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A Primer on Resourceful Planning

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Executive Briefings - By Arthur Cole

With Steve Yellen, vice president of product/market strategy, [Aperture Technologies](#).

Question: Capacity and resource planning has always been a tightrope for enterprise managers. Too little, and you can't roll out new services; too much and you've overspent. What's the best way for managers to find the middle ground?

Yellen: In order to reach the middle ground, enterprise managers need to have as much information as possible about the history of the data center environment. And an effective data center management system should be in place to give a comprehensive view of all metrics. Furthermore, managers must align themselves with overall business goals to find out when and what changes will need to be made to the data center. Typically, there is a disconnect between data center facilities management and IT operations. To effectively plan the future, both parties must have access to the same tools and information. So the best way to find the middle ground is to examine the data center history, discuss business requirements, and forecast how new technology will affect the current data center in order to plan capacity and resources.

Question: In what way does virtualization affect the planning process?

Yellen: Virtualization is a great technology to improve server utilization, but it adds complexity to planning processes by issuing a new layer of abstraction. When more than one application runs per box, understanding the dependencies between applications and different hardware devices becomes exponentially harder. Virtual servers still impact the physical infrastructure of the data center, and power and cooling must be planned accordingly. Virtualization can force devices to run at 60 to 70 percent capacity, dramatically increasing the power density. More power means that more heat is generated, which creates a need for more cooling.

Question: But with power and cooling now among the top concerns in data center infrastructure expansion, will managers have to scale back their expectations for more processing and storage?

Yellen: Business demands will drive the need for more processing and storage and will put a strain on power and cooling resources. However, managers don't necessarily need to scale back. Instead they must ensure that power use is planned and optimized across the data center. To do this, they need a model of the data center that gives them a clear picture of how devices are connected to the power infrastructure. This will help balance the operational load and increase efficiency. Tools like Aperture VISTA are available as a comprehensive planning and management system that will give a visual picture of the data center for further clarity. Other systems, like ITIL, can also help meet server demands and manage change.