

# SharePlex Replication for Risk Mitigation

## Business Depends on Databases

Does the resiliency of an organization's databases and the infrastructure that runs them really matter all that much in today's world of high-performing servers and cluster architectures? Yes, more than ever since organizations and their operations teams face increasing pressures to keep business-critical applications available with no excuses. Skills gaps on DBA teams, cloud migration experimentation, and forays into new databases and infrastructures cannot affect the constant use of data throughout and outside the organization.

C-level and other leaders in all organizations require timely visibility into business metrics and trends. It is why CIOs, held accountable for the availability of data, increasingly seek cloud strategies and resiliency strategies that control costs but also keep data available. Strong strategic and tactical business decisions depend upon data.

Your customers are plugged into this ecosystem, too. Customer-facing applications are their window into your organization's products and services. Data is a difference-maker: the difference between a customer remaining with you and a customer becoming frustrated and moving elsewhere.

Resiliency is not a nice to have. It is a must-have. Poor performance and issues re-appearing is just not acceptable to anyone. Not to data analysts, not to organizational leaders, and especially not to your customers.

## Database Risk Assessment

Business applications, internal- and external-facing, that depend on underlying databases often face



contention issues. Online processing requirements and batch/reporting needs often compete for database resources like CPU, memory, and table or row access. If the competition for resources is won by the batch and reporting use cases, the loser is too often the organization's crucial online e-commerce applications.

Cloud migrations are choices that add to the complexity of managing a healthy ecosystem. The processes and mechanics of moving data to the cloud carry risks of data loss and reduced data availability. Customers can be impacted. Operations teams can spend unplanned time and resources trying to resolve the problems – upending cloud strategies that are meant to improve the business.

Other risks to data availability are well-known and never-ending including natural disasters, tasks during planned maintenance, and malicious activity. Does your organization provide reliable means of resilience in all these cases, minimizing downtime and costs?

While these challenges are becoming more complex and making surprise performance and outage problems higher risks, the skills of operations

teams are often lagging. Database administration, infrastructure administration, Cloud Ops, and other teams may have honed their skills on databases and infrastructure, but skills in cost-effective and safe (read “no data loss”) cloud migrations are rare enough in some organizations that leadership must alter or delay cloud migration goals. And typically, these operational teams are not growing. So, more is asked of people to not only solve problems faster, but also to help with digital transformations – a common polarity that too often results in time and effort shifting to fire-fighting over helping the organization transform.

## Review of Causes Outlined in Chart

### 1. Reporting workloads overwhelm OLTP system:

When the Online Transaction Processing system is overloaded, performance is affected and can alter your customers’ experience.

### 2. Planned database maintenance goes wrong: Even when you plan for maintenance, issues can occur.

3. **Downtime during migration:** Whether migrating from/to hardware, the cloud or database vendors, there will be downtime as the migration occurs. Some issues may not be discovered for hours or days later.

4. **Loss of full data center – catastrophic data loss, service outages:** Unexpected outages can affect everything from productivity and customer experience to IT and business coming to a halt.

5. **Data warehouse builds, ETL processes are batch, not real-time:** All components of building a data warehouse are needed so that you can get results quickly and analyze data on the fly.

The table below encapsulates the cause and potential impact of five common database risk scenarios. It also shows the corresponding Inherent Risk scores for organizations that are yet to implement controls or mitigation strategies, followed by the potential Residual Risk scores (much lower) after the deployment of Quest’s database replication offering.

Risk Scenario	Cause	Risk Event	Impact	Inherent Risk			Residual Risk		
				Likelihood	Severity	Score	Likelihood	Severity	Score
1	Reporting workloads overwhelm OLTP system	Performance issues affect usage of the system	Reputational damage and revenue can be affected when customer experience suffers; loss of productivity if internal applications affected.	4	2	8	0	0	0
2	Planned database maintenance goes wrong	Downtime, data loss, application(s) unavailable, productivity loss	Revenue loss is possible as customer experience suffers, reputational damage; the organization’s data pipeline is disrupted, analysis and other internal tasks halt or lose trust.	4	4	20	4	0	0

				Inherent Risk			Residual Risk		
Risk Scenario	Cause	Risk Event	Impact	Likelihood	Severity	Score	Likelihood	Severity	Score
3	Downtime during migration	Must take an outage when migrating	Revenue loss is possible as customer experience suffers, reputational damage to the organization's trust with IT, affecting data analysis and other internal tasks.	5	5	20	1	1	1
	Unplanned – more severe	At switchover, new system experiences unplanned issues; cost overruns and success of migration strategy is unmeasurable							
4	Loss of full data center – catastrophic data loss, service outages	Outage, data loss, application(s) unavailable, productivity loss	Revenue loss is possible as customer experience suffers, reputational damage; the organization's data pipeline is disrupted, analysis and other internal tasks halt or lose trust.	1	5	5	1	1	1
5	Data warehouse builds, and ETL processes are batched, not real-time	Current data is not available for analysis and decision-making	Business decisions are based on incomplete data.	2	3	6	0	0	0



## How Resilient and Available are Your Databases?

In the event of a data outage, the extent of an organization's difficulties is determined by its ability to respond and recover; in other words, its resilience in restoring service. For so many organizations, the smooth and high-performing operations of the databases and the pipeline that flows the data through the organization is a business requirement.

### Quest can advise you about best practices for:

- **Becoming proactive about data availability.** Design smooth replication and resilience into your data operations.
- **Transforming your data estate safely.** Data transformations like moves to open-source databases and databases in the cloud, often meant to save money and increase availability, should do both without risks to the business.
- **Optimally use the data you have.** Ensure that the right data is available to the right people and systems exactly when needed to bring value to the business.

Talk with us about our database replication solution that gives you the ability to increase the safety of your data transformation efforts while continually meeting or exceeding your customers' high expectations.

[Learn more about SharePlex.](#)

## About Quest

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