

White Paper

How Capacity Planning Can Optimize Your Virtual Resources

HEROIX

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Executives can lose sleep over a number of issues when there are unanswered questions about IT resources that serve the company's employees, customers, and partners. How much and what kind of IT resources are really needed? When? Where? For who? When will it change? How will it change? How do we ensure that our employees have the resources to excel at their jobs? How can we use IT to improve corporate performance? How can we serve our customers well using our IT resources? How can we not break the bank overspending on IT?

One of today's primary organizational challenges is determining the correct amount of IT resource to meet ongoing and future needs. This is especially true as companies constantly evolve in size through merger and acquisition or market growth. The challenge to right-size IT becomes even more complicated when an IT environment contains both physical and virtual resources. VM sprawl, over- or under provisioning, and excess use of resources are common problems that occur with virtualization and drive up IT budgets.

Enterprises that adopt a proactive approach to IT resource capacity planning, using the most advanced methods and tools available, are ensuring that their IT environments are right-sized to enable corporate growth and improve company performance. Companies are finding that there are much better ways today to answer the sleepless CEO's questions and meet this challenge than there were just a year ago.

If your company doesn't have a formal capacity planning program for the virtualized environment using the proper analytical tools, you should begin one right now. Or, if the tools you've been using for these efforts haven't delivered results, it's time to start using one that will provide useful, reliable information. Read on for information that will help you "sell" executives on investing in capacity planning.

Before selecting an approach or tool for capacity planning, or when reevaluating your current one, consider the best practices that many successful companies have adopted.

Why every company should engage in IT capacity planning.

Capacity planning can be a little-used methodology within the IT department, or it can be a tool to foster company growth. The most advanced organizations, typically leaders in their own industries, engage in a rigorous and ongoing program of IT capacity planning in order to:

- save money by continuously right-sizing IT resources
- ensure that SLAs are always met
- improve productivity with available and on-time IT resources
- ensure optimal IT performance, without trading off one resource for another (CPU, memory, I/O, storage, etc.)
- plan for disaster recovery should IT resources be compromised

Capacity planning helps companies identify and handle IT performance issues before they become problems for users. It also provides a better understanding of current and future requirements so that the annual budgeting process becomes much more accurate and appropriate.

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Who really cares about capacity planning?

You might think that only a few individuals in an organization have a large stake in capacity planning ... most specifically, the people who do it. However, IT resource capacity planning, especially for virtual environments, touches nearly everyone in the enterprise, from the CEO to the IT team and on to users. The people who should care about capacity planning include:

- CEOs who want to ensure that the organization is operating at top efficiency and IT resources are correctly sized to fulfill needs.
- CFOs who want to make sure that the enterprise is not wasting money on unneeded resources or last-minute purchases of expensive resources to meet business needs.
- CIOs who want the IT team to spend their time in the most productive manner, by anticipating future needs and taking care of them in a timely and cost-efficient manner, and not get embroiled in last-minute emergencies.
- IT directors and managers, who want to make sure they meet all SLA commitments and stay within budget.
- IT staff who manage virtual environments and monitor applications, systems, and networks, who want to become rock stars in their own company by always ensuring that their customers ... the company's business groups ... have the correct IT resources, and who don't want to waste their time in daily fire-fighting on unexpected problems.
- Employees, customers, and partners who rely on having the right IT resources at the right time, in order to be productive and efficient.

If you think you're doing the best capacity planning you can, think again.

As you look at your capacity planning function, ask yourself:

- Has our virtualization program become more expensive than planned?
- Could our SLA performance improve?
- Do I need better information on where and how potential IT changes will affect the virtual environment?
- Has it been more than six months since we did a thorough capacity planning exercise?

If the answer to any of these questions is yes, it may be time to reevaluate how the organization is dealing with capacity planning.

“We encourage our customers to make capacity planning a best practice. Think about how you forecast your growth in number of users, in each user's data set, in application data sets. If you use an external facing application, you should also think about growth in new customers accessing the system,” said Dave Bartoletti, senior analyst at Forrester, in an [interview](#) published at www.SearchVirtualStorage.com.

If you want to operate an efficient and highly functional virtualized infrastructure, then you need a good method for capacity planning and performance monitoring:

Virtualization complicates IT capacity planning and performance monitoring because the Hosts are serving up multiple OS instances, with multiple applications, and multiple workloads, all of which is provisioned from a pooled set resources. Because resources are pooled any allocation issues can have a cascading effect across OS instances, applications, and workloads.

Conduct capacity planning in conjunction with IT infrastructure monitoring.

In a virtualized environment, monitoring both the virtual and physical resource utilization and service levels must be done together. Accurate capacity planning can't be done effectively without using the metrics collected through performance monitoring as a baseline and an ongoing gauge of what resources are needed and not needed. Longitude offers an integrated approach to application and network monitoring along with capacity planning. The technology lets you analyze the history of IT performance, which is a critical indicator for future virtual needs.

Don't try to do it manually or use a hodge-podge of products not specifically designed for capacity planning AND virtual environments.

Capacity planning for virtual environments is too complex to attempt with manual methods. While this may have been sufficient with physical resources in certain sizes of organizations, manual capacity planning in any size of organization with virtual resources is next to impossible. The variables associated with virtual resources are far too many and complicated for any manual efforts.

Use a solution that offers "What if" analysis.

Because the virtual environment is constantly changing, it is essential to be able to analyze and simulate changes to any combination of factors affecting VMs, hosts, resource pools, and datastores, such as CPU capacity, memory, disk, network, workloads, and more. The "What if" capability that is built into Longitude lets the IT team consider many different futures and plan accordingly. It also helps them see how to improve services and correct problems instantly.

Look for excellent and customizable reporting tools.

The sheer number of variables in a virtual environment means that you'll want to have a solution that provides an easy-to-read dashboard that shows the complete status of the IT environment, with resource utilization cumulatively shown by VM, host, resource pool, or other variable on a single screen. For years, Longitude has been praised because it delivers true ease-of-use for IT teams as well as business users. The software offers this same proven value in capacity planning, providing the ability to drill down from the initial dashboard instantly into specific areas, so that virtual infrastructure details can be seen and evaluated quickly.

Make sure the solution is easy to use and affordable.

Some monitoring and capacity planning software require the addition of multiple costly modules to perform basic monitoring and planning capabilities. The maintenance and steep learning curve for this type of solution can quickly overpower the IT department's time, and be daunting for IT professionals under a heavy workload as well as the less IT-savvy person who may be charged with monitoring and planning for an individual business group or smaller organization. There is no need for a painstaking

method of navigating to different pages in the tool or using multiple pop-up menus to get to the final information. Heroix delivers this very important advantage by making Longitude easy to purchase, install and use for anyone, no matter the level of their technology expertise.

Start Capacity Planning Today

Capacity planning for virtualized environments can be fast, easy, and affordable, and provide you with the means to monitor and manage your complete IT environment, as it changes. Companies are finding that proper capacity planning is helping them make more cost-effective use of hardware, simplify disaster recovery, properly size budget to need, avoid VM sprawl and use virtualization for highly flexible provisioning, and improve customer satisfaction.

About Heroix

Heroix has a 30+-year history of proven monitoring solutions, with products running on tens of thousands of critical servers. It offers fast, easy, affordable application and networking monitoring solution for physical and virtual environments. [Download Longitude Now](#) and you'll be monitoring and planning in just 10 minutes.

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