COMPREHENSIVE MONITORING OF CITRIX XENSERVER ENVIRONMENTS

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OVERVIEW

Comprehensive Virtual Monitoring: There is no hypervisor limitation. PHD Virtual Monitor ships today with complete support for monitoring the entire Citrix XenServer virtual environment, including metrics from the hypervisor, directly from the virtual machines via an agent, and the associated physical infrastructure. This is distinctly different from other monitoring solutions as they are likely to be limited to only those metrics provided by the hypervisor which don't include granular data about the virtual machines and their applications or the physical environment. PHD Virtual Monitor provides "Comprehensive monitoring of the virtual infrastructure" (see Figure 1).

XenCenter Integration: In addition, the PHD Virtual Monitor UI integrates with Citrix XenCenter via a Tab plug-in so that the XenCenter console can be leveraged for a seamless operation. Note that this gives an administrator the ability to manage not just the XenServer hosts and their Virtual Machines, but also the physical infrastructure including networks, physical servers, applications, desktops and storage all from the XenCenter console. (See Figure 2)

Not Just Virtual Servers: The virtual infrastructure is not a silo in and of itself; total availability and performance can be severely impacted by the supporting architecture which often include physical servers, network devices, and storage. As a complete and comprehensive monitoring solution PHD Virtual Monitor has the ability to monitor all of the components in a modern IT infrastructure from a single console. PHD Virtual Monitor has support for monitoring all Windows Operating Systems, and deep monitoring of associated Windows applications, including Microsoft SQL Server, Exchange Server, IIS, and third-party applications such as Citrix XenApp and XenDesktop. PHD Virtual Monitor also has support for monitoring all Linux/Unix variations, from RedHat to Solaris, including HP-UX and IBM AIX. Finally, PHD Virtual Monitor monitors the underlying network and storage infrastructure.

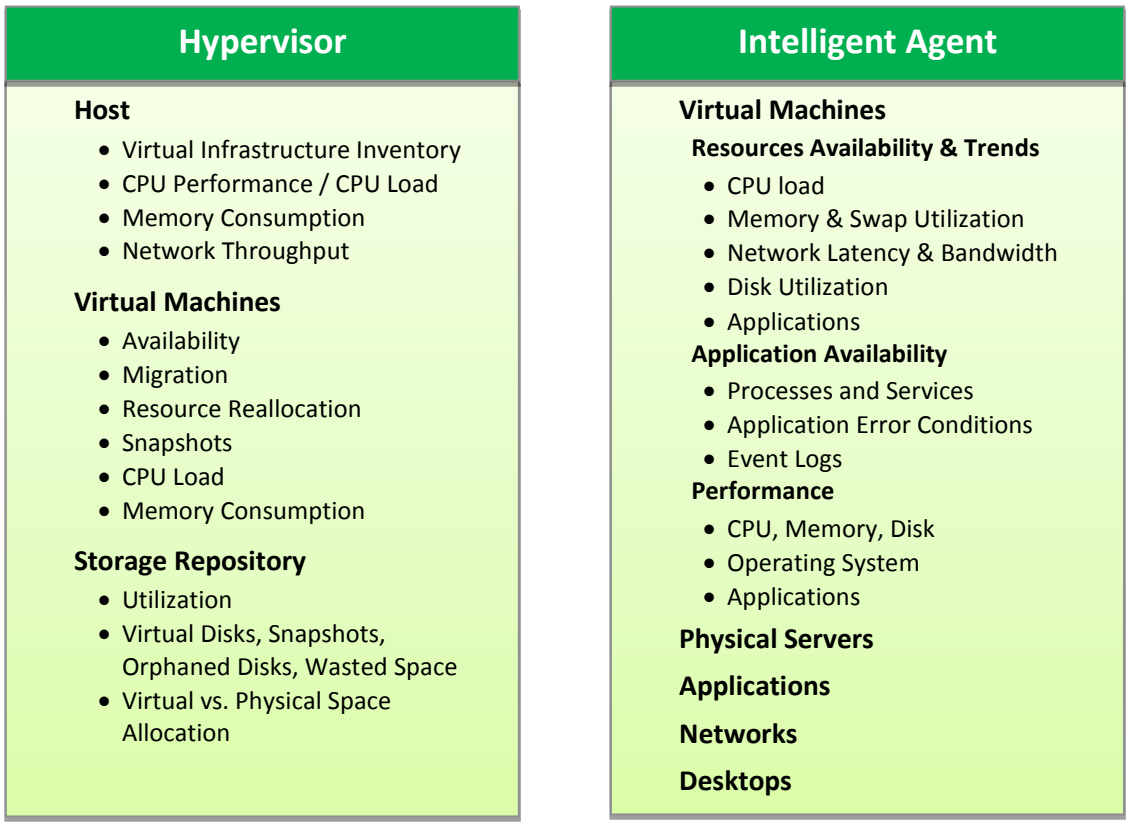
Intelligent Agent and Agentless Capability: Providing the IT user with ultimate flexibility, visibility, and control, PHD Virtual Monitor is both agent based for monitoring Windows, Linux & Unix, and agentless when collecting data via SNMP Traps, Syslog messages, and from the virtual hypervisors. It also provides a comprehensive UI console with dynamic dashboards for monitoring, alerting status, and graph based metrics with historical trending and reports that are easy to customize. PHD Virtual Monitor also integrates basic network device monitoring via SNMP Traps and Queries, SYSLOG messages, and basic proactive PING, HTTP, and other IP service checks.

Intelligent Agent: The "intelligent agent" has several unique features that make it worthy of being considered intelligent. First, it is very easy to deploy and configure relative to most agents. Next, it is able to capture deep diagnostic metrics with little resource utilization, typically less than 0.1% of CPU & Memory utilization, and a 1.2 MB footprint. Finally, any agent can be designated a "master agent" and then be tasked with capturing SNMP Traps and SYSLOG messages from any such enabled device in your environment. If an SNMP Trap or SYSLOG alerting condition is triggered, the "master agent" will then send alerts to the PHD Virtual Monitor server. This is incredibly helpful as it provides a facility for deployed agents, at a remote site, behind a firewall to monitor network devices, while negating the requirement to deploy an additional monitoring server to each location.

MONITORING CITRIX XENSERVER VIRTUAL ENVIRONMENTS

PHD Virtual Monitor monitors the XenServer Host and the associated virtual machines, guest operating systems, and associated applications. Other monitoring solutions are likely to be limited to hypervisor based metrics only. (See below - Figure 1)

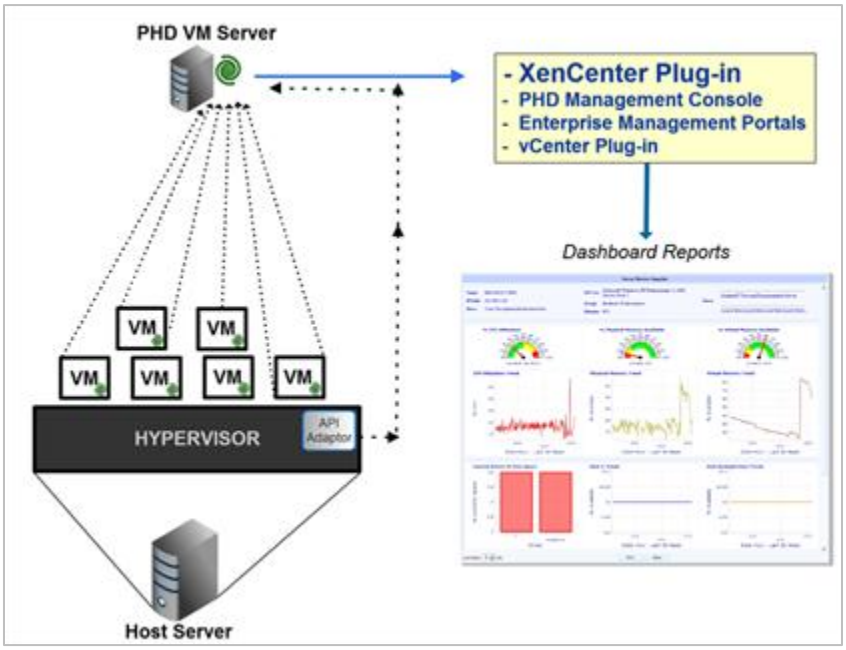
Figure 1 – What PHD Virtual Monitors Today – Not Limited to Hypervisor Metrics



MONITORING VIA THE HYPERVISOR INTEGRATION

By directly interfacing with the XenServer APIs, PHD Virtual Monitor provides the administrators with actionable information about the entire virtual inventory including all hosts, virtual machines and connected storage repositories (SR). PHD Virtual Monitor provides a centralized console to quickly determine CPU, memory, storage, and network performance for your virtual infrastructure. (See Figure 2)

Figure 2 – Monitoring Citrix XenServer Virtual Environment



MONITORING USING AGENTS ON THE VIRTUAL MACHINES

Most virtual monitoring solutions are limited only to those metrics which can be obtained from the hypervisor. Legacy solutions offer agents but often the technology is so resource intensive or difficult to deploy, that the agents are simply not a viable option. The limitation to hypervisor-only monitoring means you may not have enough detailed information about the virtual machines or the applications that they host. The PHD Virtual Monitor Intelligent Agent offers visibility, flexibility and control that other solutions can't provide.

PHD Virtual Monitor captures metrics for virtual machines with a combination of Agent and Agentless monitoring depending on the level of detail and visibility desired. This allows for complete flexibility when implementing the PHD Virtual Monitor solution.

Intelligent Agent

The Intelligent Agent is not like typical agents one would find in a legacy solution. PHD Virtual Monitor Intelligent agents are easy to deploy, use less than .1% of the CPU and memory, and capture contextual diagnostic data from the virtual machines and the applications they host.

PHD Virtual Monitor installs a lightweight Windows or Linux/Unix Agent on each VM depending on the guest OS. All of the PHD Virtual monitoring features and Watch types are available for monitoring the system and the applications including CPU, Disk, Memory, Network, Processes, Files/Folders, EventLogs, Services, Performance Counters, and Availability. PHD Virtual Monitor ships with a variety of Monitoring Watch Packs (PHDVM PAKs) to simplify the configuration and use of the various monitoring features.

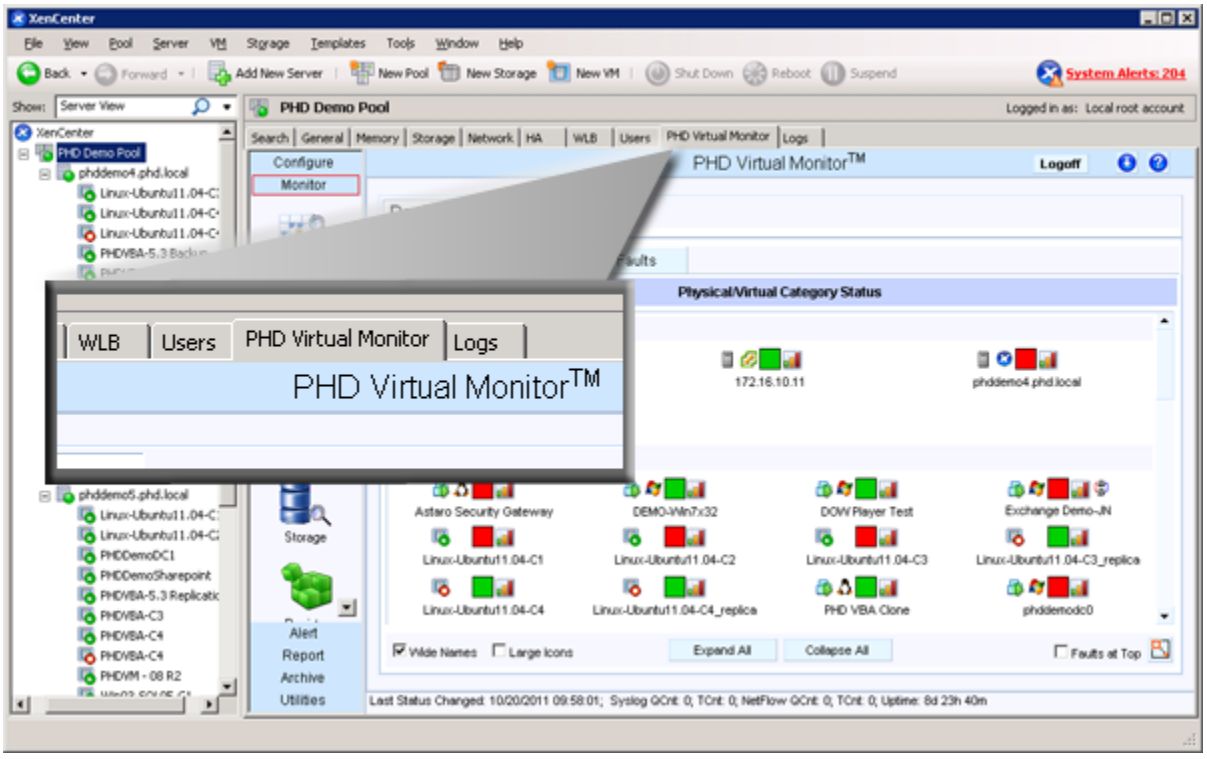
Agentless

For those virtual machines, systems and applications running in the virtual machines that use SNMP Traps and Syslog messages for signaling important conditions, information, or alerts, the PHD Virtual Monitor Server, or a local Windows Agent, can act as the SNMP Trap and Syslog message collector. If a Windows Agent is the collector, it forwards the SNMP Traps and Syslog messages to the central PHD Virtual Monitor Server over a secure, encrypted TCP connection.

INTEGRATION WITH CITRIX XENCENTER

PHD Virtual Monitor can optionally integrate with the Citrix XenCenter console using a XenCenter plug-in to create a Tab for the PHD Virtual Monitor UI. (*See Figure 3*) Administrators who frequently use XenCenter will have easy access to PHD Virtual Monitor. The UI provides complete access to all the PHD Virtual Monitor dynamic dashboard displays, alert management displays, configuration screens, and report facilities. There is also an option for configuring the Tab plug-in for specific, key dashboards such as the Dashboard Display instead of, or in addition to, the whole UI. All PHD Virtual Monitor security and multi-tenancy features are supported with both options.

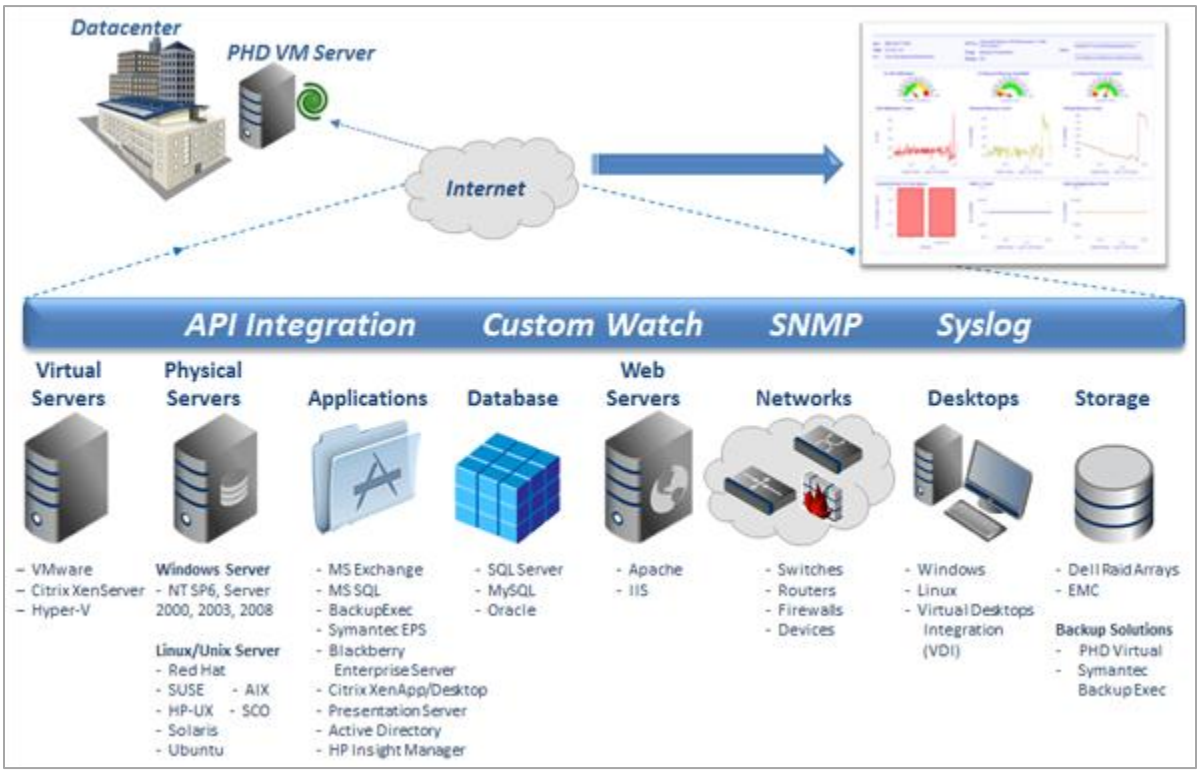
Figure 3 – Integration with Citrix XenCenter



MONITORING THE ENTIRE PHYSICAL ENVIRONMENT

PHD Virtual Monitor supports all Windows, UNIX & Linux systems, with out of the box monitoring of Windows applications including Citrix XenApp, XenDesktop, Microsoft Exchange, and Microsoft SQL Server. PHD Virtual Monitor also monitors the underlying network and storage infrastructure.

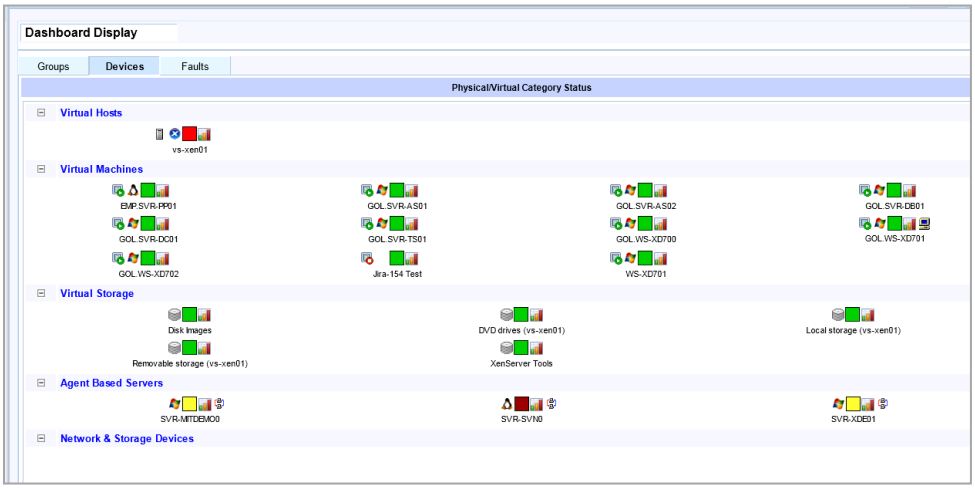
Figure 4 – Comprehensive Infrastructure Monitoring with PHD Virtual

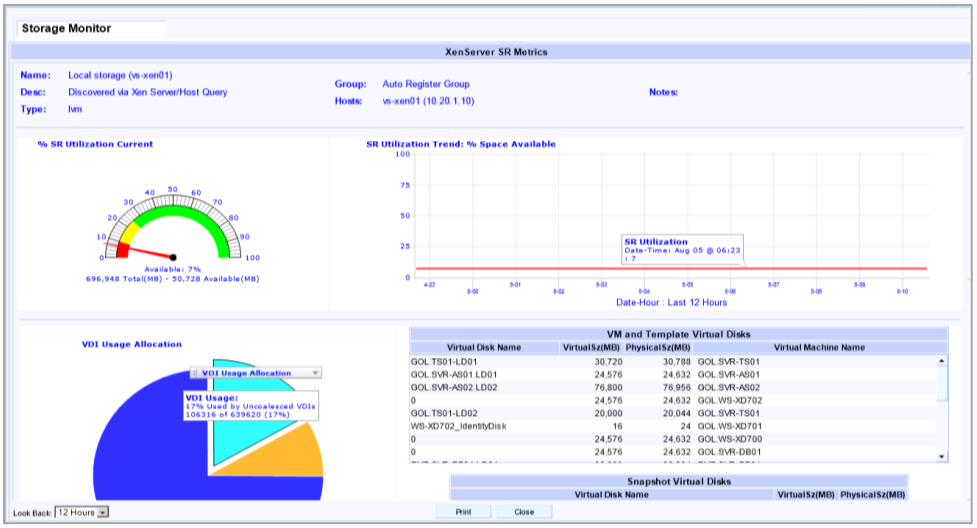


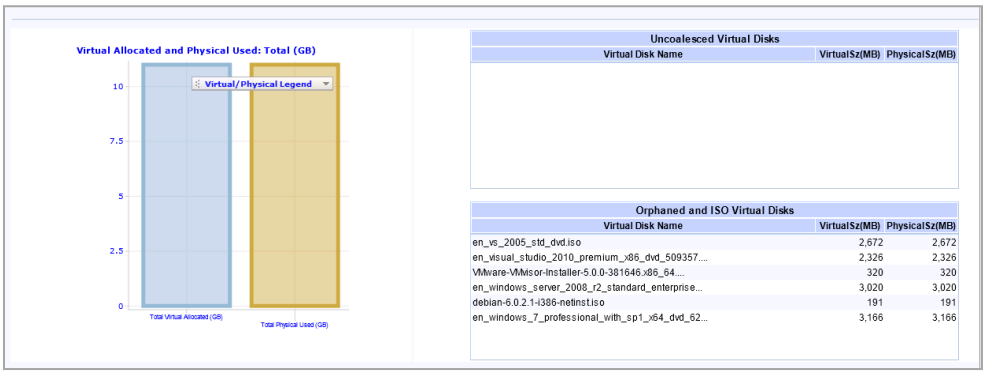
DYNAMIC TREND DASHBOARDS

PHD Virtual Monitor provides a variety of dynamic, trend dashboards in XenCenter. (See Figure 5)

Figure 5 – Resources Performance and Trends







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ABOUT PHD VIRTUAL TECHNOLOGIES

Delivering the highest performance and most scalable cross platform backup and monitoring solutions on the market and pioneer of Virtual Backup Appliances (VBAs), PHD Virtual Technologies has been transforming data protection for virtual IT environments since 2006. Its award-winning data protection solution, PHD Virtual Backup is used today by more than 3,500 enterprises worldwide to achieve unlimited scalability, high availability and cost effective backup and recovery for VMware and Citrix XenServer virtual machines. Its PHD Virtual Monitor provides a complete, end to end solution for monitoring virtual, physical and application infrastructures in VMware, Citrix and Hyper-v environments. PHD Virtual also provides a suite of free virtualization utilities to assist with the administration and management of virtualized environments. For more information, visit http://www.phdvirtual.com.