parallel Sysplex technology for cross-system communication that has been employed in DB2 data sharing and other z/OS products for many years.

Replicating data from the SAP ENQ server into the z Systems Coupling Facility requires only a small footprint in the CF, results in slightly lower overall resource consumption and is significantly more robust than the standard TCP/IP-based replication option.

Offering a compact, robust, and cost-effective deployment, the IBM Coupling Facility for the SAP ENQ server reduces system complexity and provides greatly enhanced business continuity, enabling companies to avoid foregone revenues and reputational damage.

For all enterprises operating mission-critical SAP solutions, moving the SAP ENQ server to the IBM z Systems platform makes economic, technical, and business sense.

For more information

To learn more about running SAP applications on IBM z Systems, contact your IBM sales representative or IBM Business Partner, or visit us at: **ibm.com**/systems/z/solutions/editions/sap-applications.html or **ibm.com**/services/us/en/sap/solutions/systemz.html

Share with other users and experts in the SAP on IBM z Systems Community: ibm.biz/BdHmpM

A technical white paper on the IBM Coupling Facility for the SAP ENQ server is available at:
ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP102248

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