lopoco

low power systems

Company Introduction

HISTORY

- Started in mid 2010
- We were looking for servers that get the job done, but:
  - operate at a fraction of the cost of conventional servers
  - are silent, or close to it
  - generate a fraction of the heat
  - have performance and capacity at a decent price
- We couldn't find any, so we started building our own
  - One year later, we released the LP-2180 microserver family, and the LP-2220/LP-4240 in 2012 and LP-6200 heavy duty server family in 2013
  - 75% less power consumption, half the size, quiet, competitive price

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Company Introduction

CUSTOMERS

pogoseat

Datafiniti
The Search Engine for Data

LIGHT & MOTION

SYMSOFT SOLUTIONS
Creation through Collaboration

methodics™

amazon.com

ebay

YAHOO!

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Why

- Green

  Green computing, for most of the industry, is still largely talk. Lopoco brings real green computing solutions to the table in the form of right-sized server platforms that conserve power usage, especially when idle (over 90% of the time)

- TCO

  Reducing the power consumption of your servers means you can not only reduct your electric bill, but also reduce your HVAC costs an equal or greater amount.

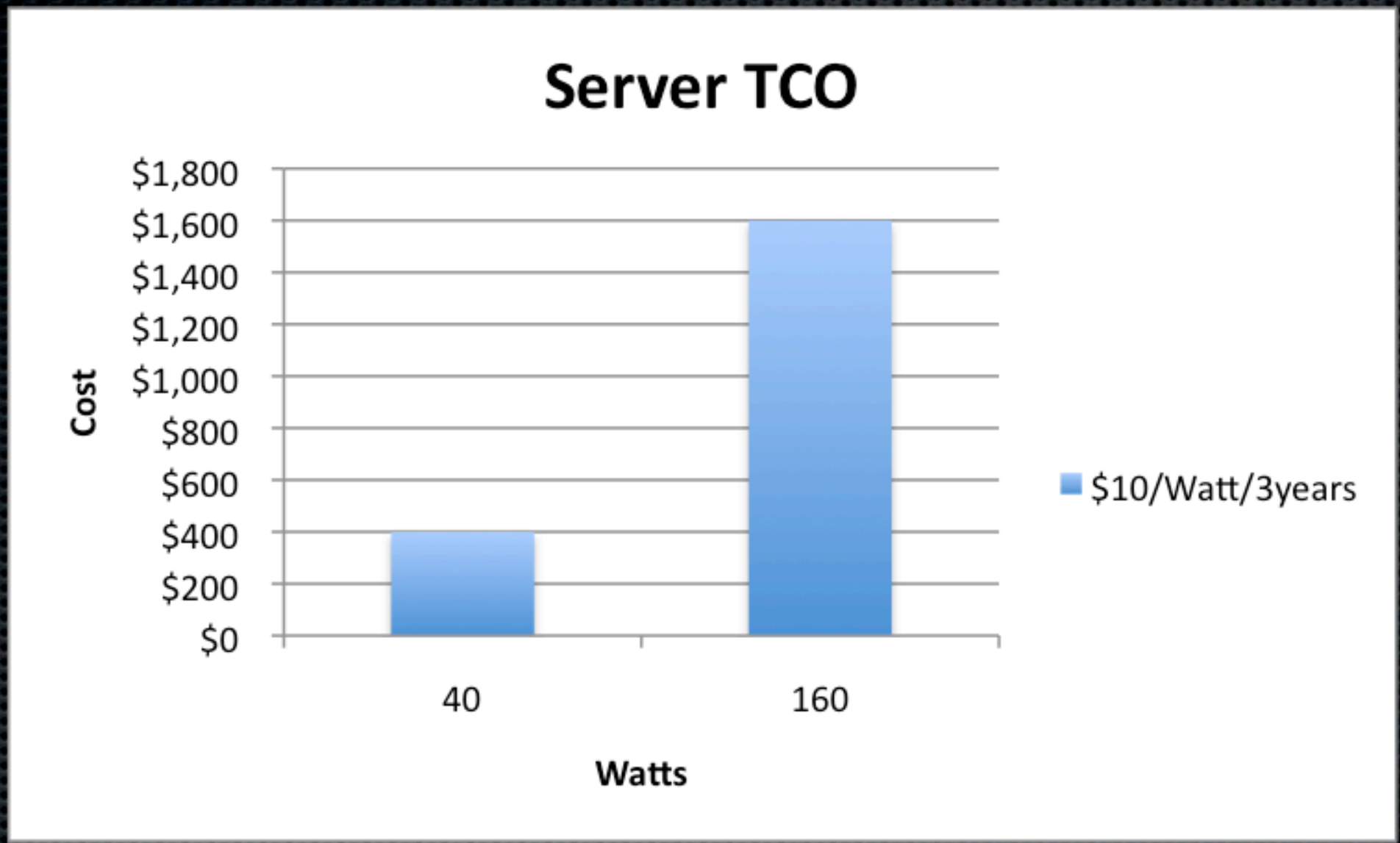
- Availability

  By utilizing two or three lower cost, lower power, smaller physical footprint servers in the place of one large, expensive, fire-spewing conventional server, higher uptimes can be achieved at a lower price point and lower overall TCO.

- ROI

  Server farms of the same throughput can be built in less physical space, leaving room to grow without replacing, substantially increasing ROI.

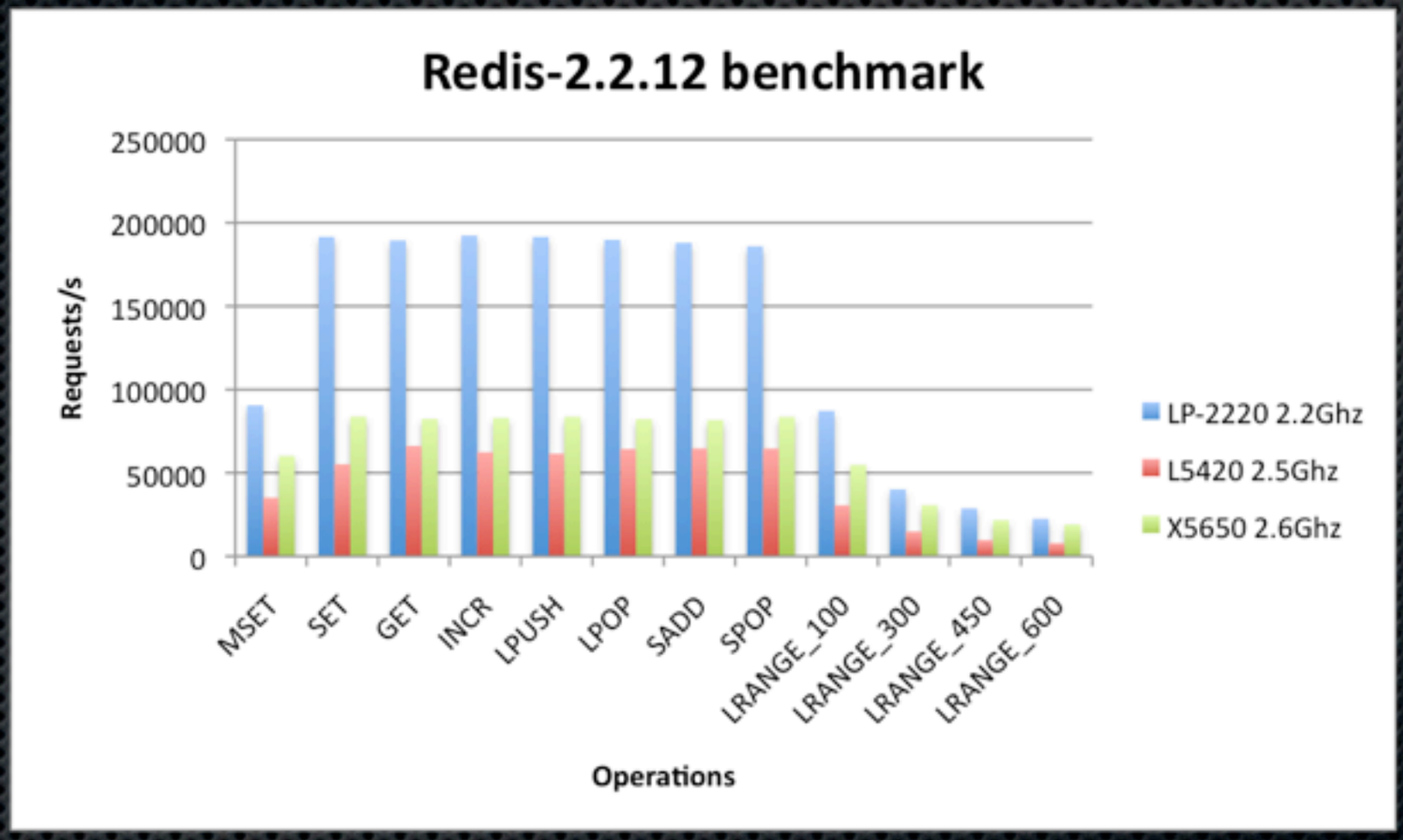
Why


Server TCO
$1,800
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
Cost
40
160
Watts
$10/Watt/3years

Why

- ROI

  If you can get similar performance in less space, with less power consumption, you can keep your servers longer. Here is a benchmark of the **lopoco** LP-2220 v. some common Intel processors.



Market

- Dramatically reducing data center operating costs and the costs of service availability will give you an unfair advantage against your competitors.
- **The market is going green**. Everyone realizes that the cost to operate larger and larger datacenters is getting too high, and electricity isn't going to get cheaper. Until now, finding servers that meet these desired market trends has been next to impossible.
- The industry is trending towards smaller, higher granularity, servers to increase overall service availability regardless of hardware outages.
- Competitors will be looking for ways to decrease costs so they can spend more on marketing and innovation.

Server Solutions - 1U

LP-2180 Microservers	LP-2230/LP-4255 Medium Weight	LP-6200 Heavy Weight
Completely fanless; short case depths; very low TDP; excellent appliance: firewall; router; load balancer; email; file server; cluster-in-a-closet	4 or 8 core journyman servers with excellent idle power usage as well as constrained TDP 2.3GHz or 2.5GHz	12 core workhorse for high concurrency workloads • heavy web framework apps (Tomcat, Ruby) • VM server • large memory applications
• 1.8 GHz, dual core, quad thread • 4 GiB DDR3 • 2 Intel GB LAN • cases range from 2 internal to 8 hot plug disks • 11.5” deep	• 4 or 8 logical cores • up to 32 GiB ECC Memory • 2 - 6 Intel LAN • up to 10 hot plug disks • turbo to 3.7 GHz	• 12 logical cores, 2.5 GHz turbo • up to 256 GiB ECC Memory • 2 standard LAN; up to 6 • up to 10 hot plug disks • 20” deep
• 20 watts idle / 30 watts TDP	• 21 watts idle / 55 watts TDP	• 35 watts idle / 115 watts TDP

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Newest 1U Server

LP-8240 Microserver Family

8 core Intel Avoton based microservers with dramaticly lower power consumption combined with astonishing performance

13.5 watts idle / 25 watts TDP

- 8 cores, 2.4 GHz turbo 2.6 GHz
- up to 32 GB ECC Memory
- 4 Intel Gigabit LAN ports
- up to 10 hot plug disks

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Storage Server Solutions - 2U

LPS-1624	LPS-2472
Large capacity, low power footprint • multiple databases • backup services • video file storage • medium load file sharing	Extra large capacity, up to 72 TB • very large databases • high load file sharing • streaming video • backend photo/video server
• up to 4 internal SSDs for caching or OS • 16 or 24 hot plug drives, 48 TB max • 2 - 6 Intel LAN • up to 32 GB • 4 or 8 logical cores	• Up to six internal SSDs for caching or OS • 24 to 72 hot plug drives, 144 TB max with exp. • up to 6 Intel LAN • 12 logical cores, 2.0 GHz turbo to 2.5 GHz • up to 256 GB memory • up to 4 - 24 drive enclosures can be added
• 30 watts idle / 105 watts TDP	• 45 watts idle / 120 watts TDP

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Professional Services

- Full suite of professional services for the datacenter:
  - high level design
  - installation/ construction
  - software and network configuration
  - testing
  - tuning
  - monitoring services
  - openstack implementation
  - hadoop installation & configuration
  - firewall configuration
  - remote access
  - router & networking configuration
  - configuration maintenance

- Custom software pre-installation and configuration.
- Custom programming and debugging, profiling and bottleneck analysis.
- Power consumption auditing for State and Federal Tax incentives and PG&E incentives.
- Capacity planning.

Software

ONE STOP SHOP

- Pre-installation of favorite Linux or Unix distribution.
  - Debian and Ubuntu are our specialties
- Disk partitioning and raid configuration upon request
- Installation of customer owned and licensed software:
  - Redhat, Centos, Custom
  - Windows

Support & Warranty

- One year limited warranty against hardware defects or failures
- Two year additional support contract available