Ensuring the performance and capacity of business services has become more critical, as a growing percentage of applications and workloads are moved to virtualized infrastructure, private cloud services, and hybrid environments. Resolving performance and capacity problems in cloud and virtualized systems is complex because they are very dynamic. HP Virtualization Performance Viewer (vPV) is a unified performance and capacity management tool for both virtualized and cloud IT components. It can help you quickly troubleshoot performance issues, optimize your virtualized environment, and forecast the required capacity.

HP vPV can be rapidly deployed and easily used in a wide range of organizations. It is a heterogeneous, and scalable enterprise-class tool that complements existing operations management and cloud solutions. This powerful, yet easy to use product is highly scalable. It delivers fast time to value and works efficiently with other HP Business Service Management (BSM), cloud, and performance management solutions.

Figure 1. vPV dashboard provides an “at a glance” health and capacity overview

One tool, many environments

The HP vPV provides a single, specialized console. It is designed to be vendor-neutral, supporting a variety of hypervisors and private cloud environments. This provides you with a common, open method for triaging and diagnosing performance problems across domains. The current release supports the following:

• Hypervisors: VMware vSphere, Microsoft® Hyper-V, KVM, and Xen
• Cloud environments: OpenStack (private cloud deployments only)
Fast time to value

HP vPV delivers benefits in less than 15 minutes from the time you begin an installation. You can quickly download and deploy the HP vPV virtual appliance, register hypervisors or cloud environments, and begin to visualize their data. The intuitive user interface provides a high level view of complex systems with the ability to interactively sort and group components to isolate problems. You can quickly drill down into specific performance bottlenecks for ad hoc analysis of performance issues. vPV is lightweight, with a low footprint. It requires no additional configurations to begin delivering value.

Easy to use for rapid results

HP vPV utilizes tree maps which are visual analytic representations of data trees. They organize objects in structured hierarchies to represent multidimensional performance data using easily identifiable size and color indicators. This provides an intuitive, visual way to quickly identify “hot spots”, including performance, resource utilization, and capacity problems.

Figure 2. The HP vPV tree map visualizations quickly identify “hot spots” for performance, resource utilization, and capacity

The innovative workbench view of HP vPV provides rapid triage analysis. This functionality enables the virtualization or cloud subject matter expert (SME) to observe utilization trends over time, and it provides extensive troubleshooting and reporting options. It also enables customers to compare usage rates in the near term.
Figure 3. vPV provides many useful out-of-the-box reports

HP vPV also offers a number of out-of-the-box reports. These reports include inventory, trends of usage and activity, top and bottom utilization, pie-chart of usage, group and individual reports, storage reports, and others. Reports generated by HP vPV are available in both PDF and HTML formats.

The proper allocation of the VMs helps in balancing resource utilization and capacity planning across the virtualized environment. The vPV placement and optimization functionality provides suggestions about where the new VMs can be added in the virtualized environment as well as how the environment can be optimized based on the historical resource usage trends and available capacity.

Smart detailed alerts identify performance bottlenecks and resource saturation symptoms in the virtualized environment. The content-rich alerts help to detect performance anomalies, find the cause of the symptom and fix the problem before the performance deteriorates.

Figure 4. vPV provides best fit placement and optimization functionality
The HP vPV offers a capacity modeler which helps to analyze how the allocation of resources impacts the environment. The vPV modeler feature will model the capacity change requests and constraints, then provide a detailed report. These reports can be used to determine if the resource allocation is effective or need to add capacity to meet the given requirements.

The HP vPV Guest OS drilldown functionality can help to determine, in real time, if the system utilization is optimal or the health of the system does not show the expected utilization by checking the graphs available. This feature can further help to drill down to detect the processes where the memory or CPU utilization is exceeding the limit by checking the processes or applications that are consuming more CPU or memory.
Enterprise-class, integrated solution

This powerful product is designed to cost-effectively scale from supporting small configurations to large deployments of up to 6,000 OS instances or virtual machines (VMs). It can retain a very granular level of information while presenting fast and interactive reports and graphs. Data can be retained for up to 90 days to allow for trend analysis and to facilitate capacity planning.

HP vPV operates independently as a standalone product. However, unlike many easy to use products, it is more than a tactical point tool. It can be integrated with other HP BSM, cloud services, and performance management products. You can leverage your investment in HP vPV as part of a long-term, broad solution.

vPV provides a comprehensive data center view and when integrated with HP OneView, you will have a unified view of the virtualized infrastructure linked with the enclosure layout. This helps to understand the impact of any physical infrastructure changes on the virtualized environment. vPV provides OOTB cluster balancing reports across enclosures for risk assessment. vPV provides the capability to inspect the performance and the capacity usage forecast for physical servers in your data center.

Figure 7. The workbench view of HP vPV provides extensive troubleshooting options to facilitate quick analysis.

Performance issues in cloud environments can be addressed in the OpenStack environments. HP vPV also enables fast and easy integrations, with products such as HP Performance Manager software and HP Operations Agent for in-depth investigation and analysis of VMs.

vPV upon integration with HP Cloud Service Automation provides a cloud consumer or a tenant a specific view for the subscribed cloud services. vPV provides right-sizing recommendations by which you can save cost and release unused resources. With the forecast reports, the cloud consumer or tenant can plan for future capacity requirements. vPV also allows cloud consumer or tenant to inspect the performance of the virtual infrastructure. It provides a rich set of performance counters to troubleshoot and analyze performance issues.

The Business Grouping capability in vPV allows you to customize the operational view of the virtual infrastructure based on your business applications and services. You can link business metrics with infrastructure performance and utilization metrics. You can forecast capacity utilization by business groups. vPV provides resource usage forecast analysis. You can use these reports to plan for future capacity requirements. It predicts capacity demands and provides near & long term projections with days to capacity information.

vPV provides Application Programming Interfaces (APIs) for best-fit VM placement and optimization recommendations. You can use these APIs to integrate with automation and orchestration products to flex and optimize your virtualized environment.
The choice is yours

Regardless of where you are on your journey to becoming “strategic service brokers”, HP vPV provides you with choice, confidence, and consistency. It ensures choice by supporting a wide range of virtualized and cloud environments to help eliminate vendor lock-in. HP vPV delivers fast and easy performance management and root cause analysis to enhance confidence. It offers consistency by delivering long-term value, whether HP vPV is implemented as a standalone tool or integrated with a broader HP solution. This powerful tool can scale from very small to large configurations seamlessly and cost-effectively.

Available as a free tool and free trial

vPV community edition is a free tool for yourself, so that you can use it in your environment for monitoring up to 25 OS instance. Also, try vPV trial version for free and experience the full benefits before you buy.

HP vPV is available as a virtual appliance (CentOS-based), which can be deployed in a VMware vSphere environment and as a Linux installer (CentOS and Red Hat®). HP vPV needs a minimum of 2 vCPU, 4 GB RAM and 40 GB free disk space. Adobe® Flash Player version 10.3 is the minimum required version to view the user interface properly.

Learn more at hp.com/go/vpv