

Technical aspects of business continuity and disaster recovery

With a continuing squeeze on budgets, organisations are looking to save money on the provision of their business continuity plans and looking to improve the resilience of their live IT systems. Jason Connolly, Next Generation IT director, examines the options



Recent technologies have enabled continuous data protection through the replication of data to a disaster recovery site, and more recently still, virtualisation has enabled true high availability to be built into the live site for faster recovery time, and minimal data loss.

Next Generation IT has invested in a suite of innovative services that build on these technologies to improve the resilience of our clients' systems, and provide more cost effective disaster recovery, which reduce the risk for local businesses, satisfy regulatory requirements, and provide a competitive advantage to their business. Here is a brief summary of the options available to businesses:

The problem with Tape Backups

Traditional tape backups are cost-effective, but are ultimately the least reliable in terms of recovery time and data loss for disaster recovery. Backups are usually only taken each night, and in the event of a disaster, a second set of equipment must be procured before a lengthy restore process is carried out. In practice, this means that the systems can take several days to be recovered, and all changes or additions to the data, including e-mails and files, since the last good backup will be lost.

Replication to a Disaster Recovery Site

This technology overcomes many of the shortcomings of backup tapes by copying the live data across a private link to a business recovery site. Typically a duplicate of the IT infrastructure is set up and ready at the DR site in case of invocation, and the data is replicated directly onto the DR hardware, so the systems are ready to go in the event of a disaster.

We have found that this type of replication works very well providing a fast failover of less than an hour, and very little or no data loss. This scenario has been common among many financial institutions in recent years, but is very expensive. It requires a complete duplicate set of hardware and licences on the DR site, plus the rental of seats at the DR facility and charges for the hosting of DR equipment, power usage and private circuit.

Virtual Disaster Recovery

Many organisations cannot afford to purchase a duplicate set of hardware and software, but local regulatory requirements mean that finance businesses still need some type of offsite recovery plan. To enable local businesses to comply with this requirement in a cost-effective manner, we offer a virtual DR recovery service where we provide space on our NGIT-hosted system for backup images. We backup client's complete system states to portable hard drives and provide a service

to restore these clone systems to our DR facility during their regular health checks. In the unlikely event of a disaster, we are then able to fire up the client's DR systems and restore any data changes from backup tape in a timely manner, at a fraction of the cost of purchasing a duplicate of server hardware and software for DR.

Business Recovery Suites

We have seen a growth in demand for smaller BCP suite to be used as a base of operations. Next Generation IT has invested in a new 5,000 sq ft business recovery facility in St Peter Port, with smaller ready-to-move in suites in the event of a disaster. These suites are fully-furnished, high-quality office accommodation with desks, PCs, wi-fi, telephones, meeting rooms, kitchens, parking and all other office facilities. We find that a 10-person office is typically used as a base of operations for key staff during an event, with other staff members accessing the DR systems remotely from any internet-connected PC.

Highly Available Systems

In our experience, 99% of all disasters are as a result of hardware failure. We have found the best solution is usually to create a highly-available infrastructure in the live environment. This is the ultimate in business continuity, providing a clustered live system with two active-active nodes. Either of the two nodes can fail, and the second will continue operating almost seamlessly to the end user, who can continue working with no loss of data.

This type of system has the added advantages of load balancing of resources across the duplicate systems, providing improved performance and flexibility, in addition to business continuity.

Focusing your investment

Given the frequent role of IT hardware failure in disaster recovery, focusing investment in the live systems can provide the best value for money, enabling the budget for DR systems to be used in the live environment to increase performance and resilience.

We implement this type of solution to many of our clients, using the backup of virtual server images to regularly restore to our business recovery facility, to cover the unlikely event that the live site was destroyed. This avoids the cost and issues with private circuits and DR equipment, and the complexity of asynchronous replication, while covering the dual requirements of high availability and business recovery in the most cost-effective manner.

The key balance is to maximise the performance, flexibility and reliability of the system, while providing the best value for capital expenditure and minimise ongoing support costs.