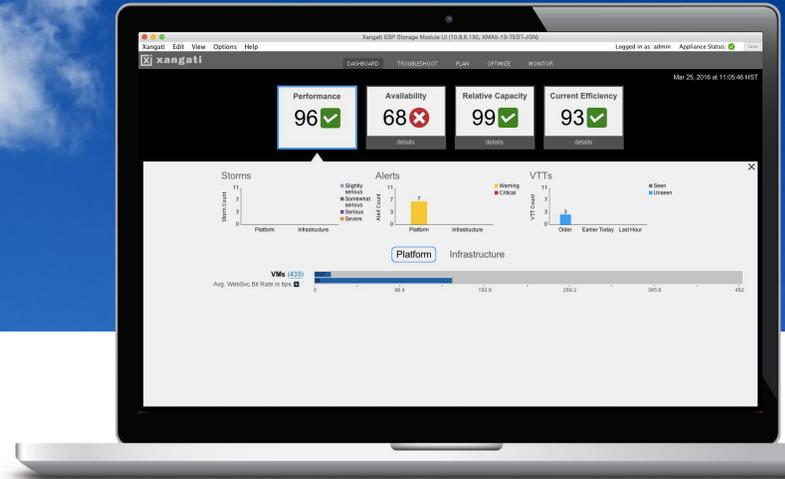


# Xangati ESP Storage Module



*"We have relied on Xangati for a number of years now to help us quickly see where bottlenecks are in a short period of time. It's an important part of maintaining the integrity of our infrastructure."*

**– Shawn Wood Assistant Manager, Systems Admin, MedAmerica**

## INTRODUCTION

Xangati ESP Storage Module is designed for the storage infrastructure and virtual storage objects. Xangati collects metrics on the IOPS, throughput and latency of each datastore as well as the number of hypervisors and guest VMs using each. Xangati monitors the choke-points for storage systems typically the network interfaces through which storage talks to the controllers that perform read/write transactions, the disks' ability to deliver I/O, and/or the flash's ability to cache and deliver I/O.

## SERVICE ASSURANCE - THE CHALLENGE

Service assurance is the ultimate responsibility for the IT department and a major resource consumption concern of business stakeholders – ensuring that all applications are healthy, workloads are balanced to achieve peak efficiency in the use of the IT infrastructure, and that service-level targets are consistently met while end users enjoy a superior workspace experience from any mobile device anywhere in the world.

Traditionally, service assurance was incidental to legacy performance monitoring tools, each in its own silo. Volumes of data would be collected on the IT infrastructure, but sorting through it to find ways to make improvements or even to fix a current problem was intolerably time-consuming. IT personnel were limited by the 5-to-5 minute sampling frequency of on/off-hot/cold monitors and the inability to see a holistic, real-time picture of potential bottlenecks that are transpiring between mission-critical applications and troublesome “noisy neighbor” applications in the dynamic, shared infrastructure.

## SERVICE ASSURANCE - THE SOLUTION

Xangati ESP provides IT administrators, enterprise architects and DevOps professionals with an end-to-end tool that goes far beyond what traditional monitoring tools provide. Xangati is a virtual appliance that can be self-installed in an hour, with no agents or reboots required, and that automatically discovers and maps the infrastructure, while providing unsurpassed clarity about the IT infrastructure status from day one, enabling true cloud performance optimization.

At the core is Xangati ESP's real-time, in-memory, cross-silo, time correlated metrics, which populate software-dashboard modules on a live, second-by-second basis, even in the largest of infrastructures, to provide the most granular visibility possible across the datacenter, out to mobile client devices, and with a full awareness of users, applications and services. Then our predictive analytics, leveraging Xangati ESP's exclusive storm-tracker utility, determine the root cause of resource contention storms and provide IT with the exact steps they need to take to resolve bottlenecks and to ensure that they do not recur in the future.

**BUSINESS BENEFITS**

- **Save Money** by improving the operational efficiency of the IT infrastructure and by making better-informed IT purchase decisions.
- **Meet SLAs** consistently by leveraging Xangati ESP's visibility, root cause analysis, predictive analytics, and well-informed remediation advice.
- **Increase Productivity** for end users who are using various applications.
- **Mitigate Risks** associated with cloud and mobile infrastructure, such as resource contention and pattern anomalies while enjoying the benefits of an agile mobile workforce.
- **Faster Problem Resolution** by leveraging powerful, portable, DVR-like recordings to speed resolution by the helpdesk.

**RESOLVE + PREVENT = CONTROL**

- **Storm-tracker** utility provides performance and capacity saturation triggers
- **Assure Performance** by implementing the prescriptive advice that Xangati ESP provides, based on its unsurpassed visibility and advanced, predictive analytics.
- **Increase Efficiency** with second-by-second visibility and a predictive analytics engine that discovers and flags over-utilized or under-utilized resources.
- **Avoid Storms** with well-informed advice about what to rebalance and what to purchase, based upon analysis of past contention storms.
- **Better IT Purchase Decisions** are informed by powerful reports that can be created, scheduled and exported for circulation to stakeholders.
- **Minimize False Alarms** by leveraging the state-of-the-art machine learning algorithms that adjust threshold values continually.

**MONITOR AT SCALE**

- **Second-by-second** collection of metrics from the entire end-to-end infrastructure including client devices provides unsurpassed visibility.
- **Proven** to provide unrivaled service assurance in the largest infrastructures in the world.
- **Automatic Discovery** of the networking and storage infrastructure maps all dependencies.
- **Cross-silo View** eliminates finger-pointing and provides a holistic view of the complex, interdependent infrastructure.
- **Monitor Worldwide Operations** from a single pane of glass with live performance indicators that provide real-time at-a-glance oversight.
- **No Agents or Probes** are needed, eliminating administrative burdens and the need for server reboots.
- **Fast time to Clarity** with easy installation and machine learning.
- **Reduce Brake-Fix Times** with powerful DVR-like recordings that provide unsurpassed visibility and guidance to resolve issues.
- **See Anomalous Traffic Alerts** in real-time to pinpoint any intentional or unintentional bad actors, with a minimum of false alarms.
- **Role-specific Software-dashboard Modules** provide all of the information needed for each admin scenario.

**END-TO-END VISIBILITY**

- **Virtual network objects** and underlying network infrastructure components are monitoring via NetFlow and comparable protocols, and cross-referenced against all of the other protocols and APIs Xangati ESP captures.
- **Key metrics** reported include bit rate, latency and flow analysis; network traffic anomalies are detected and reported.
- **Deeper insights** extensibility available for Citrix NetScaler ADCs, Cisco UCS, vNIC and Cisco ASA Server.
- **Proper use of network resources** is accounted for, with end-user consumption visibility to social media apps like Facebook and Netflix.
- **Highly granular bandwidth consumptive metrics** interactions with storage and compute displayed.
- **Cloud and micro-services** visibility with Docker VM-container infrastructure support for core Storage module.
- **Extension for EMC VNX** - Reports the IOPS, throughput and latency metrics that EMC VNX is contributing to the hypervisors (file, block, unified). Additionally, data on NFS or CIFS shares, iSCSI or Fibre Channel LUNs and CPU utilization and overall network bit-rates are collected.
- **AWS and Azure Extensions** analyze CPU, memory and storage utilization of an organization's virtual machines and associated objects, and Virtual Private Cloud VMs hosted in an AWS or Azure account.

