



**Troy Rutman** | September 9th, 2013

# **Doing More with Less: For the CIO, Meeting Exponential Increases in Data Demand Requires an Agile & Efficient Data Center**



It is the fall of 2013. Digital data continues growing by almost 50% a year. IT budgets are growing by 2% a year. By 2020, CIOs will be asked to manage 21 times the amount of data that exists today, with only 1.2 times the budget.<sup>[1]</sup>

For the CIO, this poses a real challenge. The only solution is to do more with less. A data center that is agile and efficient really comes down to some common sense rules:

### Increases in Demand Increase DEMAND

One of the key features of Data Center 2.0 is that it is modular—built in a factory to be rapidly deployable and infinitely scalable (yet still customizable). Time-to-market is short and data center capacity can live wherever you need it. And with Data Center 2.0, you can deploy power and cooling capacity incrementally as your data demands grow, based on the needs of applications. In other words, you don't have to pay today for data center capacity that you won't use for

years, if ever.

Another key feature of Data Center 2.0 is that it is software-defined. The IO data center operating system, IO.OS, leverages Intelligent Control® for unprecedented visibility into data center operations...because when you can SEE, you can OPTIMIZE workloads and power based on the needs of your business. So where Data Center 1.0 is a one-size-fits-none answer, Data Center 2.0 allows pivots in real time; you can switch modes to operate the data center for resiliency, economy, or performance depending on the situation.

### When Every Dollar Counts, Every Dollar COUNTS

In today's IT climate, cost savings are a fundamental consideration. Arizona Public Service (APS) recently found that a modular data center uses 19% less energy than a traditional data center – this savings goes right to the bottom line.

The efficiency gains associated with Data Center 2.0 stem from how modular data centers are built as well as how they are run:

During the first years of operation of a traditional data center, when a relatively small percentage of the total IT equipment capacity is installed, power and cooling systems run at a low percentage of maximum capacity, reducing efficiency and driving up utility costs. In contrast, Data Center 2.0 enables the expansion of power and cooling capacity in step with IT load growth, allowing those systems to run at higher utilization and greater efficiency – reducing utility bills as well as build costs.

Software-defined Data Center 2.0 gives operators Intelligent Control to optimize energy efficiency, by allocating power, cooling, and space dynamically, based on application need. That allows you to support growing demand without blowing out power and cooling infrastructure.

## Really Smart, Complex Companies Have Tested Data Center 2.0 For You

The need to meet exponential increases in data demand without exponential increases in IT budget is one of the reasons that Goldman Sachs entered into a long-term, **strategic technology partnership** with IO. In an interview with The Wall Street Journal, Don Duet, the global co-chief operating officer of Goldman's technology division, explained that Data Center 2.0 would enable his team to "react to the pace of technological change."

**Wall Street Journal** editor Michael Hickins explained well why Data Center 2.0 is the only way for CIOs to efficiently meet exponentially increasing data demand: "[Data Center 1.0] forces CIOs to make difficult decisions about whether to spend more on infrastructure capacity, or accept that they might not be able to support the next wave of technological innovation – regardless of the competitive advantage [that innovation] may confer."

"That's the context in which [Goldman Sachs technology division COO] Duet is implementing modular, software-driven data centers." Because supporting the next wave of technology innovation, and the massive increases in data demand that come with it, is not only a competitive

advantage – it's a business imperative. And it requires the agility and efficiency that only Data Center 2.0 can provide.

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[1] Based on data growth projections from IDC and IT budget forecasts from Gartner.



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