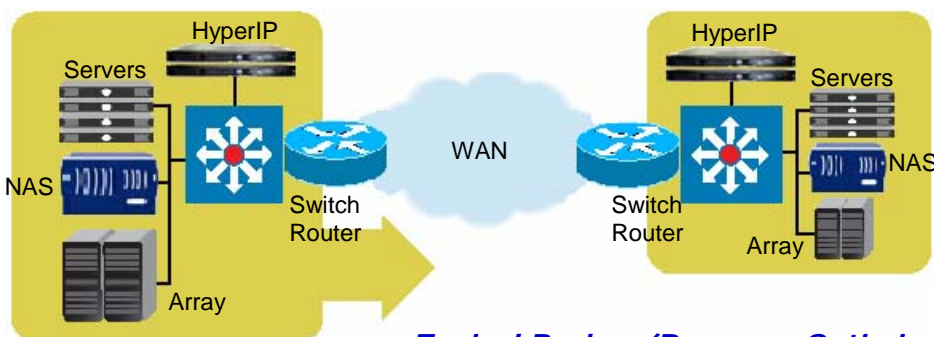


# HyperIP versus WAN Optimization

## Technology Comparison



*Typical Backup/Recovery Optimization by NetEx HyperIP*

The **HyperIP** platform scales from 1 Mb/s to 622 Mb/s providing optimization for backup, recovery and data replication applications. WAN Optimizer's solution, and others, are sufficient for optimizing desktop applications but are not well suited for mission-critical BC / DR requirements.

### Celebrating 25 years of Transport Technology

HyperIP is an award-winning, patent-pending BC / DR optimization solution for backup, recovery and data replication applications. It is the best solution for moving TCP data efficiently over a time tested, production-hardened transport across WAN networks. HyperIP provides auto-sensing data compression, TCP-based optimization; including latency, jitter, and packet loss mitigation, congestion avoidance and out-of-order sequence correction. HyperIP does not alter application protocols nor does it modify any file systems. It simply moves storage data (blocks or files) very efficiently over inefficient network conditions with guaranteed data delivery.



### Product Features

**High Performance & Scalability** - A single HyperIP platform supports speeds from 1Mb/s to 622 Mb/s where WAN Optimizers offer multiple units to build aggregate performance. WAN Optimizers will also attempt to sell multiple product models that require a forklift upgrade, negating investment protection for previous models that may have been purchased. With HyperIP you can transparently upgrade your bandwidth allowance as application demands grow via a simple performance key upgrade, providing the complete feature set all the way up to 622 Mb/s. Key upgrades are non-disruptive, in-line, real time and include the ability to add an active-active or fail safe roll over unit with little effort.

**TCP/UDP/ICMP Optimization** — HyperIP mitigates issues that degrade application and data migration performance over the WAN. HyperIP manages data movement across the WAN and is instrumental during the restore when recovery is most needed. HyperIP also enhances data delivery of remote SANs including FCIP, iFCP or iSCSI transport technologies. No other appliance, including WAN Optimizers, can make this claim. Cisco and Riverbed, like most WAN optimization vendors, started off optimizing branch office requirements and spoofing desktop protocols such as NFS and CIFS. These types of application acceleration techniques are not well suited for mission-critical storage requirements because of performance limitations and storage vendors will simply not allow their applications to be spoofed. HyperIP's roots are in the enterprise data centers, moving large amounts of data across the world for Fortune 500 companies.

**Simplicity & Transparency** — HyperIP is transparent to applications and provides LAN-like performance over the WAN. No changes are required to the application when implementing HyperIP. The HyperIP units connect to an existing LAN switch / router providing a totally non-disruptive, seamless installation. The HyperIP web based GUI provides a very simple means to install, configure, and operate your HyperIP. Most WAN Optimizers require their own monitoring system to be implemented.

**Transport Technology and Non-Caching** - HyperIP utilizes a transport technology and does not pretend to be a storage system and therefore does not cache data like some WAN Optimizers. Storing any mission-critical data onto a non-storage, non-RAID system is flirting with data integrity and corruption issues.

**Efficient Data Blocking & Compression** — HyperIP utilizes a loss-less data reduction algorithm that reduces the amount of data transferred over the WAN. Data is organized into large blocks, compressed and then sent over the WAN. HyperIP customers experience compression ratios ranging from 2:1 to 15:1. HyperIP does not provide de-duplication because this feature is best supported by the storage system and not a WAN optimizer pretending to be a storage controller.

**Rate Limit Controls** — HyperIP optimized throughput can be dynamically changed and/or scheduled by time-of-day as required by IT. This gives the control back to the IT department to provide or limit bandwidth to applications when necessary. Being able to set schedules and implement bandwidth controls is especially important to meet storage backup windows and more importantly to provide the throughput for the restore.

**Performance Monitor Tools** — HyperIP's graphical user interface provides a heads up display of throughput and performance statistics. Several built-in utilities are included for testing network capacities, latency, trace routes, optimum network segment size and others. The HyperIP GUI in real time provides the ability to work with performance adjustment controls allowing applications to achieve their maximum performance. The system is fully SNMP compliant for integration into a central monitoring console.

**High Availability** — HyperIP's Active—Active and Automatic Hot Standby feature provides fault tolerant operation. User configurable controls will send broadcast capable e-mails and/or SNMP traps when HyperIP detects a triggering event providing the early warning indications that network administrators demand.

**Encryption** — HyperIP has been qualified with our industry's best-of-breed security encryption devices including; General Dynamics' (DOD) Taclane, Cisco VPN routers, CipherOptics, Blue Ridge Networks BorderGuard, etc. HyperIP leaves encryption to the experts and does not encrypt data. HyperIP is best deployed when optimizing data prior to encryption if compression is to be done by HyperIP, however, it can also optimize encrypted TCP/UDP/ICMP traffic. WAN Optimizers are new participants in the 'encryption pool' and many break the end-to-end Secure Socket Layer (SSL) connection using their own established temporary certificates and keys over the WAN transmission. Terminating SSL poses a huge security risk that has the potential to compromise data.