



## QTS Service Delivery Platform – Power Analytics

QTS Service Delivery Platform (SDP) drives engineering decisions for global chip manufacturer

One of the world's largest semiconductor companies, and developer of computer processors and related technologies for business and consumer markets, has deployed their high-performance grid-computing environment in one of flagship data centers in the southeast.

The company utilizes two 1 megawatt data halls to test and measure load as part of the silicon wafer manufacturing process. The high-density environment consists of dozens of racks encompassing a variety of network, high performance compute. The custom high-density environment enables a very dense power consumption, up to 30kW/rack of utilized power.

According to the data center manager responsible for analyzing and forecasting power consumption, "Our goal is to maintain a maximum 80% utilization of power across our environment. We are constantly making changes to our data center footprint, and every significant change requires a new power draw analysis to determine if we need to load balance or redistribute the machines to normalize the environment and to avoid costly underutilization that require blind purchase of additional power."

"Before SDP I was getting a weekly report from the facilities team but it did not break down utilization at the rack level. I could only know, collectively, what our utilization was, but could not know what, if any, racks were oversubscribed. It was difficult and time consuming to identify which servers were over or underutilized so we were forced to purchase additional power to ensure we would avoid any interruptions."

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QTS Power Analytics is now driving engineering decisions related to this environment. The significant increase in visibility is allowing us to optimize utilization, see new solutions and ways to innovate that were not previously possible.

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- Customer Data Center Manager

## Business Benefits

With Power Analytics, the semiconductor giant is analyzing the following:

- Power consumption in its data center footprint versus its power subscription – useful for planning future expansions
- Power consumption at the rack level versus capacity of the PDU – goal is to optimize under 80% of the manufacturer's value
- Power consumption on each of the two PDUs in a rack – ensures that a single PDU is sufficient to handle the load in case a PDU fails
- Be notified proactively via email if any 80% capacity threshold is threatened



In addition, the customer accesses audit and power data available via SDP from their mobile devices, from within the halls of the data center, and remotely. By providing this level of transparency into power utilization, the customer is optimizing data center efficiency, lowering costs, improving forecasting, and tracking against contracted power to keep on top of availability.

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Today we use Power Analytics on a daily basis to keep our environment normalized and optimized for the 80% utilization threshold, as well as for future expansion and planning.

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- Customer Data Center Manager

QTS Service Delivery Platform is a self-service, API-driven orchestration platform for colocation environments. One of a suite of real-time optimization and management Apps, Power Analytics provides real-time power usage metrics allowing for greater operational efficiency and improved forecasting. It is enabling the company to retrieve and analyze power metrics related to their QTS deployment by location, by nested spaces, and power devices including PDUs, UPS', and circuits down to the rack and pole level.

## Power Analytics App solves power distribution problem

In a separate use case, QTS' Power Analytics helped to correct a situation that occurred when the customer was attempting to integrate and deploy critical large-scale testing equipment into the environment. The data center manager realized that certain proprietary fiber optic cables were not sufficient lengths and it was going to delay the project by weeks while a workaround was developed.

"It was a complicated process to begin with," the data center manager said. "Our on-site team worked quickly using SDP and Power Analytics to re-architect the compute layout utilizing very granular power details remaining in racks that the cables did reach. Power Analytics provided precise data that allowed us to see which of the existing racks had enough power that we could draw from and redistribute to support the deployment of the new equipment on-time and avoid disruption. This was all done remotely given SDP shows the 3D floor layout and detailed power analytics."

QTS SDP and Power Analytics is allowing the semiconductor giant to make better business decisions, and maximize their outsourced IT investment. "QTS Power Analytics is now driving engineering decisions related to this environment. The significant increase in visibility is allowing us to optimize utilization, see new solutions and ways to innovate that were not previously possible."

### About QTS

QTS Realty Trust, Inc. (NYSE: QTS) is a leading provider of data center solutions across a diverse footprint spanning more than 7 million square feet of owned mega scale data center space within North America and Europe. Through its software-defined technology platform, QTS is able to deliver secure, compliant infrastructure solutions, robust connectivity and premium customer service to leading hyperscale technology companies, enterprises, and government entities. Visit QTS at [www.qtsdatacenters.com](http://www.qtsdatacenters.com), call toll-free 877.QTS.DATA or follow on Twitter @DataCenters\_QTS.