

Countering Emerging Digital Threats

The disaster recovery industry was created to provide backup computer systems in an era when downtime was less critical than it is today.

Digital threats such as ransomware are challenging businesses in new ways and business continuity needs to be more comprehensive than ever. CSI's Helix Cyber Resiliency Service offers enhanced DR with virtual machine replication.

VM Replication vs Data Backup

Virtual machine replication and data backup may appear to be interchangeable, but they have different goals and both approaches should be considered when designing a data recovery plan.

Data Backup

Backups are used to create copies of data for compliance and long-term record keeping. To reduce the amount of data storage required, backup software often leverages compression and deduplication. Data reduction lowers the cost of storage used, but must be reversed before files can be restored. In the event of multiple VM failures or the loss of an entire site, recovery from backups is slow and often not practical.

Virtual Machine Replication

Replication creates copies of a VM in native format. VM replicas are fully-functional, so when a disaster strikes, restoring service is simply a matter of switching to the VM replicas. Recovery Time Objectives can be as low as a few minutes.

Helix Cyber Resiliency Service

CSI can enhance DR plans by protecting critical servers through virtual machine replication in addition to providing core backups. Unlike backup files, replicas are stored in native format.

The Helix Cyber Resiliency Service uses the replication functionality within Veeam software to replicate snapshots of VMs from a primary cluster to replica VM instances in the IBM Cloud. Once created these snapshots are stored as readonly immutable copies, enhancing the level of protection against the threat of ransomware and data corruption.

To maintain an exact copy, ready-to-start replicas are regularly updated at intervals of minutes or hours depending on available bandwidth. This allows instant boot-up in the cloud from the most recent recovery point, rather than relying on a more lengthy backup restore process.

In the event that a production VM stops working properly, the replica takes over the role of the original VM. Automatic network routing minimises the time to reroute users.

After the original VM is repaired, service can fail back with all changes that occurred on the replica transferred to the original VM. If the original VM cannot be repaired, service is permanently switched to the VM replica. The original VM can be over-written and re-used.













Helix Cyber Resiliency Service Tiers

CSI provides two tiers of service. VMs in the Platinum tier have CPU and memory resources reserved on the replica instances ensuring a production-level of service in event of failover. VMs in the Platinum tier are also included in an annual DR failover test to prove recoverability from the replicas.

Service Feature	Gold	Platinum
Access to 24x7x365 Service Desk	X	X
Daily email status reports	X	X
Access to Service Portal	X	X
Software licensing included	X	X
Immutable snapshot created of each replication job	X	Х
Define frequency and retention of snapshots	X	X
WAN acceleration	X	X
Service Reviews	X	X
Product support and vendor liaison	X	X
Fully hosted and managed service	X	X
Recovery Compute Reserved 24x7 (CPU & memory)		X
DR Testing included		X

Helix Cyber Resiliency Service Portal

A console gives access to CSI's Helix Cyber Resiliency services. All registered virtual machines can be viewed and a daily report is made available showing the success of replication jobs over the past seven-day period. Multiple restore points are visible within the environment.

