Monitor cloud instances with SAM

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Cloud service platforms provide on-demand computing resources to third-party organizations over the Internet. As organizations migrate systems to the cloud to distribute workloads, deliver applications, and expand resources for growing databases, infrastructure can become difficult to map in sprawling environments, leading to lost resources or hidden instances.

To support hybrid environments, the Orion Platform can retrieve data from the Amazon Web Services (AWS) and Microsoft Azure cloud service platforms to track availability, performance, applications, and more for instances and VMs. Examples of data gathered include status, storage capacity, memory usage, and IP addresses.

Using the Cloud Infrastructure Monitoring feature with Orion Platform products such as SolarWinds SAM and VMAN provides several benefits, including the ability to:

- Manage hybrid environment metrics and status through a single console. Displaying on-premises, virtual, and cloud systems together helps you compare performance, locate bottlenecks, and better plan capacity and resource allocation.
- Track end-user and business context for performance by using SAM to gather extended metrics that provide visibility into cloud and on-premises systems.
- Dynamically monitor cloud instances and VMs to better handle resource churn during provisioning. Instances and VMs can be removed as needed to support expanding environments or performance peaks.
- Determine usage trends and troubleshoot issues. Captured metrics over time provide historical references to track trends for resource consumption (such as CPU spikes and lulls) and help determine when those trends become issues.
- Use cloud monitoring data, Orion alerts, and the Performance Analysis dashboard (PerfStack) to review historical performance and pinpoint when significant usage changes began to trigger issues.

To enhance cloud monitoring, configure cloud instances/VMs as managed nodes in the Orion Platform so you can:

- Poll specific metrics beyond the basic metrics gathered by cloud service APIs, including OS, memory, and other detailed metrics retrieved by SAM application monitors.
- Use SAM application monitors and templates to poll applications deployed in the cloud.
- Display cloud instance/VM details in AppStack for quick troubleshooting across your environment.
- Develop and deploy custom script monitors for PowerShell, Nagios, Linux/UNIX, and Windows.
- Assign Custom Properties to nodes.
Displaying data for cloud-based instances

After adding your cloud services account in the Orion Web Console, the Orion Platform polls cloud service APIs and services for cloud metrics and status. This data aggregates and displays through the Orion Web Console to monitor, manage, and troubleshoot issues in your cloud environment:

For example, after adding a series of EC2 cloud instances from your AWS account for the east coast, you can click My Dashboards > Cloud to review overall AWS infrastructure data and cloud details. Use the Cloud Instances Status Summary and Cloud Server Infrastructure resources to review status and health at-a-glance. To quickly review cloud status, metrics, and node management for a cloud instance, hover over any cloud instance name in the Orion Web Console.

The tooltip provides quick information for the cloud service and status.

When managed as a node, the tooltip provides enhanced data.

Any cloud instances encountering issues display in the following resources with linked instances and nodes to investigate:

- Active Cloud Alerts lists all active alerts affecting monitoring and managed cloud instances.
- Cloud Applications with Problems lists all applications with issues on cloud instances managed as nodes in SAM.
Select a cloud instance to view the Cloud Instance Details page. This page displays for monitored nodes, or as a Cloud tab in a cloud instance managed as a node. Any exceeded thresholds show in warning and critical values, charts and graphs with hover over points to compare all collected data, and linked alerts.

The following resources provide important data for determining issues and tracking performance and usage trends:

- Active Alerts lists all active alerts affecting the cloud instance.
- Min/Max/Average of Average CPU load displays average CPU load collected and calculated for the cloud instance.
- Min/Max/Average of Network Utilization provides a chart of the minimum, maximum, and average bits per second transmitted and received over a cloud instance for a custom period of time.