Measuring Workload Utility is Key to IT Transformation Success

How Dell's DPACK 2.0 provides the visibility and data you need for informed decision making

IT departments often lack the data needed to make informed purchasing decisions. As a result, they tend to overspend. Better to have too much storage, for example, than to come up short. This lack of information continues to pose a challenge. IT departments struggle to understand future resource allocation as data centers move business resources towards a converged or cloud architecture.

To be successful, today's IT transformation projects require a holistic view of the total draw of the current versus future environments. This includes virtualization, hardware convergence, networking convergence, licensing optimization, and moving to/building public or private clouds. The complete view is necessary for comparing the long-term cost benefit of various delivery models: public cloud, private cloud or existing on-premises infrastructure.

Knowing which option offers the best cost-benefit requires understanding workload consumption. The cost models differ, of course. With the cloud, costs are an operating expenditure, while building out infrastructure is a capital expenditure. However, the common denominator across each option is workload consumption. If you know the workload consumption and can compare it against costs, then you can make an educated decision on whether to move workloads to the cloud or keep them on premises. It can also provide the data you need to allocate costs to specific departments and offer chargeback as IT as a Service (ITaaS) internal to the company.

So, how do you get the information you need about workload consumption? Basic monitoring is built into

every server operating system, but it only gives you an individual perspective. The reality is that the majority of workloads (and all in the public cloud) will be virtualized. Performance must therefore be viewed in aggregate form. Monitoring tools can help provide the data necessary to determine performance needs, but they are expensive and often require trained staff to use them. Fortunately, there's a new way.

Introduction to DPACK

The Dell Performance Analysis Collection Kit (DPACK) was originally intended to help IT organizations understand their true needs around storage array performance and SAN connectivity speeds. Today, DPACK has evolved to meet IT's need for greater awareness of computer performance needs, making it increasingly relevant as IT departments move towards converged infrastructures, workload- or workgroup-based sizing, and evaluating physical and cloud resources to accommodate computer needs.

DPACK is a point-in-time performance-capture technology donated to the IT community by Dell Inc. to promote awareness of actual computer performance needs. The tool specifically helps users understand physical or virtual server workload performance at the individual machine, workgroup or data center level—all without requiring any dedicated experience or even any expense. The complimentary technology measures the requests demanded of the operating system and applications, aggregates the metrics with the entire computing environment being measured and provides a hardware-agnostic perspective of overall computer resource consumption.

Now going into its fourth year, DPACK has expanded to allow additional performance data to be available through a user's own personal portal. The core benefits of DPACK still exist:

- Agentless and remote performance monitoring that doesn't install or require change control
- Individual machine-to-datacenter level performance analysis
- Performance capture to offer up a hardware-agnostic evaluation of resources needed to accommodate core components of sizing IT environments such as:
  - o Capacity
  - o Disk Throughput and I/O
  - o Memory Utilization
  - o Aggregate CPU cycles consumed
- As well as more diagnostic information such as:
  - o Disk Queue
  - o System Latency
  - o Application IO transfer size

Conclusion

Convergence is a great benefit to the data center, but it introduces massive complexity when it comes to understanding requirements. IT's ability to make cost-benefit purchasing decisions rests on having a clear insight of workload performance. DPACK provides this clarity, as well as the hard evidence to support investment decisions so IT departments can accurately size the investment against the need. That means no more guessing or overspending. Furthermore, DPACK can help identify, through showback, other departments that should help fund the effort.

DPACK not only provides an understanding of a company's workload performance routines, but more importantly, it can move corporations closer to the goal of optimization and transforming IT into ITaaS. In short, this information literally puts money back into the budget. The cost savings realized from greater optimization and the lack of overspending can enable IT to address more projects.

Register and Run DPACK today, and take the guesswork out of understanding system performance.■

What You Can Do with DPACK 2.0

In addition to these benefits, DPACK 2.0 offers an ever-growing set of new capabilities, including:

- An end user accessible performance portal

- Live simulation or predictive modeling

- Pan and zoom timeline functionality

- Web service data collection to avoid large files and allow more frequent data collection

- Increased operating system certification

- Network performance

- Hybrid cloud monitoring

- Basic showback or chargeback reporting