

# 5 Things You Need to Know About Stretch Clustering

Stretch clustering, where host servers are part of the same logical cluster but located in separate geographical locations, is necessary when high availability of services is a critical success factor. It offers the advantage of enabling easy migration of virtual machines between locations with full access to data without downtime to ensure application availability in the event of a site outage.

**Here are five characteristics of stretch clustering and how Hedvig enables them in a seamless manner:**

- 1) A single storage subsystem across sites.** A vSphere Metro Storage Cluster requires a single storage subsystem that spans both sites. Hedvig provides a single cluster with a single storage subsystem that can span multiple locations.
- 2) Read and write to both locations simultaneously.** VMware requires a vMSC storage subsystem to be able to read and write from both locations simultaneously. Hedvig handles this requirement utilizing Storage Proxies on the ESXi hosts.
- 3) Uniform vs. non-uniform host access configuration.** A uniform configuration is where ESXi hosts are connected to storage nodes across all sites. A non-uniform configuration is where ESXi hosts are only connected to storage nodes in the same site. (Hedvig provides a uniform configuration)
- 4) Disaster avoidance vs. disaster recovery.** vMSC is designed to deliver disaster avoidance, enabling automated failover between two sites. To provide additional assurance of disaster recoverability in the event of a regional outage, most data protection policies require a 3rd copy of the data replicated elsewhere. Hedvig meets this requirement by providing a disaster recovery solution that extends the storage cluster to three or more sites across any distance or geography. Adding a third site also decreases the amount of additional compute capacity required for failover.
- 5) Low latency and high bandwidth network requirements.** Network performance is critical for stretch clustering, therefore it is common for the data centers to have a limited amount of physical distance between them. Examples include data centers on the same campus or in the same metropolitan area. VMware requires the following for a stretch clustering vMSC solution:

- Minimum 250Mbps (with redundant links) for the ESXi vSphere vMotion network
- CMaximum 10ms round trip time (RTT) for synchronous storage replication links, with 5ms being the most common maximum RTT

The Hedvig solution can be configured to deliver storage services and application consistent data across low latency and high latency environments.

- Maximum 10ms RTT for the VMware ESXi management network

**Hedvig provides a robust and easily administered software defined storage solution for stretch clustering, like VMware's vSphere Metro Storage Cluster. [Contact us today to learn more!](#)**

## ABOUT HEDVIG

Built by software engineers of the world's largest distributed systems, Hedvig delivers modern storage for enterprise compute environments running at any scale. Customers such as LKAB, Scania, and GE use the Hedvig platform to transform their storage into a fundamental enabler of digital business strategies.