Remote Direct Memory Access (RDMA) increases the efficiency at which data is transferred by removing the CPU from I/O tasks, freeing up resources to accelerate application performance (Server-to-Server or Server-to-Storage).

**Without RDMA**

**With RDMA**

<table>
<thead>
<tr>
<th>Performance</th>
<th>Scalability</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Throughput &amp; IOPS</td>
<td>Reduce Overhead</td>
<td>Lower CPU Utilization</td>
</tr>
</tbody>
</table>

- **6X The Throughput** Compared to iWARP
- **<1usec Latency** VM to VM Communication
- **<2% CPU Utilization** Delivering I/O at 25Gbps

**RDMA Over 25GbE Provides 23.5Gb/s Total Throughput**

**Accelerate Your Server & Network Infrastructure With Mellanox 25Gb Ethernet and Boost Application Performance and Scalability!**
Increases in data center traffic are driving requirements for increased server and networking bandwidth. Data centers also require an offering that can scale effectively well into the future, something that 10GbE falls short on providing. 25Gb Ethernet arrives just in time to solve the concerns that 10GbE infrastructures cannot provide the bandwidth, nor scale economically to meet future growth requirements. 25GbE technology provides superior server and switch port density by providing higher bandwidth in a single lane along with lower costs and power consumption. 25GbE is a new standard that leverages technology defined for 100 Gigabit Ethernet implemented as four 25Gbps lanes (IEEE 802.3bj) running on four fiber or copper pairs. Solutions built on 25GbE are backward and forward compatible with 10, 50, 100, and future 200 and 400 GbE products, ensuring an upgrade path that future-proofs solutions.

As high bandwidth interconnection become more prevalent, processing network requests places a significant burden on the CPU. With offloads such as RDMA, efficiency can be gained to further improve performance of 25GbE networks. RDMA allows network adapters direct access to application buffers, bypassing the kernel, CPU and protocol stack so the CPU can perform more useful tasks while I/O transfers are taking place. This delivers increased performance within servers, allowing application workloads to efficiently scale in high-bandwidth networks, making the decision to migrate to 25GbE a simple one.