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TECH TIPS

Monitoring Linux & UNIX Environments

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Unexpected Simplicity

Monitoring Linux & UNIX Environments

Linux, as we know is an open source operating system which is widely used at an enterprise level even today. Since it's an open source and a free operating system, you can go to greater lengths to customize your applications and tools as per your needs and usage. Similarly, Linux is widely used in today's smartphones and tablet PCs. Android phones and tablets were built based on the Linux kernel providing customers and end users a highly customizable and a scalable platform.

Even though Linux offers plenty of flexibility, at an enterprise level, IT admins will still encounter performance issues. Whether it is Red Hat, SuSE, Ubuntu, CentOS, etc. performance issues related to the following will still keep coming up and you have to proactively troubleshoot.

- Storage issues and bottlenecks
- CPU load
- Memory bottlenecks
- Network issues

Similar to Linux, UNIX offers free and open source software for enterprises while a few versions of UNIX are paid software. You need to constantly look at the following in your UNIX farm to avoid performance issues, irrespective of whether you're using AIX, Solaris, or HP-UX operating systems.

- Context switching
- CPU spikes
- Zombie processes
- Memory constraints

Linux & UNIX Performance Monitoring

Linux and UNIX performance monitoring will ensure and help optimize the performance and availability of your OS environment. Linux and UNIX monitoring tools provide plenty of critical metrics which give you information on performance and other OS activities. In addition, you can drill-down using the monitoring tool to identify the cause of performance bottlenecks which was previously taking a lot of time to diagnose and troubleshoot.

SolarWinds Server & Application Monitor (SAM) delivers powerful application and server management capabilities for monitoring and managing various components of your Linux and UNIX operating system.

Some key components monitored by SolarWinds SAM for Linux and UNIX operating system:

Linux	UNIX
CPU User Time & System Time (%)	CPU User/System/Idle Time (%)
Wait IO (%)	Kernel Threads in Run Queue
CPU Idle Time (%)	Page-Cache: Page Ins/Outs
Run Queue	Daemon: syslogd

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Drive Space	Disk Operations/Sec of Busiest Devices
Total/Used/Free Memory (kB)	UNIX Disk Monitoring Perl Template
Total/Used/Free Swap (kB)	Page Faults/sec
Linux Disk Monitoring	Total Amount of System Call After Boot
Cache (kB)	Zombie Processes
Amount of Zombie Processes	Percent Busiest Device is in Use
Available Space on / Partition (MB)	Zombie Processes
Timing Cached Reads (MB/sec)	Total Amount of Device Interrupts After Boot
Blocks sent/received to/from Block Device (Blocks/sec)	Total Amount of CPU Context Switches After Boot

Agentless Performance Monitoring for Linux & UNIX

SolarWinds Server & Application Monitor (SAM) delivers agentless availability and performance monitoring for Linux and UNIX operating systems. Whatever your environment, SAM allows you to choose component monitors that will give you critical performance feedback. SAM comes with a range of expert templates for Linux and UNIX that tells you what to monitor and why it's important to monitor.

Further, SAM allows you to customize the expert template by choosing what component monitors you need for your environment. Once you have the template ready, apply it and then you can immediately start monitoring. SAM even recommends optimum performance thresholds to the component monitors.
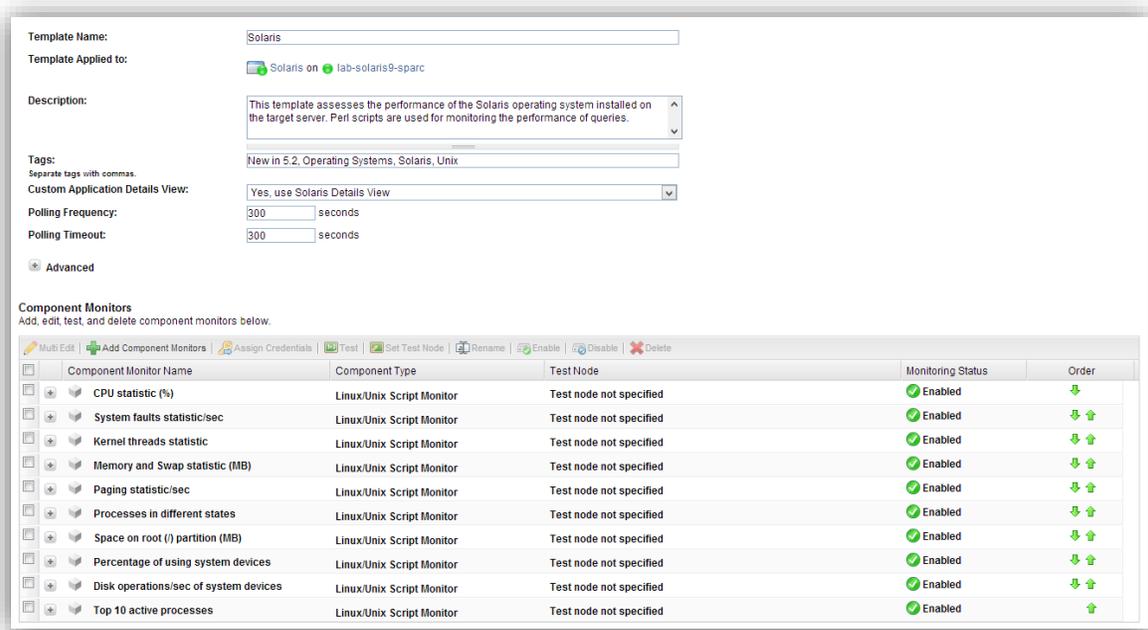

Customize and assign template for monitoring your Linux or UNIX setup

Out-of-the-Box Delivers Insights into the Linux & UNIX Environments

From SAM's intuitive dashboard, you can view all information about a Linux & UNIX environment, including:

- Application details

- Application availability

- Groups

- CPU load and memory statistics

- Active alerts related applications and components

- Top 10 processes

- Node details
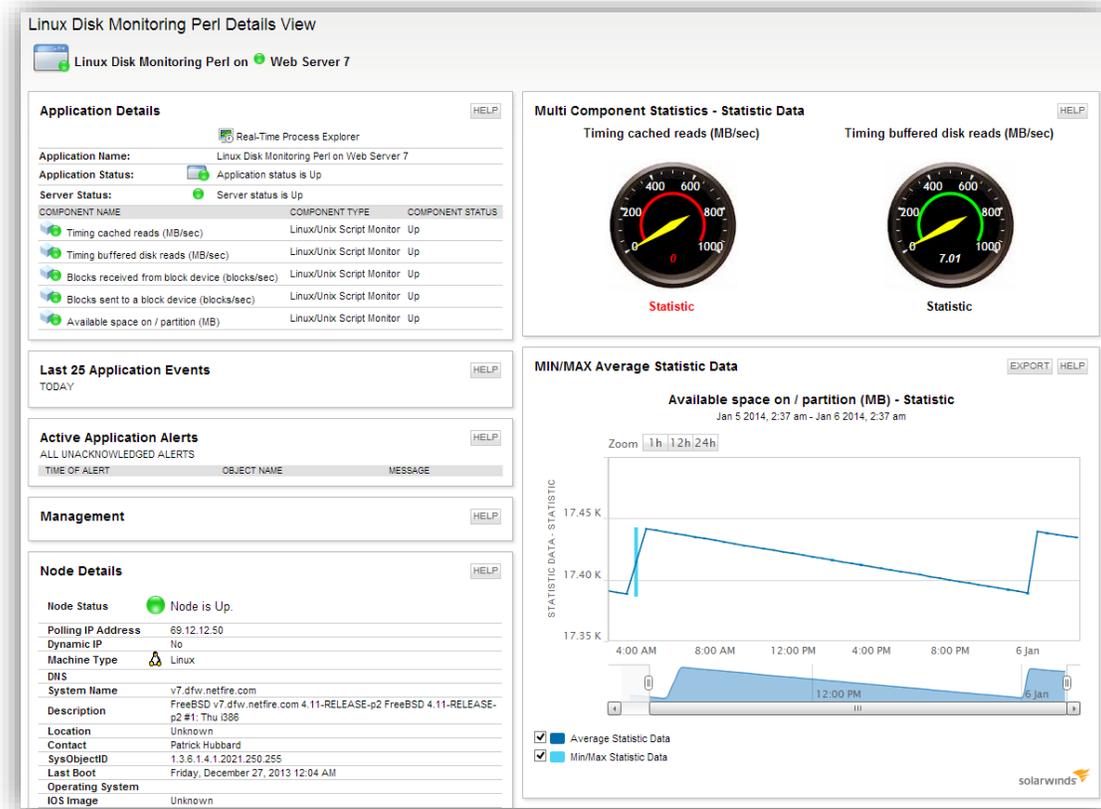
SAM dashboard displays vital statistics for efficient Linux & UNIX monitoring

Linux and UNIX component statuses can be viewed in the form of charts, such as gauges, graphs, and pie charts. You can drill-down further from the chart to see specific information that are time-based, min/max data related, percentage data (Available memory, % CPU Load, etc.). In addition, the data from the charts can be exported in to an excel file or in to HTML format.

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Advanced Alerting and Escalations

With SolarWinds SAM, you can quickly configure alert engines and respond to hundreds of different scenarios, including multiple condition checks.

You can generate alerts for applications and components in SAM and many more including:

- Base your alert criteria for every individual component in your Linux and UNIX farm.
- Obtain alerts if your component reaches critical, up, down, unknown, or warning stage.
- Obtain alerts based on statistic data that are specific to the applications that are monitored.
- Get alerts on zombie processes
- View alerts in the SAM Web console or depending on the priority of the alert, receive alerts via email or on your phone.

Advanced Alert Manager

The Advanced Alert Manager is used to view component events and alerts. Using the Advanced Alert Manager you can:

- Configure alerts in such a way that components can be monitored for a specific time period.
- Look at recent component events with their description and other information from the events log.
- Select actions that will occur when advanced alert is reset to ensure basic alerting still continues for specific components you consider critical in your Linux or UNIX OS.
- View active alerts in Advanced Alert Manager with their description and information from the alerts log.

Monitoring Processes & Services

Once an alert is generated that an application, or its component or a node, is reaching a warning or a critical stage, you can follow the alert and take corrective measures before more users are affected. SAM allows you to do this in many ways. Drilling down to the component level of a node or an application will identify the issue. You can also look at critical processes and services that are causing an overload on the node.

Real-time Process Explorer

Gain real-time insights about critical processes and their performance. With the Real-time Process Explorer, you can identify processes that have been assigned to applications and kill those processes affecting a node's performance.

Real-time Process Explorer allows you to:

- Remotely manage processes without being physically present
- Log in and retrieve vital statistics about the processes
- View information for both monitored and unmonitored processes

- Monitor processes and services, such as:
    - CPU utilization
    - Memory utilization
    - Virtual memory utilization
    - Disk I/O

Remotely manage processes and obtain vital statistics about your applications

Service Control Manager

The Service Control Manager is very similar to the Real-time Process Explorer. You can manage services of the monitored Windows nodes. The Services Control Manager gives you information on services that are currently running and aren't on the monitored node. You can start and stop services that are assigned to applications as needed.

Remotely start, stop, and restart critical services

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Built-In Reporting Functionality

SolarWinds SAM offers plenty of built-in application reports, making it easy to report on application and server performance over specific time periods. SAM allows you to even schedule automated report generation and email delivery. These reports help you monitor availability, performance, and utilization statistics of your Linux and UNIX environments.

You can also project future trends and capacity needs to keep your Linux and UNIX environments up and running at all times.

5 Reasons to Download Server & Application Monitor

- Get visibility into Linux and UNIX performance metrics and statistics

- Track performance to identify performance bottlenecks and ensure sustained performance of your Linux and UNIX operating system

- Set baseline thresholds and get notified when your Linux and UNIX operating system components are reaching a critical stage

- Web-based and agentless monitoring platform

- Deploy and start monitoring in less than an hour

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide - from Fortune 500 enterprises to small businesses. The company works to put its users first and remove the obstacles that have become "status quo" in traditional enterprise software. SolarWinds products are downloadable, easy to use and maintain, and provide the power, scale, and flexibility needed to address users' management priorities. SolarWinds online user community, http://thwack.com, is a gathering place where tens of thousands of IT pros solve problems, share technology, and participate in product development for all of the company's products. Learn more today at http://www.solarwinds.com.

For additional information, please contact SolarWinds at 866.530.8100 or e-mail sales@solarwinds.com.

To locate an international reseller near you, visit http://www.solarwinds.com/partners/reseller_locator.aspx

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