



Lopoco Ultra-Efficient Server and Storage Products Inspire a New Server Provisioning Paradigm in the Data Center

With the introduction into the market place of Lopoco's revolutionary server products, a new way of looking at provisioning IT equipment for the data center has also come into existence.

In this era of huge varieties of choices in the area of server configurations, including CPU and disk options, experienced IT professionals have, over the years, learned that the server configuration most likely to make everyone happy is a two processor server with large core count for each processor. The performance of this one-size-fits-all system would be good enough to handle most any application software that end users required. These days, however, the software landscape has changed somewhat. Virtualized cloud environments, with highly scalable software infrastructures like hadoop, openstack and the like, are becoming more and more common. The size of data centers is increasing to meet the demands of big data analysis and other corporate needs. But the operating cost and the electricity usage of these data centers is also becoming an issue.

And so the ultra-efficient servers from Lopoco came into the picture. Lopoco servers are designed from the ground up to be extraordinarily efficient compared to conventional machines, and as a natural consequence have a very balanced resource configuration of CPU core count, memory and network connectivity. A modern data center provisioned with such servers can have higher average available compute capacity and an equivalent or better throughput capability, all *combined* with drastic reductions in electrical power consumption. Most customers see a 50% or greater reduction in electricity use which translates into large operating expense reductions.

Let's compare a few numbers.

	Conventional server with 2 processors and 20 cores total	Lopoco LP-6240 Server with 1 processor and 12 cores total
	500 servers	700 servers
Servers per 8kW rack	16	40
Total number of racks	31	18
Kilo watts	125	38.5
Server cost	\$5,000,000	\$3,850,000

From the table above, it's obvious that even with 700 Lopoco servers utilized in lieu of 500 conventional servers, far fewer racks will be required, 1/3 the energy will be used (and paid for) and

even the estimated purchase price will be substantially lower. But the larger number of servers means that there is a higher granularity of parallelism, and therefore higher average available capacity and lower job latencies for parallelized latencies. All while delivery equal or better throughput.

Smooth, simple support

Individual unit down times reduced to minutes, not hours or days. With Lopoco servers, large data center customers need never bother with repairing or servicing products themselves again. Lopoco will furnish the customer with on-site, un-paid replacement units which, in the unlikely event of a problem with a customer owned machine, can be instantly swapped into the place of the ailing unit. A simple scan of the bar codes on the new and the old servers, and Lopoco or one of its reseller or support partners will take care of shipping the swapped out unit back. If a customer's on-site stock of replacement units gets below a certain threshold, replacement units will be delivered immediately.

This results in a dramatic reduction in on-site personnel requirements, both in hours and numbers, should that suit the customer. IT personnel can be re-tasked to monitoring and end user ticket response, resulting in greater end user approval levels.