

# WAN Optimization versus Data Acceleration

WAN Optimization and its derivatives were architected over 10 years ago when bandwidth was restricted. In order to overcome the issue of easily flooding pipes, the only credible answer was to minimize the amount of data to be sent over the pipe to increase performance. By utilizing deduplication or compression techniques this was accomplished by several vendors to excellent effect. WAN Optimization is pervasive especially for application performance most commonly found in remote office locations in a CIFS or NFS environment (chatty protocols) with commonly used files.

If we move on 10 years the infrastructure has changed dramatically. Bandwidth cost and availability has seen 1Gb pipes become the norm with 10 Gb pipes becoming widely available. In this new environment, traditional WAN optimisation is neither efficient nor scalable. Compression and more importantly, dedupe require massive computing resources (24 CPU cores) just to exploit the full capacity of a 1 Gb connection let alone a 10Gb. Furthermore, the type of data we now use has change dramatically with a lot more media content with pre-compressed data formats and encrypted files, these present considerable if not insurmountable challenges to traditional WAN optimisation.

The focus has now moved from sending the minimum, to how do we maximize the performance that this bandwidth provides. This is where WAN Acceleration takes over the torch from WAN Optimisation. WAN Acceleration does not touch the data, its works sympathetically with TCP/IP using data parallelization techniques and Artificial Intelligence to quickly move the data between 2 points mitigating the effects of latency and packet loss with the use of Self-Managing , Self-Configuring and Self-Optimising Artificial Intelligence. As the data is not manipulated or stored locally in any way by WAN Acceleration the compute and storage resources are minimal: One CPU core and zero disk storage.

		Competitors	Bridgeworks
WAN Optimization Riverbed Silver Peak Ipanema	Strengths	<ul style="list-style-type: none"> <li>*Well established</li> <li>*Strong/large customer bases</li> <li>*Provides excellent performance improvement for CIFS/NFS</li> <li>*Well developed efficient dedupe/compression technology platforms</li> </ul>	<ul style="list-style-type: none"> <li>*Built for scalability, large bandwidth, multiple 10GB</li> <li>*Rapid, non-disruptive deployment</li> <li>*Minimises infrastructure and operational costs</li> <li>*Once installed it self-learns, self-monitors and self-manages - fit and forget.</li> <li>*All data - no excuses</li> </ul>
	Weakness	<ul style="list-style-type: none"> <li>*Not built to scale over large bandwidth</li> <li>*Cannot carry Encrypted or compressed data</li> <li>*Complex &amp; expensive to manage/tune</li> <li>Large compute and storage requirements</li> </ul>	<ul style="list-style-type: none"> <li>*Brand awareness</li> <li>*For larger volumes over distance (not application performance)</li> </ul>