SOLUTION BRIEF

Pure1 VM Analytics

Gain end-to-end visibility for VMware environments.

Step into any business, and chances are they've adopted some sort of cloud infrastructure. VMware defined cloud infrastructure back in 2001 with a radical new way to virtualize Windows and Linux operating systems. This meant customers could consolidate their data center footprint, saving energy, cooling, and real estate by running many applications on a single physical server. However, running virtualized machines can be complex, and many larger organizations have responded by creating specialized cloud services teams. Unfortunately, these teams are often siloed from storage, network, and application teams, hindering communication and problem-solving. The complexity of VMware environments can complicate troubleshooting and diagnosing the problem, resulting in wasted time as siloed teams work independently on issues.

Gain a Clear Map of Your Entire Infrastructure

Many solutions don't deliver a clear picture of performance issues across compute, networking, and storage. Adding to the complexity, many solutions don't deliver a clear picture of performance issues across the entire storage architecture. IT teams can spend countless hours identifying problems using fragmented and siloed point solutions which often are cumbersome and expensive to manage and maintain.

Pure1® from Pure Storage® is a SaaS data management platform powered by Pure1 Meta®, an artificial intelligence (AI) and machine learning (ML) engine that's included in your Pure Storage support and subscriptions. Pure1 helps IT manage and monitor complex and highly-scalable storage infrastructure across multiple data centers and in the public cloud. Pure1 enables you to take the guesswork out of complex storage operations, allowing you to keep ahead of IT issues and avoid downtime. Use Pure1 Meta for predictive analytics like capacity and performance forecasting, seamless upgrades, and proactive support.

End-to-end Visibility

Pure1® VM Analytics provides end to end visibility from your virtual disks to your Pure hardware and is provided at no additional cost.

Measure Performance

Gather performance metrics like IOPs, bandwidth, latency, as well as CPU and memory utilization of your VMware environment.

Resolve Issues Faster

Quickly identify bottlenecks and next steps toward faster resolution.

Pure1 VM Analytics

Pure1 VM Analytics gives you an intuitive map of your VMware infrastructure from a single dashboard. Pure1 VM Analytics delivers end-to-end visibility into the performance of your virtual disks, VMs, data stores, volumes, and arrays. It gathers data on IOPs, bandwidth, and latency, and then maps the paths via an intuitive topology view from a single dashboard. You'll no longer need to spend time trying to understand complicated charts and graphs across multiple solutions. Using Pure1 VM Analytics simplifies how your teams monitor storage and VMs and reduces the time they spend troubleshooting.
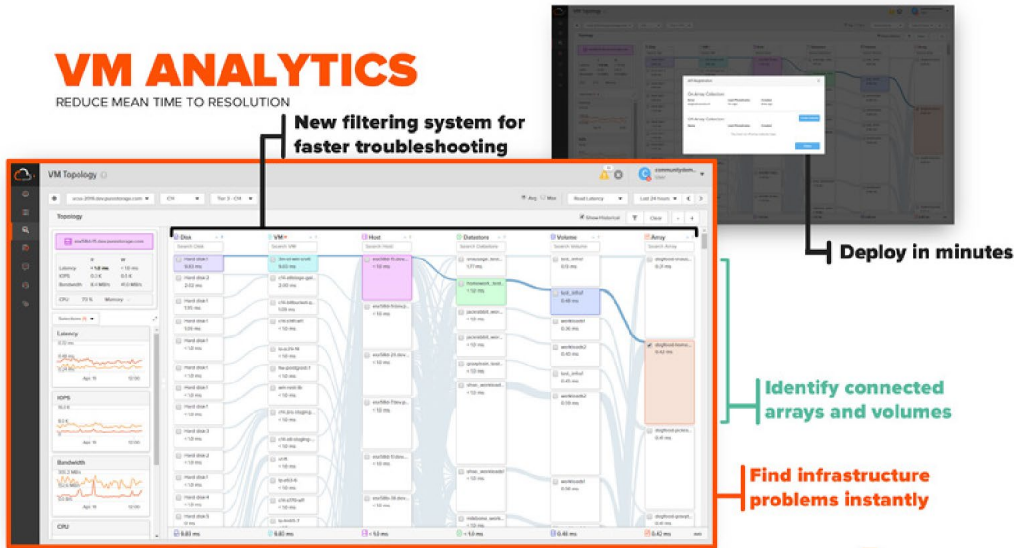

Figure 1. Pure1 VM Analytis

Easily Perform Infrastructure Analysis

Pure1 features an intuitive topology map showing the VMs connected paths. You can customize the view, change filters and time duration, and sort columns to pinpoint the VMs you are most interested in. You can easily identify underutilized VMs during the time period you have selected, which are the ones to investigate and potentially reclaim resources from.

By clicking on any of the nodes, you can easily see what's connected to that object. For example, you can select a VM to see which volume or array it's on. Or you could go the other way and see which VMs are living on a particular volume by selecting the volume. Once you've highlighted the path that you want to look at, you can easily filter away objects that are not along the path, thus reducing noise and allowing you to identify problem areas faster.
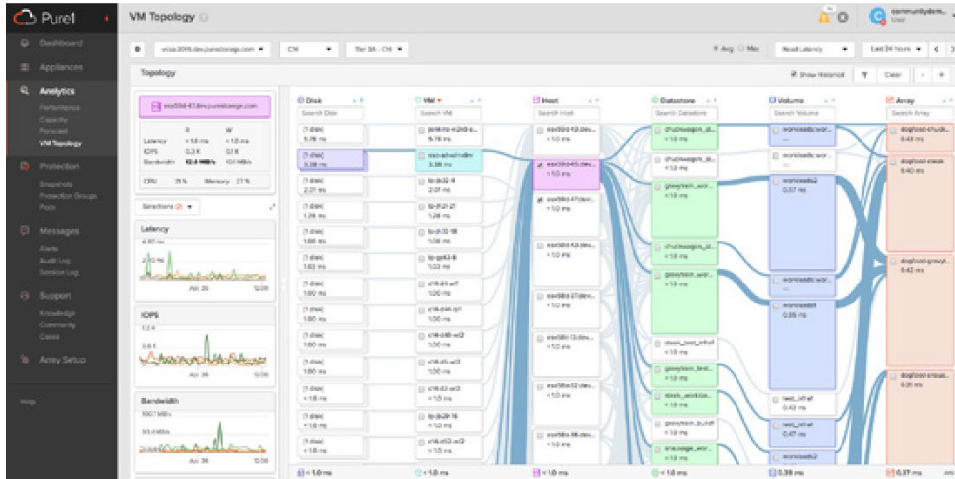
Figure 2. Analyze the connected path across the infrastructure

Dive Deep into Problem Areas to Get to Resolution Faster

Pure1 allows you to easily search for disks, VMs, hosts, data stores, volumes, and arrays. You can also filter based on the path selected from the same map. Using a process of elimination, you can pinpoint the root of latency bottlenecks. Once you've figured out the problem area, you can investigate using graphs and deeper metrics based on given timelines. After finding spikes, simply click and drag on the spikes to zoom into a particular time window. Once you have narrowed down the issue, you can clear the filters to get a bird's eye view of the rest of your cluster in that specific time window. These insights provide clear knowledge about the problem area so you can get to resolution faster.
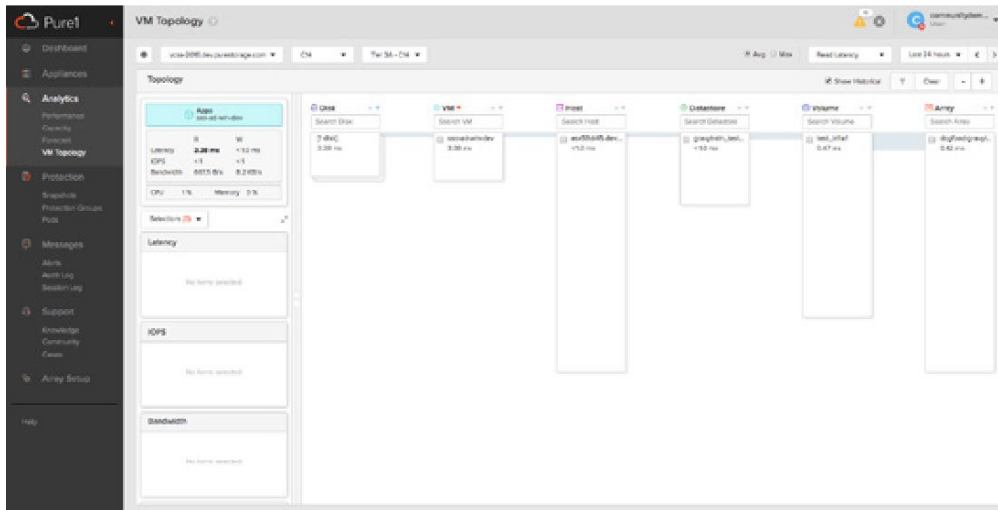

Figure 3. Drill-down and filter out noise to pinpoint bottleneck

Key Benefits of Pure1 VM Analytics

With VM Analytics you can:

- Identify performance bottlenecks faster across virtual disks, VMs, volumes, arrays, hosts, and data stores
- Reduce mean time to resolution

- Highlight the connected path from disk and VM to storage

- Perform multipath traffic analysis with a simple and intuitive topology map

- Optimize storage and VM performance based on detailed analysis of read/write IOPS, bandwidth, latency and system CPU, and memory utilization

- Identify and reclaim abandoned resources

- Identify the best- and worst-performing VMs

- Plan your next best action based on insights, pin-pointing problem areas using filters, drill-downs, and sorting

Case Study: Navis Transforms Shipping Industry Powered by Pure1 VM Analytics

The Challenge: Legacy Storage Infrastructure

Navis, a provider of operational technologies and services, is transforming the shipping supply chain with the power of data. Navis has reduced the time to market for its innovation, increased developer productivity, and optimized its data center investments.

Navis was struggling with legacy storage infrastructure and the growing challenges of managing and maintaining expensive rack space to keep up with business scale. Their lean data center infrastructure team wanted to optimize its management resources.

The Solution: Using Pure Storage and Pure1 VM Analytics

With Pure1 VM Analytics, Navis's team realized the following benefits:

- Their developers can run twice as many jobs at the same time.

- High data-reduction rates result in smaller storage footprint and lower data center costs.

- Advanced, proactive Pure1 tools minimize the demands of storage management.

Praising the ease of management of Pure products, Steve Culy, Senior Systems Engineer on the Navis infrastructure team said, "The Pure1 VM Analytics tool allows me to look at a VM and see the storage path and know exactly what's happening. It tells you what the host is doing, what the VM is doing, and what the storage is doing. We had a host that wasn't performing well, and I didn't know why. With Pure1 VM Analytics, I was able to see in an instant that we had too many VMs going onto one data store and we were overloading the host. The problem was so easy to see with the analytics tool. So, I built a few more data stores to spread out the load, and the problem was solved."

Try out Pure1 VM Analytics today with a free trial to discover how you can solve latency issues in your infrastructure, with no FlashArray™ required.

Additional Resources

- Learn more about Pure 1.

- Watch a demo of Pure1 VM Analytics in action.

- Read the complete Navis case study.