



Site24x7

Free Online Training - Day 2



Intro about the training program

All modules of Site24x7 will be covered in 5 sessions.

We offer this training program in three time zones for your convenience.

AUS Time Zone (10:00 AEDT) | UK Time Zone (10:00 BST) | US Time Zone (10:00 PDT)

Sessions split up:

Session 1 - Introduction and Deep Dive into Website Monitoring (Mon, Oct 10, 2022)

Session 2 - Infrastructure Monitoring and Custom Plugins (Tue, Oct 11, 2022)

Session 3 - Network & Virtualization Monitoring and Log Management (Wed, Oct 12, 2022)

Session 4 - Application Performance Monitoring and Real User Monitoring (Thu, Oct 13, 2022)

Session 5 - Reports, Dashboards, Advanced Configurations, Alerting, and More (Fri, Oct 14, 2022)



Scope of the session

- Agent-based server monitoring (Process monitoring, Microsoft applications monitoring, Resource check profiles and much more)
- Bulk deployment of server agents
- Cron Jobs and Heart Beat Monitoring
- IT automation
- Docker and Kubernetes monitoring
- Plugins
- Introduction to cloud monitoring (AWS, Azure and GCP)
- Overview of Site24x7 CloudSpend



Agent-based Server Monitoring

Server Monitoring - Supported Platforms



OS X



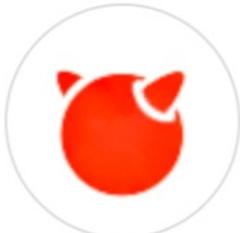
Windows



Linux



Kubernetes



FreeBSD

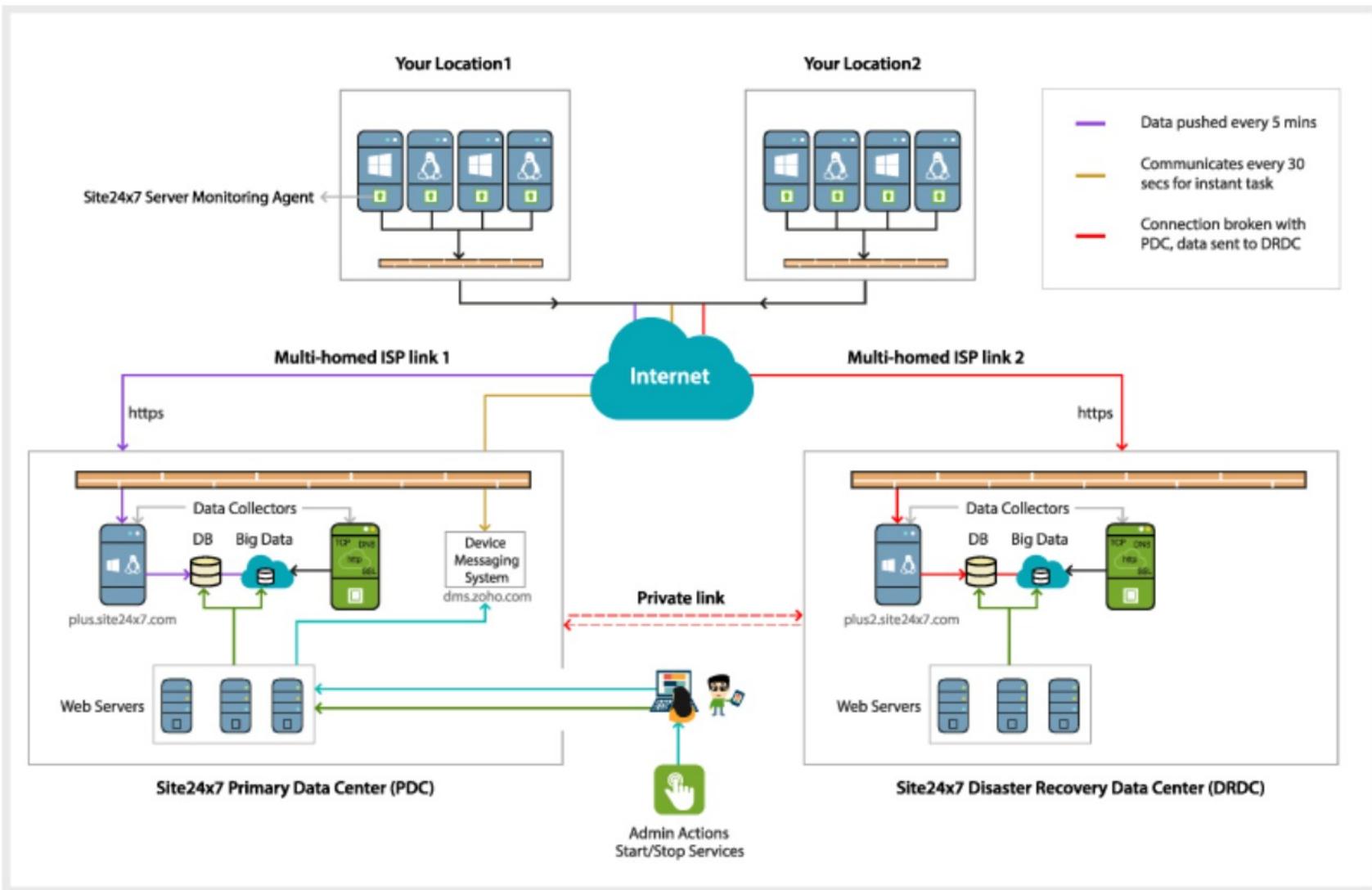


Servers



Bulk Install

How it works?

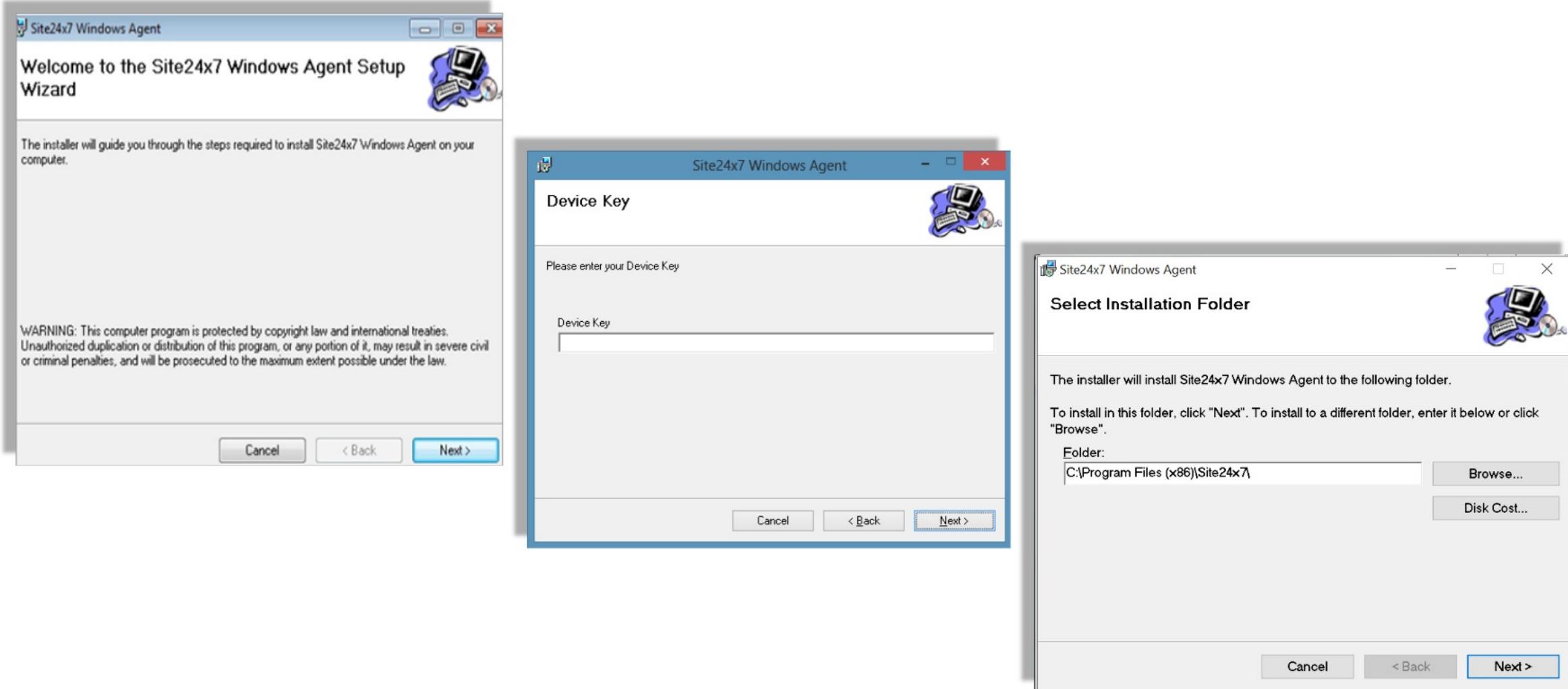




Domains and Port to be whitelisted

- > Domains
 - > plus.site24x7.com (Primary data center)
 - > plus2.site24x7.com (Disaster recovery data center - Primary)
 - > plus3.site24x7.com (Disaster recovery data center - Secondary)
 - > logu.site24x7.com (Log receiver)
- > <https://staticdownloads.site24x7.com/>
- > Port : 443

Server Monitor - Windows Agent Installation

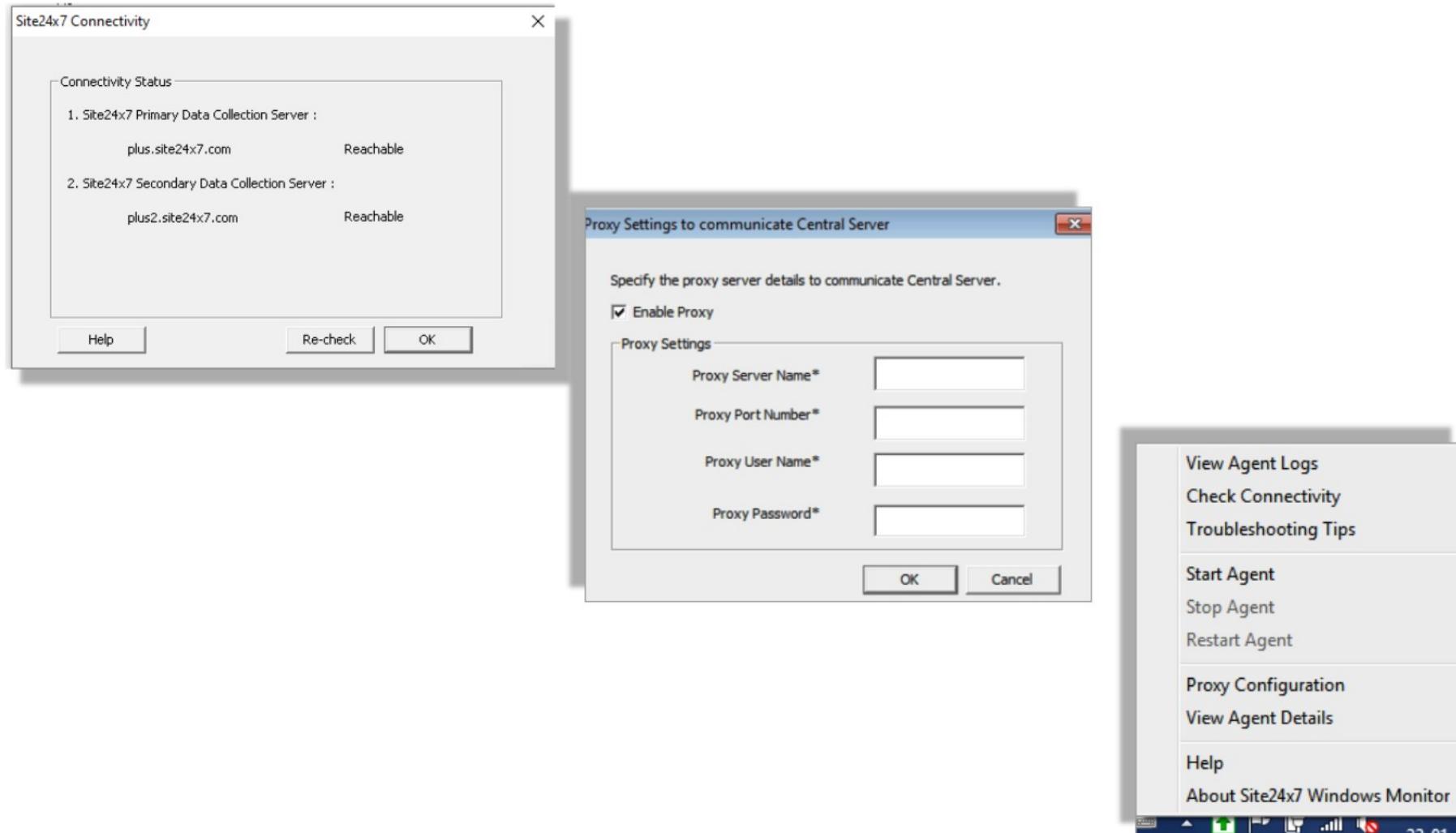




Services that are installed by Windows server monitoring agent

- …→ Site24x7 Windows Agent
- …→ Site24x7 Agent Helper
- …→ Site24x7 Plugin Agent
- …→ Site24x7 APP Monitoring Agent
- …→ Site24x7 Applogs Agent

Server Monitoring - Windows Agent Tray Icon



Server Monitoring - Linux Agent Installation

→ Requirements

- Glibc version - 2.5 and above. To check the glibc version, use the command locate libc.so in your Linux Terminal

→ Installation

Execute the following commands in your terminal

Set Proxy

Yes

No

Install as

Root

Non Root

Run as

Root

Non Root

IT Automation

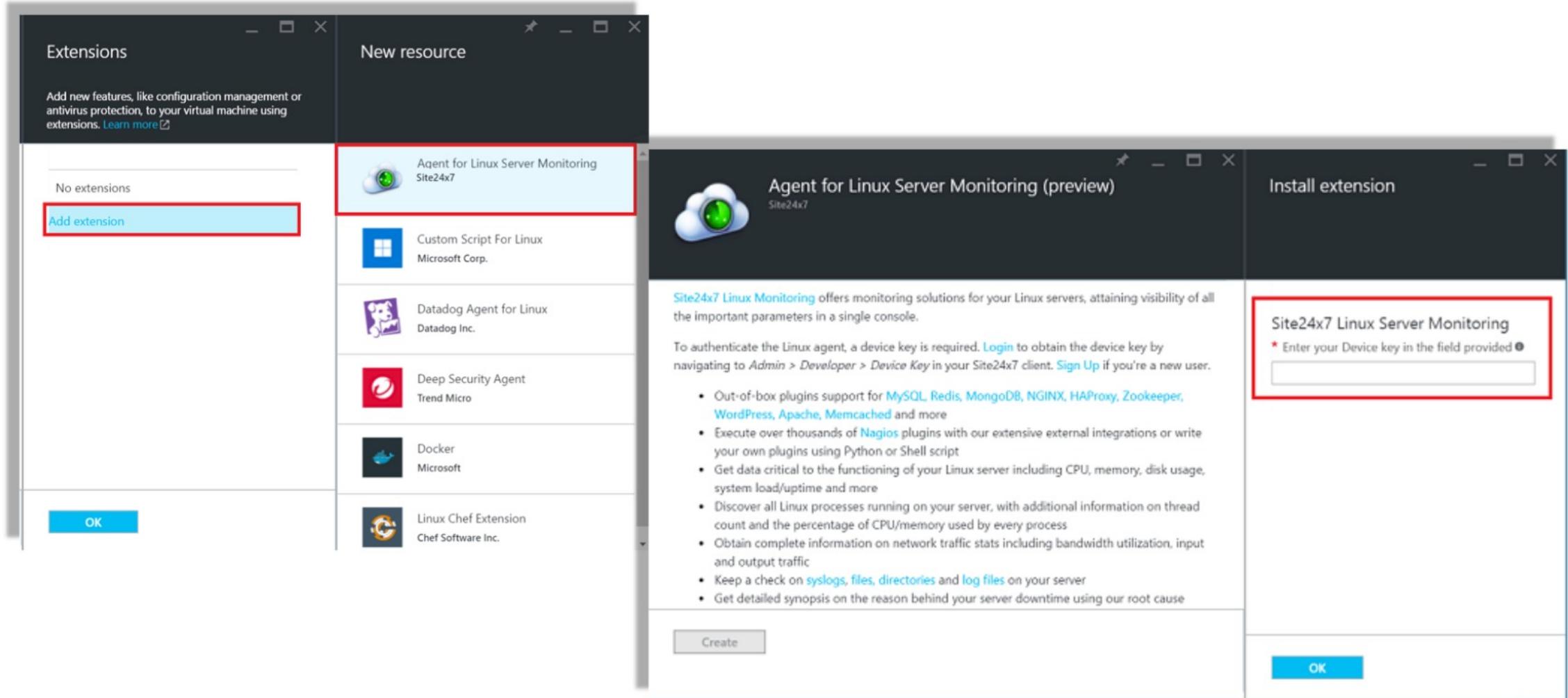
Disabled

Enabled

```
wget https://staticdownloads.site24x7.com/server/Site24x7InstallScript.sh
```

```
bash Site24x7InstallScript.sh -i -key= -automation=true
```

Adding a Linux Monitor via VM Extension in Azure



Server Monitoring - Bulk Installation

Having more than 100 servers? Bulk install the agent in all your servers in one go. Pick any of the below methods based on your OS platform.

Windows Bulk Installation Methods



Active Directory



Remote Commands



Powershell DSC



SaltStack



Azure VM Extension



Using GCP



Auto Installation using AD

Linux Bulk Installation Methods



Remote Installation using SSH



Chef



Puppet



Ansible



SaltStack



Azure VM Extension



Using GCP



Using DigitalOcean



Using Amazon Machine Image(AMI)



AWS ECS



AWS EBS



Kubernetes

Server Monitoring - Mac OS X

- OS version 10+ and above are supported
- Admin permission required to install the OS X agent

Add Server > Add OS X Server Monitor Page Tips

Prerequisite : Ensure you have Python version 3 or above installed

Execute the following command in your terminal

Set Proxy Yes No Install as Root Non Root

```
bash -c "$(curl -sL https://staticdownloads.site24x7.com/server/Site24x7InstallScript.sh)" readlink -i -key=
```

[Copy to Clipboard](#)

Once the installation is complete, go to [Server > Server Monitor > Servers](#) to view your monitor.

Tip: [Associate threshold, notification, resource check profiles and more while installing the agent](#)

Having trouble installing the agent? Try with an [alternative method](#).

Not able to see your monitor even after successful installation? Try [troubleshooting](#).

Help Resources

- [Add a OS X monitor](#)
- [Necessary ports to allow access in my firewall](#)
- [Configure Resource Checks](#)
- [Troubleshooting Tips/FAQs](#)

You can also add



Linux FreeBSD Windows

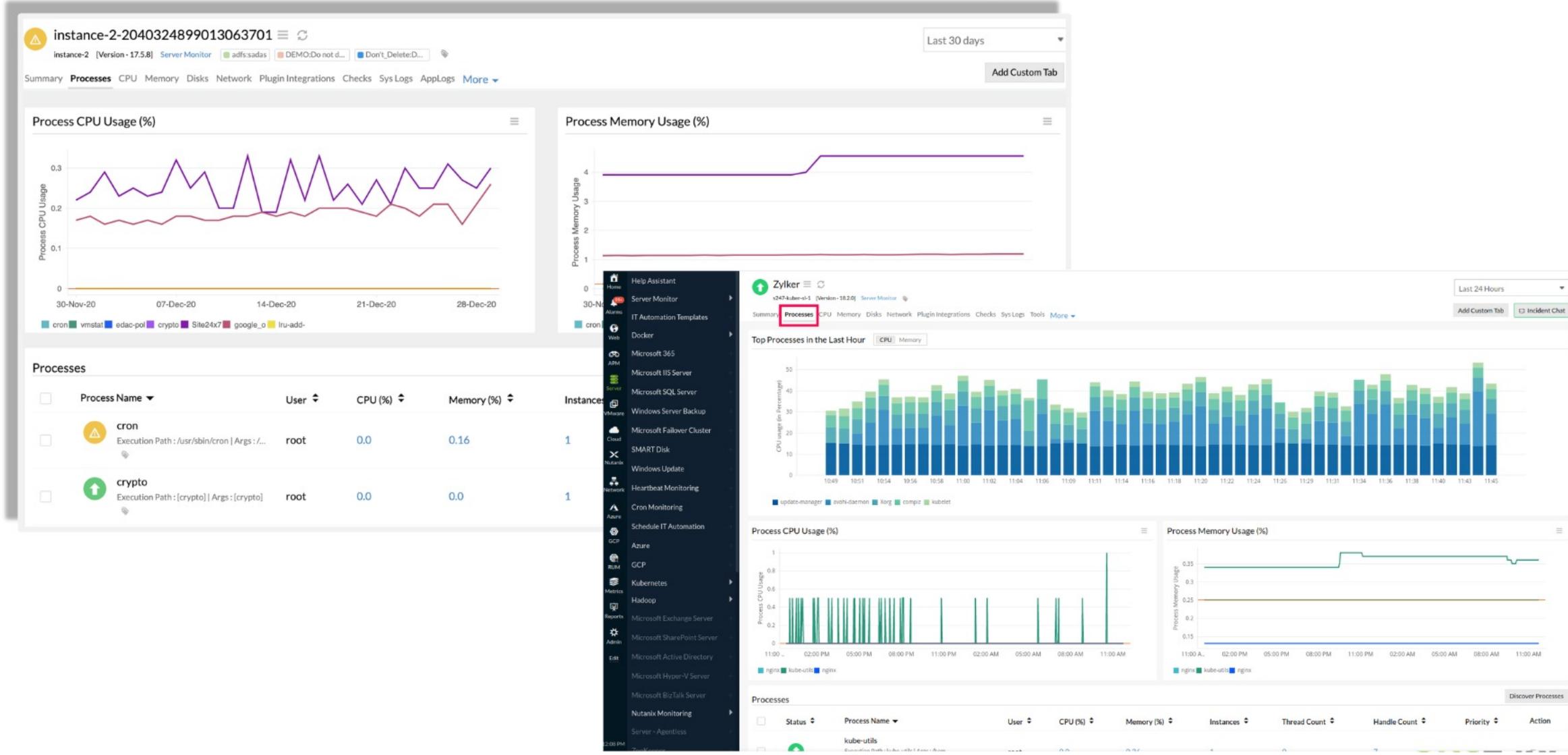


Server Monitoring - FreeBSD

→ Installation command

```
curl -LO https://staticdownloads.site24x7.com/server/Site24x7InstallScript.sh  
&& sh Site24x7InstallScript.sh -i -key=
```

Process/Service Monitoring





Resource Check Profiles

Edit Resource Check Profile ⓘ

Delete X

Profile Name: My Profileas

Associate Server Monitor(s): applogs-2gbtest.enduserexp.com and 3 more ▾

Multiple checks can be configured using the options on the right hand menu

Check Name	Check Type	Resource Monitored	X
DLL Application Error	DLL Application Error	WINDOWS - Application	X
Permissions Check	Permissions Check	onagent/conf/monagent.cfg	X

Configured Checks

Log Checks

- Windows Event Logs
- Linux Syslogs

URL and Port

- URL Check
- Port Check

File Checks

- Access Check
- Permissions Check
- Size Check
- Last Modified Check
- Content Check

Directory Checks

- Size Check
- Subdirectory Added
- Subdirectory Deleted
- File Added
- File Deleted
- Access Check
- Permissions Check



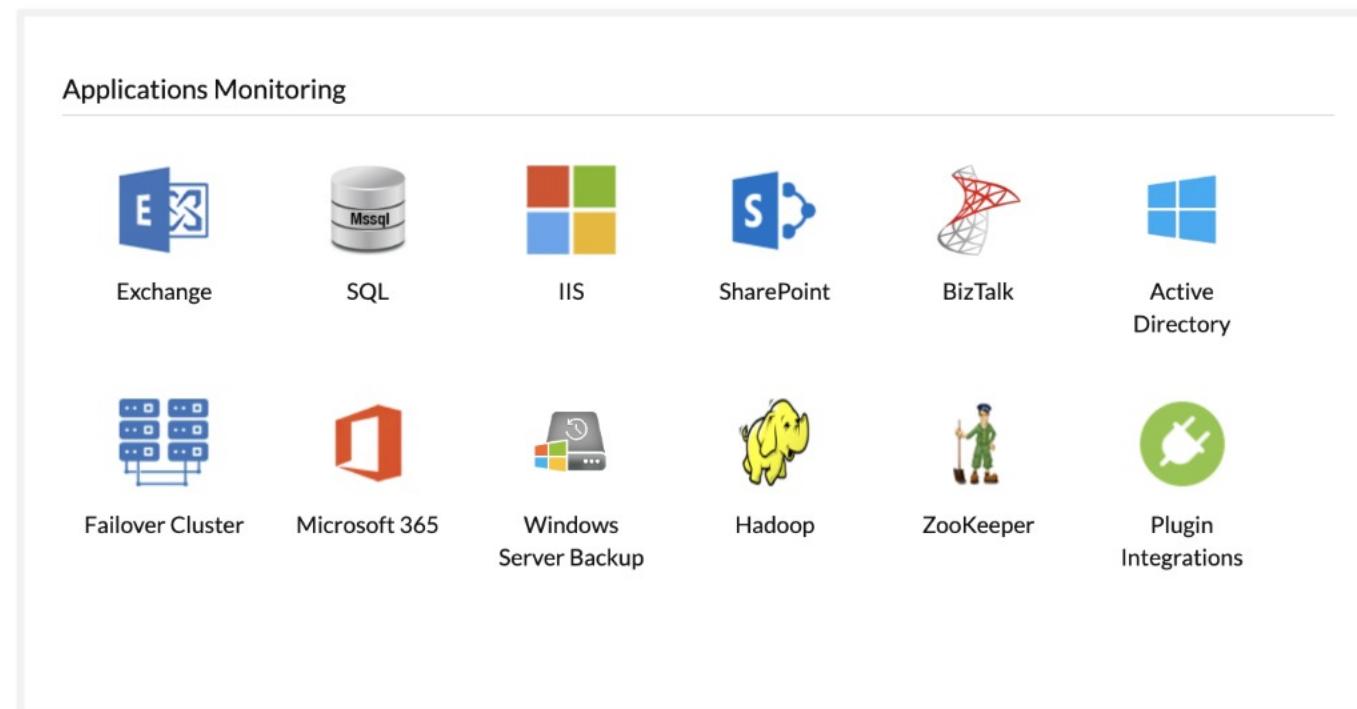
Server Monitor Settings

Settings ⓘ

Auto upgrade the agent when a new version is available ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>
Auto discover applications on the server ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>
Auto create monitor groups based on domain ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>
Sync monitor display name with server hostname ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>
Set threshold for server heartbeat check ⓘ	<input type="text" value="7"/> mins Update
Alert after server restart	<input type="button" value="Yes"/> <input type="button" value="No"/>
Map and add a server based on hostname ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>
Show Normalized Load Average ⓘ	<input type="button" value="Yes"/> <input type="button" value="No"/>

Monitoring Microsoft Applications

- Analyze the performance of critical Microsoft apps like Exchange, IIS, SQL, Windows server backups, Windows Update, SharePoint, Office 365, Active Directory, Failover Cluster, Hyper-V, etc





Cron Monitoring

- Monitor cron jobs, micro-services, daemons and almost anything else, with a simple no-coding setup. Troubleshoot cron failures quickly and get alerts before a cron failure impacts your system.



Define the Cron Expression for your job and get the unique Ping URL to collect information when your job starts, completes or fails



If your job fails to run as expected, alerts are triggered

View and analyze performance reports



Heartbeat Monitoring

- Monitor to know if your scripts, agents, workers, daemons are continuously running as expected. You will be given a unique ping URL for every heartbeat monitor added in Site24x7.
- With a simple HTTP request to the {display name} endpoint of the URL, you will know if your task is able to communicate with your server or not. Also, you can set up thresholds and be alerted when they don't ping back.



Hadoop Monitoring

- Executing the above command in your Hadoop NameNode will add a monitor for each NameNode, DataNode and YARN in Site24x7
- Each Hadoop NameNode, DataNode, and YARN will consume one basic monitor license
- Make sure auto discover applications on the server in the server monitor settings is set to 'Yes'
- Supported from Linux agent version 17.5.0



Zookeeper Monitoring

- Each Zookeeper monitor will consume one basic monitor license.
- Make sure auto discover applications on the server in the server monitor settings is set to 'Yes'
- Supported from Linux agent version 17.5.0



Smart Disk Monitoring

- Install the Linux monitoring agent to auto-discover and add the SMART Disk for monitoring
- Ensure "smartmontools" is installed to monitor the hard disks
- As of now, we support the vendors Toshiba and Seagate
- This feature is available from Linux agent version 17.4.5 and above



StatsD Metrics Monitoring

- Site24x7 StatsD integration is a metrics aggregation service bundled with the Site24x7 server monitoring agent
- The agent gets your custom application metrics and pushes it into Site24x7 through the StatsD protocol
- Ensure the server monitoring agent is enabled to bind with the UDP port to collect StatsD metrics
- Timer, counter, gauge, and set metrics can be monitored using Site24x7 StatsD Integration

StatsD Metrics Monitoring - Threshold Settings

- Set thresholds for each metric pushed to Site24x7 and get alerted when the configured threshold value is breached

The screenshot shows the Site24x7 StatsD Metrics Monitoring interface. On the left, there's a sidebar with a green icon, the text 'Statsdmetrics', and 'StatsD Integration'. Below this are tabs for 'Summary' (which is active) and 'Outages'. The main area has a large orange circle with the number '0' and the word 'Critical'. To the right, there's a section titled 'Performance' with several rows of metrics. A modal window titled 'Edit Threshold' is open over the performance data. Inside the modal, the metric 'aof_enabled' is selected. The configuration includes:

- Metric: aof_enabled
- Host: host:instance-2
- Action: SET
- DB: db:0
- Host: host:localhost
- Condition: > 66
- Threshold: 66
- Poll Strategy: Poll count
- Poll Value: 1
- Notify As: Trouble (selected)
- Automation: No items selected

A 'Save' button is at the bottom of the modal. Below the modal, the performance data table shows four rows for 'aof_enabled' and one for 'sync_partial_ok'.

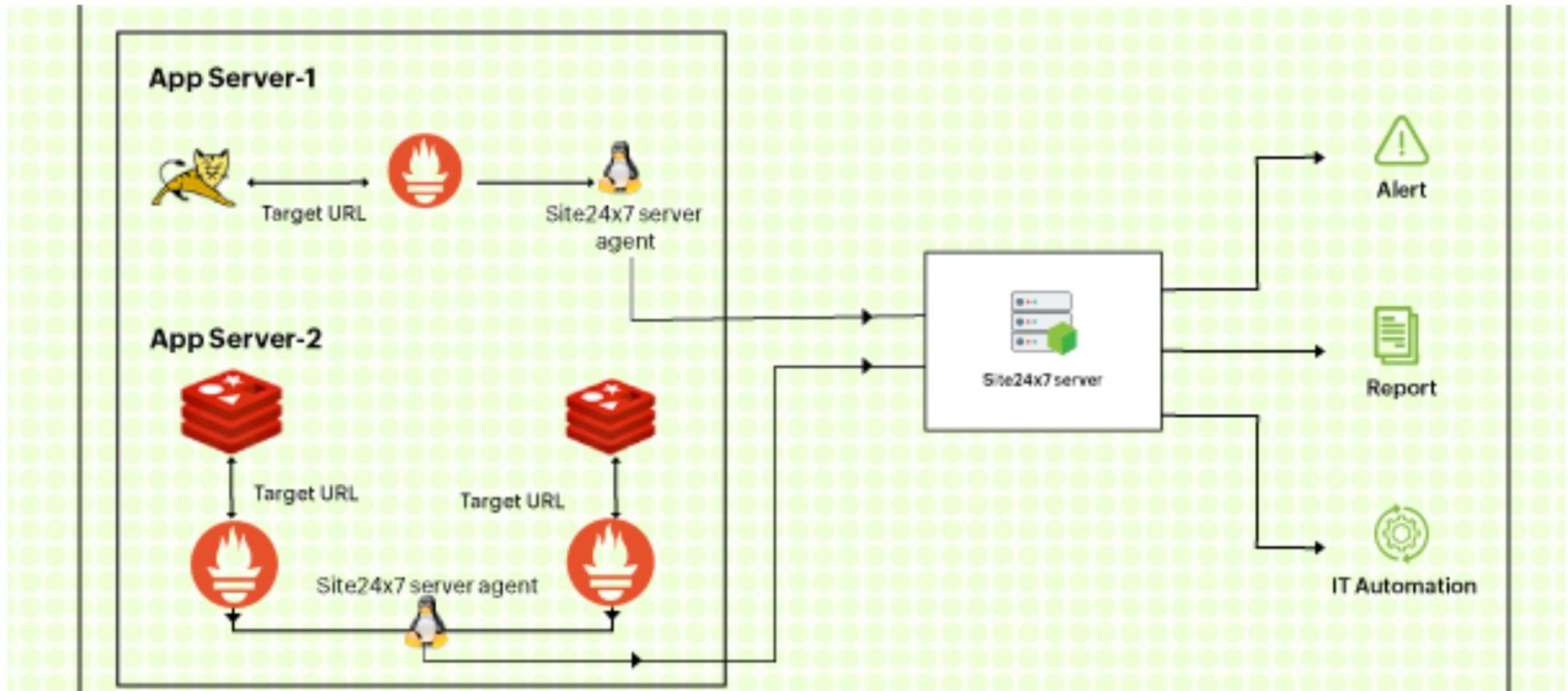
Metric	Value	Unit	Host	Action	DB	Host
aof_enabled	0		host:instance-2	SET	db:0	host:localhost
aof_enabled	0		host:instance-2	COUNTER	db:0	host:localhost
aof_enabled	0		host:instance-2	TIMER	db:0	host:localhost
sync_partial_ok	0		host:instance-2	GAUGE	db:0	host:localhost



Prometheus Metrics Monitoring

- Prometheus-integrated Site24x7 agent is an all-in-one metrics aggregation, monitoring and alerting toolkit.
- Benefits include
 - IT Automation for threshold breach
 - Custom dashboard to correlate all the metrics
 - Time-specific reports to observe performance trends
 - Email, SMS, and voice call alerts based on user-defined triggers
 - Integrate with a wider variety of ITSM and collaboration tools, including Slack, Jira, Zapier, and Zoho Cliq

Working architecture





Container Monitoring



Docker Monitoring

- Monitor your docker containers with Site24x7 Linux Monitoring agent and track the dynamic, rapidly scaling containers from a single console
- Monitor can be added in either of the below two ways:
 - > Auto-discover docker application once the Linux agent is installed
 - > Download and install the Linux monitoring agent from Docker Store (called the Docker agent)
- In both the methods, the docker application and all the containers within the docker will be added as separate monitors in the Site24x7 web client



Kubernetes Monitoring

→ Monitor the different components of your container infrastructure and get a complete picture of the health and performance of your Kubernetes clusters

* Services

* Containers

*Daemonsets

*Horizontal Pod AutoScaler(HPA)

*Nodes

*Deployments

*EndPoints

*Pods

*ReplicaSets

*StatefulSets

*Persistent Volume Claim

How to Add Kubernetes Monitor?

Add Linux Server > Add Kubernetes Monitor

Select the desired platform in which you want to monitor the Kubernetes system.

On-Premise Kubernetes Azure Kubernetes Service Elastic Kubernetes Service Google Kubernetes Engine

- Configure Role-based Access Control (RBAC) permissions in On-Premise setup and install the Site24x7 agent as DaemonSet

Download the [site24x7-agent.yaml](#) file and save it in your Master Node's Terminal.

Open the downloaded yaml file and Replace the Device key `edd30a0099ba623763b7893aafb88c7f` in the value of environment variable KEY.

Copy and execute the below command to apply the YAML.

```
kubectl apply -f site24x7-agent.yaml
```

[Copy to Clipboard](#)

If the set up has proxy, uncomment the following lines under env in the site24x7-agent.yaml file and update the proxy value.

```
- name: http_proxy  
  value: <http_proxy_value>  
- name: https_proxy  
  value: <https_proxy_value>
```

- Configure kube-state-metrics

Download the [site24x7-kube-state-metrics.yaml](#) file and save it in your Master Node's Terminal.

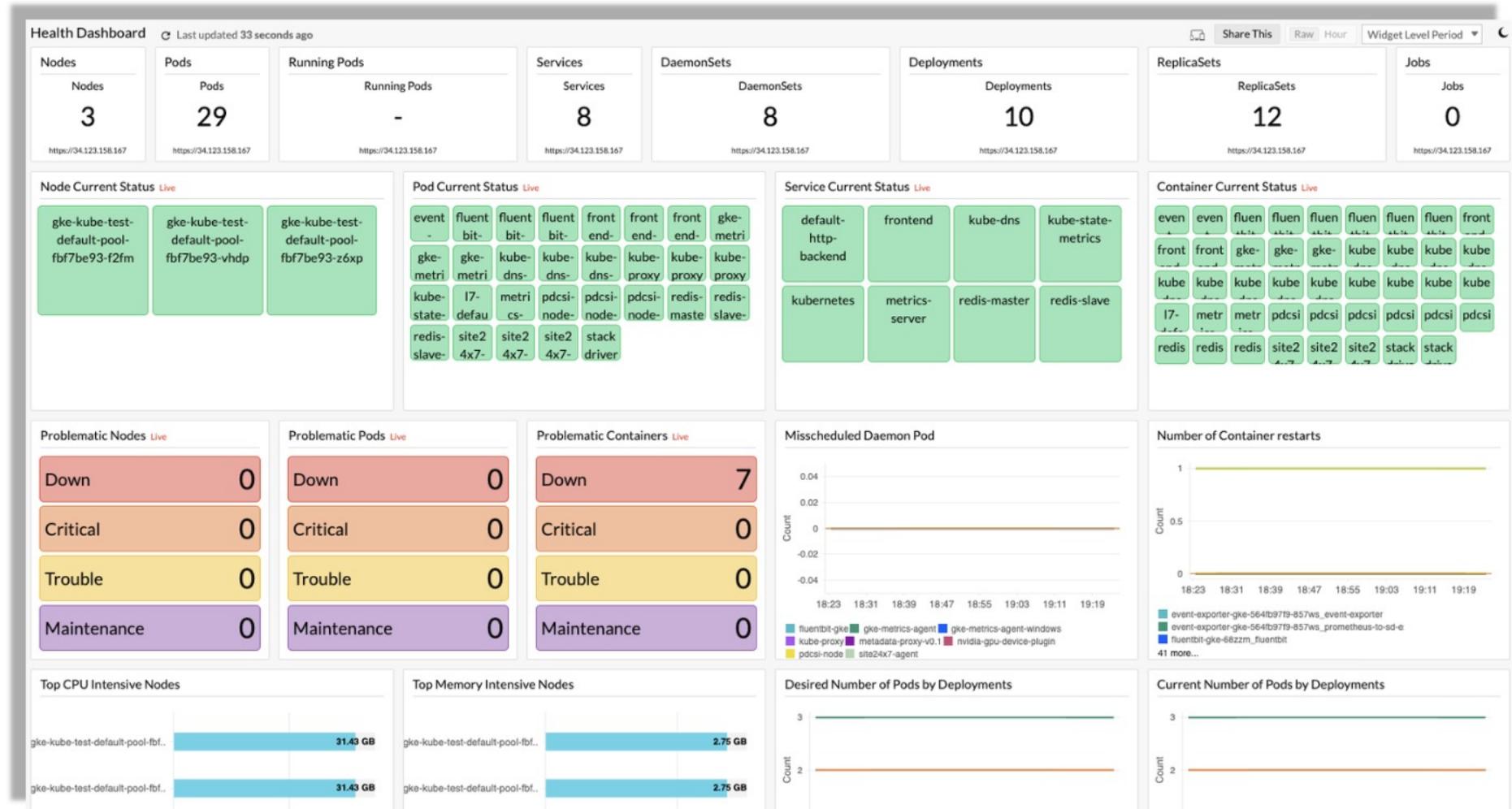
Execute the below command to apply the YAML.

```
kubectl apply -f site24x7-kube-state-metrics.yaml
```

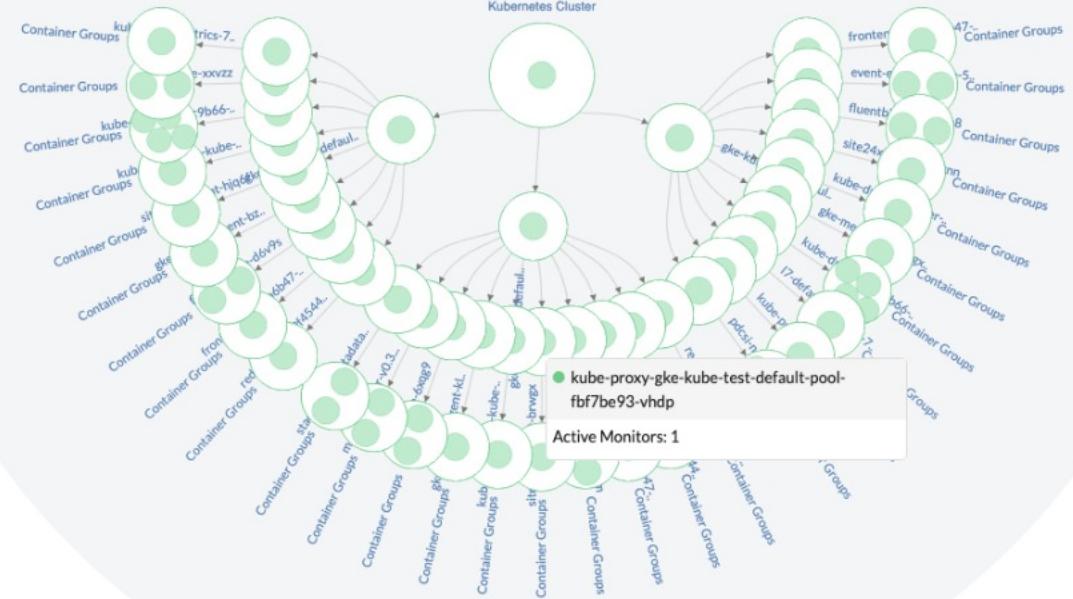
[Copy to Clipboard](#)

Note: Enable kube-state-metrics for monitoring advanced kubernetes metrics.

Health Dashboards



Business View





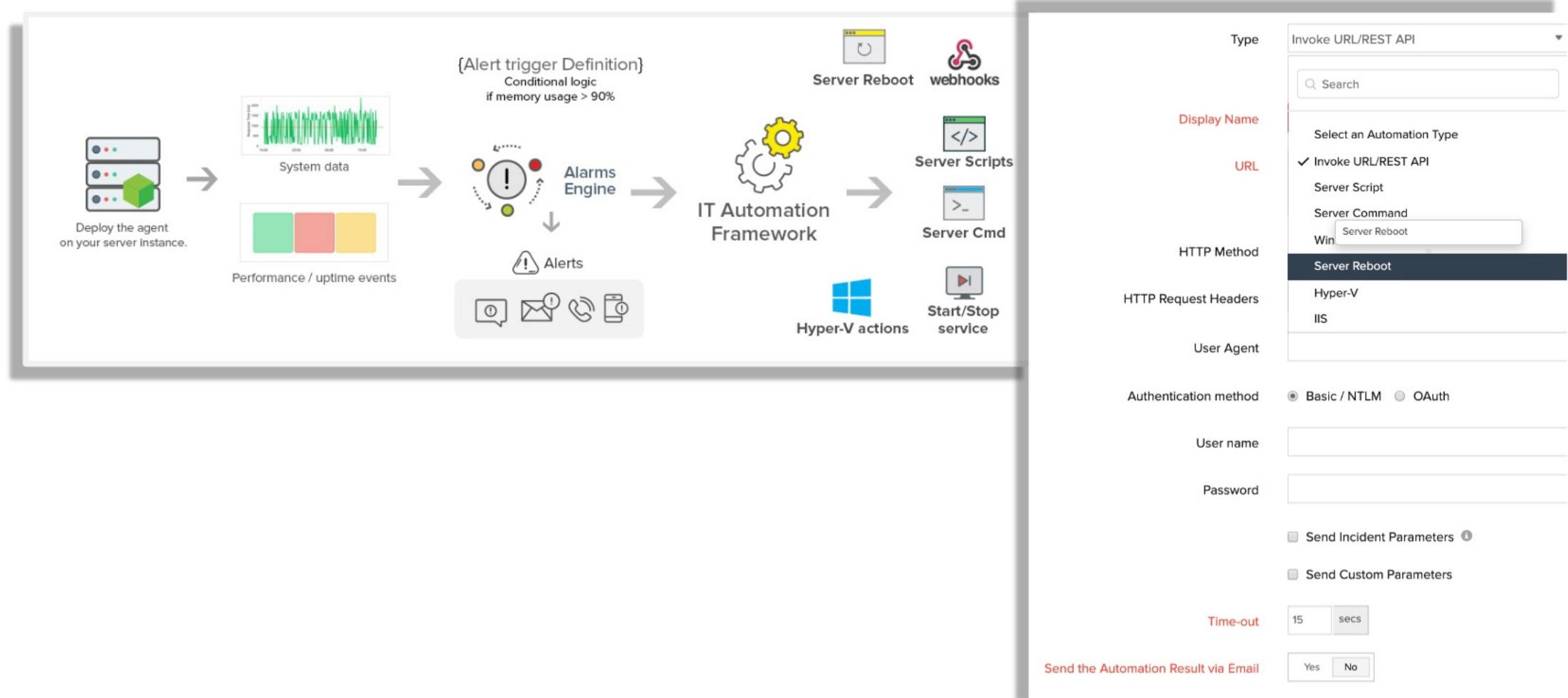
Agentless Server Monitoring

- Site24x7 Agentless Server Monitoring requires an On-Premise Poller to be installed in the same network as that of the server to be monitored
- Site24x7 monitors servers using the Simple Network Management Protocol (SNMP) and Windows Management Instrumentation (WMI) protocol.



IT Automation

IT Automation





Site24x7 Plugins

- Monitor your entire stack using our 100+ out-of-the-box plugin integrations
- Create custom scripts to track attributes that matter the most
- Monitor hosts, devices, services, protocols, applications and all resources
- View performance data of plugin instances in a easy to understand chart
- Set threshold values for individual attributes get immediate notifications

Site24x7 - Out-of-the-box supported plugins

- …→ **Databases** - MySQL, PostGres, DB2, VoltDB, Riak, CouchDB, MongoDB
- …→ **Servers** - WebLogic, GlassFish, Tomcat, Apache, iDRAC
- …→ **Load Balancers** - Lighttpd, NGINX, NGINX Plus, HAProxy
- …→ **Caches** - Redis, Ehcache, Varnish Cache, Memcached
- …→ **Message brokers** - ActiveMQ, RabbitMQ, Kafka
- …→ **Big Data** - Hadoop, Elasticsearch
- …→ **Applications** - SendGrid, Twilio, Supervisord, etcd, Samba, StatsD



Site24x7 Plugins



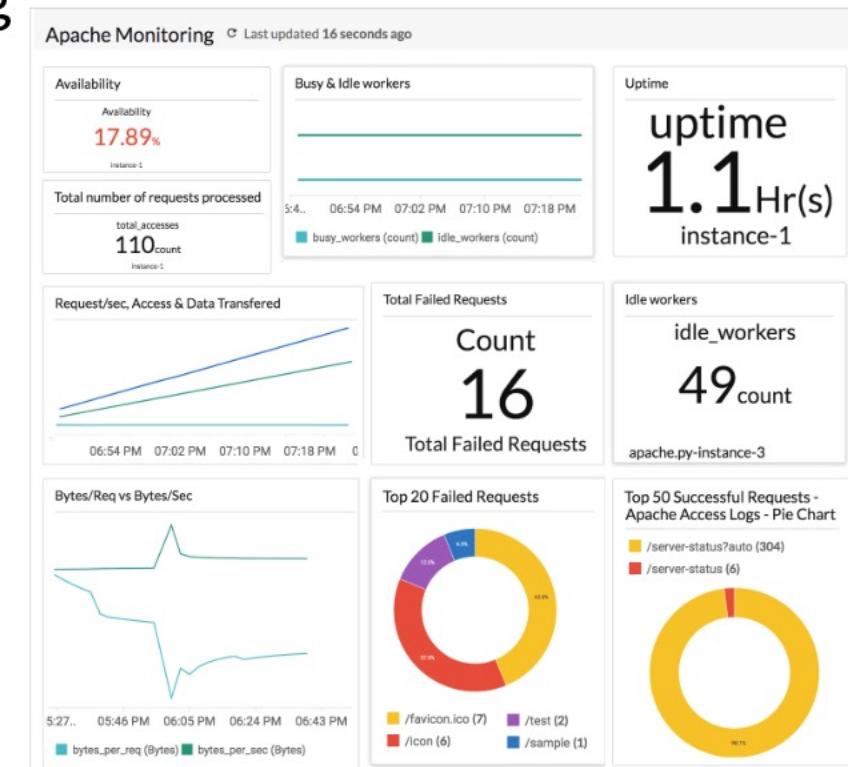
Steps to add a plugin

- …→ Ensure the executed plugin script returns a valid JSON data
- …→ Check if the plugin is placed under the agent's plugin directory
- …→ Make sure the name of the file and the folder name, both are identical
- …→ Ensure the plugin version is incremented for every new plugin template created
- …→ Make sure the required dependency modules are installed



Apache Monitoring

- Monitor Apache Web Server Performance
- Performance Monitoring Metrics
 - CPU Usage, Processes, Total Accesses, Busy Workers, Uptime, Total Kbytes, Connections Async Closing





Nagios Plugins (Without Nagios Servers)

- Execute thousands of Nagios Plugins in Site24x7
- No need to maintain a dedicated server for Nagios and Nagios server software

```
{  
  "nagios": [  
    "/usr/local/nagios/libexec/check_ping -H localhost -w 1,1% -c 1,1% -p 5 -t 10 -4",  
    "/usr/local/nagios/libexec/check_load -r"  
  ]  
}
```

- **check_ping** - A Nagios plugin which checks the server availability, packet loss and round trip average.
- **check_load** - A Nagios plugin which checks the system load average

Create Your Own Plugins

→ Windows

- Batch, PowerShell, VB, and DLL scripts
- C:\Program Files (x86)\Site24x7\WinAgent\monitoring\Plugins

→ Linux

- Python and Shell
- /opt/site24x7/monagent/plugins

→ Plugin script should return a JSON object

```
{  
  'plugin_version' : 1,  
  'heartbeat_required' : true,  
  'cpu' : 42.7,  
  'memory' : 65.8,  
  'network' : 156,  
  'units' :  
  {  
    'cpu' : '%' ,  
    'memory' : '%' ,  
    'network' : 'MB'  
}
```

Plugin Format

Linux

- …→ plugin_version
- …→ units (optional)
- …→ msg (optional)

Windows

- …→ version
- …→ units (optional)
- …→ displayname (optional)
- …→ msg (optional)



Custom Plugin

Check list

- Ensure the plugin script is executed and returns a valid JSON data
- Check if the plugin is placed under the agent's plugin directory
- Make sure the name of the file and the folder name, both are identical
- A new plugin template is created for every new plugin version
- For any dependency module supported plugins, make sure they are installed

Custom Plugin - Hardware Monitoring

- Plugin to monitor Hardware details
 - Disk, fan, power supply, base board, etc
- Uses WMI queries to get the hardware details
 - Windows Management instrumentation service running

```
Set objWMI = GetObject("winmgmts:\\" & "." & "\root\cimv2")

'units = """FileControlBytesPersec"" : ""Bytes"", """FileReadBytesPersec"" : ""Bytes"", """FileWriteBytesPersec"" : ""Bytes"""
version = """1"""
heartbeat = """True"""
displayname = """Hardware Running Details"""
data="{

dim AvailabilityArr(18)
AvailabilityArr(1)= "Other"
AvailabilityArr(2)= "Unknown"
AvailabilityArr(3)= "Running or Full Power"
AvailabilityArr(4)= "Warning"
AvailabilityArr(5)= "In Test"
AvailabilityArr(6)= "Not Applicable"
AvailabilityArr(7)= "Power Off"
```

Custom Plugin

```
Set colObjects = objWMI.ExecQuery("select * from Win32_Fan")
For Each Item in colObjects
    Name = Item.Name
    If Not(IsNull(Item.Status)) Then
        status = """"&Name&" Status"":;" &""""&Item.Status&"""
        data = data & status & ","
    End If
    If Not(IsNull(Item.Availability)) Then
        availability = """"&Name&" Availability"":;" &""""&AvailabilityArr(Item.Availability)&"""
        data = data & availability & ","
    End If
Next

Set colObjects = objWMI.ExecQuery("select * from Win32_DiskDrive")
For Each Item in colObjects
    Name = objRegExp.Replace(Item.Name,"")
    If Not(IsNull(Item.Status)) Then
        status = """"& Name &" Status"":;" &""""&Item.Status&"""
        data = data & status & ","
    End If
    If Not(IsNull(Item.ConfigManagerErrorCode)) Then
        ConfigManagerErrorCode = """"&Name&" Config Manager Status"":;" &""""&configmanerror(Item.ConfigManagerErrorCode)&"""
        data = data & ConfigManagerErrorCode & ","
    End If
    If Not(IsNull(Item.Partitions)) Then
        Partitions = """"&Name&" Partitions"":;" &""""&Item.Partitions&"""
        data = data & Partitions & ","
    End If
Next
```

Custom Plugin

Plugins							
<input type="checkbox"/>	Plugin Name	Status	Version ⓘ	Template Name ⓘ	Attributes	Performance Attribute	Last Polled Time
<input type="checkbox"/>	Hardware Running Details		1	Hardware	13	7 Units PHYSICALDRIVE0 Partitions	3 minutes ago
<hr/>							

Inventory ⓘ				
Path: <Installation Directory>\Site24x7\WinAgent\monitoring\Plugins Last updated: Mar 27, 2018 13:00:22 PM				
Plugin Name	Status	Message	Plan of Action	Action
Hardware		Plugin Monitor is installed and registered successfully	<input type="checkbox"/> Learn more on what you can do next after successful installation	-



Custom Plugin

Hardware

DELL G95J558 Internal Bat	The system has acces
DELL G95J558 Internal Bat	Unknown
PHYSICALDRIVE0 Partitions	7
DELL G95J558 Internal Bat	OK
DANIEL-2019 Thermal State	Safe
Cooling Device Availabili	Running or Full Powe
DELL G95J558 Internal Bat	125
DANIEL-2019 Power Supply	Safe
PHYSICALDRIVE0 Config Man	Device is working pr
Base Board PoweredOn	True
Base Board Status	OK
PHYSICALDRIVE0 Status	OK
Cooling Device Status	OK



Monitoring Multi-clouds - Whether Public Cloud or Private Cloud Infrastructure



Amazon Web Services
Monitoring



Microsoft Azure
Monitoring



Google Cloud Platform
Monitoring



Amazon Web Services (AWS) Monitoring

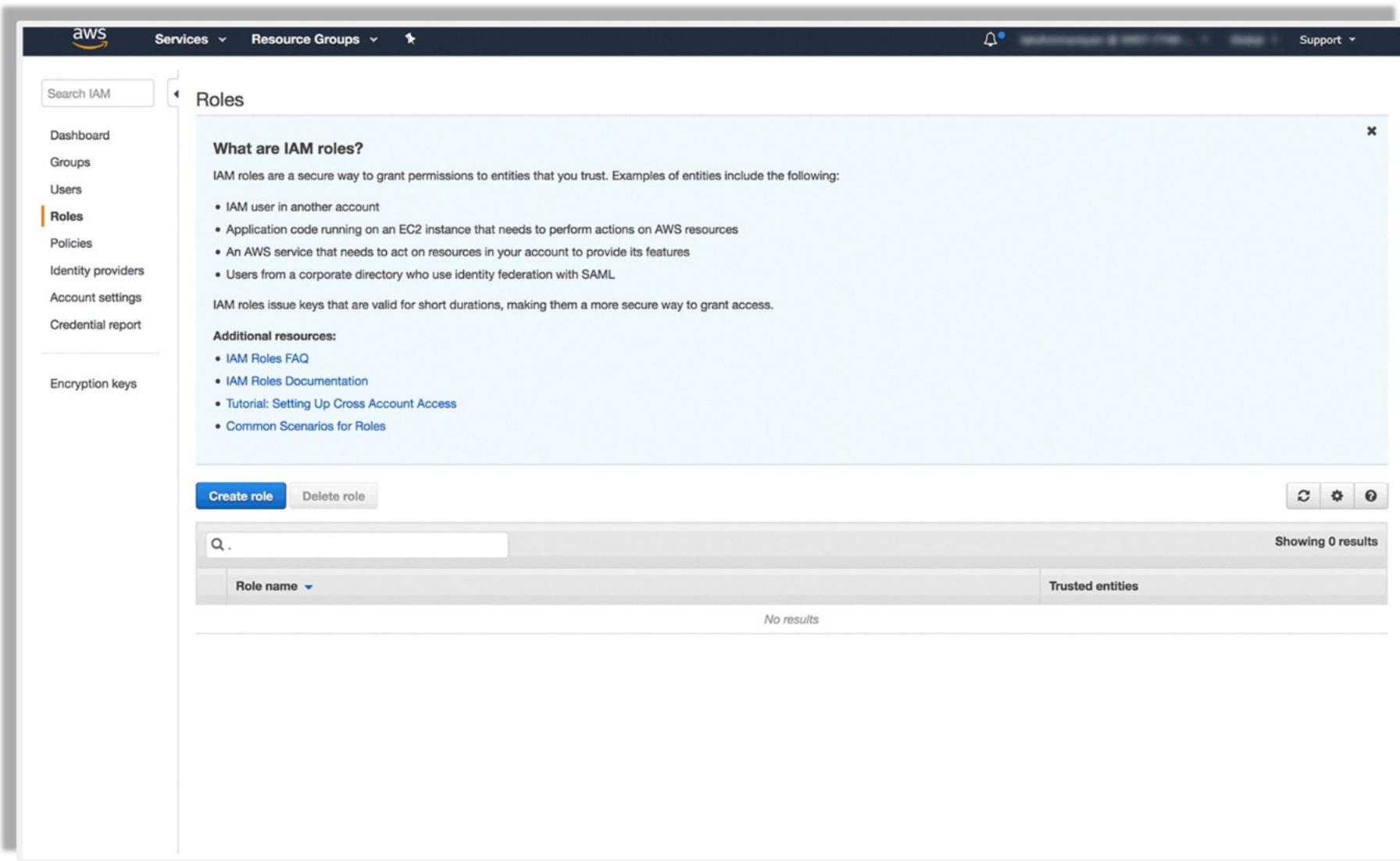


Amazon Web Services

Supported AWS Services

- > Elastic Compute Cloud(EC2)
- > Elastic Block Storage(EBS)
- > Classic Load Balancer(ELB)
- > Application Load Balancer (ALB)
- > Network load balancer
- > Relational Database Service(RDS)
- > DynamoDB
- > ElastiCache
- > Simple Storage Service (S3)
- > Lambda
- > CloudFront
- > Simple Queue Service (SQS)
- > Simple Notification Service(SNS)
- > Kinesis Data Streams
- > Kinesis Video Streams
- > Kinesis Data Firehose
- > Kinesis Data Analytics
- > Elastic Beanstalk

Role Based Access in Site24x7 AWS Monitoring



The screenshot shows the AWS IAM (Identity and Access Management) service interface. The left sidebar navigation includes options like Dashboard, Groups, Users, **Roles** (which is selected and highlighted in orange), Policies, Identity providers, Account settings, Credential report, and Encryption keys. The main content area is titled "Roles" and contains the following information:

- What are IAM roles?**: IAM roles are described as a secure way to grant permissions to entities that you trust. Examples include IAM users in another account, application code running on EC2 instances, AWS services needing access to your account, and users from corporate directories using SAML.
- IAM roles issue keys that are valid for short durations, making them a more secure way to grant access.**
- Additional resources:** Links to the IAM Roles FAQ, Documentation, Tutorial on Setting Up Cross Account Access, and Common Scenarios for Roles.

At the bottom of the main content area, there are buttons for "Create role" and "Delete role". Below these buttons is a search bar with placeholder text "Q .", a "Showing 0 results" message, and two dropdown menus: "Role name" and "Trusted entities".

Advanced Configuration

Notify for EC2 scheduled events i Yes No

Mark stopped resources as maintenance i Yes No

Notify for basic monitor license units exhaustion i Yes No

Stop rediscovery during license units exhaustion i Yes No

Sync display name with AWS console i Yes No

Sync Internal DNS name for EC2 Auto Scaling instances i Yes No

Sync display name from agent configuration i Yes No

Auto create Monitor Group i Yes No

Create monitor groups using native tags i

Type \$ to search the available tags

Resource Termination Settings

Mute resource termination alerts i Yes No

Mute termination alerts for resources with tags i
aws

Monitor Terminated Resources

Automatically Remove Terminated Resources i Yes No

Remove Terminated Resources After i day(s)

Auto-Assign Threshold Profile

Overwrite Existing Settings i Yes No

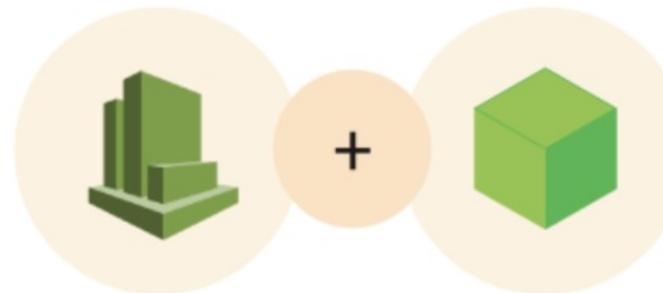
Select AWS Service

Guidance Report Configuration

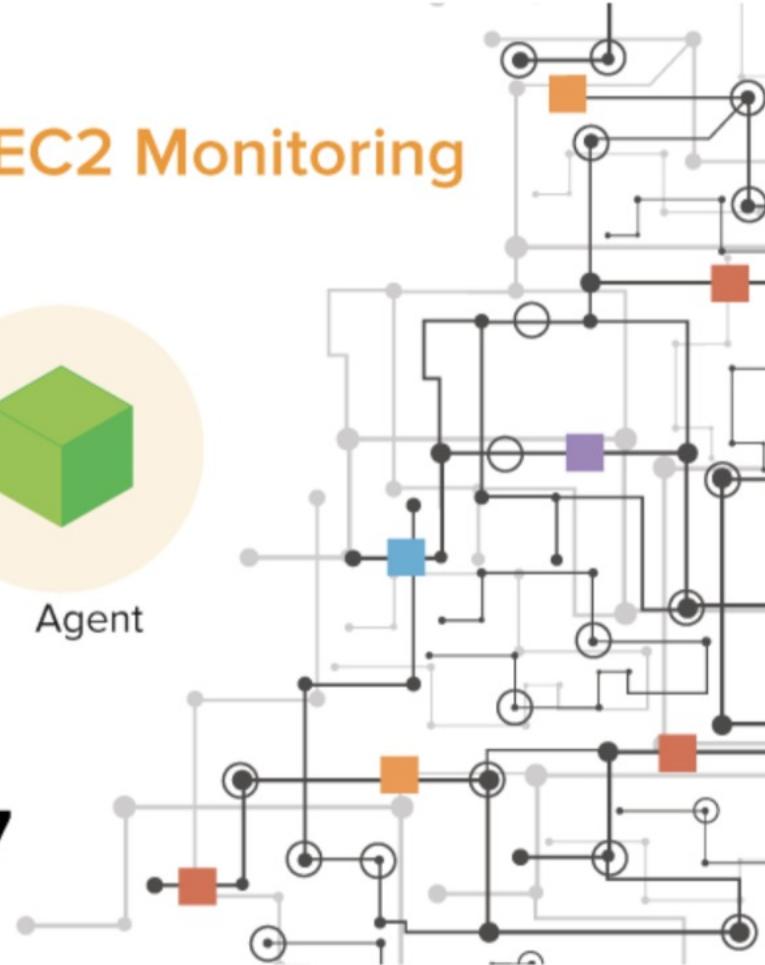
Enhanced Amazon EC2 Monitoring



Introducing Enhanced EC2 Monitoring



Site24x7



Site24x7

Integrated EC2 Instance Monitor UI Pages

The screenshot displays the Site24x7 monitoring interface, specifically the EC2 instance monitoring feature. The top navigation bar includes links for Home, Help Assistant, Monitors, Monitor Groups, Outages, Anomaly Report, Schedule Maintenance, Log Report, Alert Logs, Executed Actions History, Status Page, and Operations Dashboard. The main content area is titled "Monitor Status" and shows the last updated time as "a minute ago". It lists several monitors with their names, performance metrics, and last polled times:

Monitor Name	Performance	Last Polled
Hyper_V	13 Count	5 minutes ago
i-0ae144c475d49579a	0.63 %	2 minutes ago
i-0c7e5d69386589dc	10.56 %	2 minutes ago
i-de454d53	-	4 minutes ago
IntegrationDemoInstanc...	1 %	3 minutes ago
IPUpdates3	-	3 minutes ago

A callout box points to the icon for the monitor "IntegrationDemoInstanc...", which is described as "This Icon denotes that a Agent has been deployed in the EC2 instance". Below this, two charts are shown: "CPU Utilization(CloudWatch)" and "Actual CPU Utilization".

CPU Utilization(CloudWatch)
Percentage (%): Avg 0.74 | Min 0.67 | Max 2.24
The chart shows CPU utilization over time from 1-Jul 12:00.. to 07-Jul 12:00 AM.

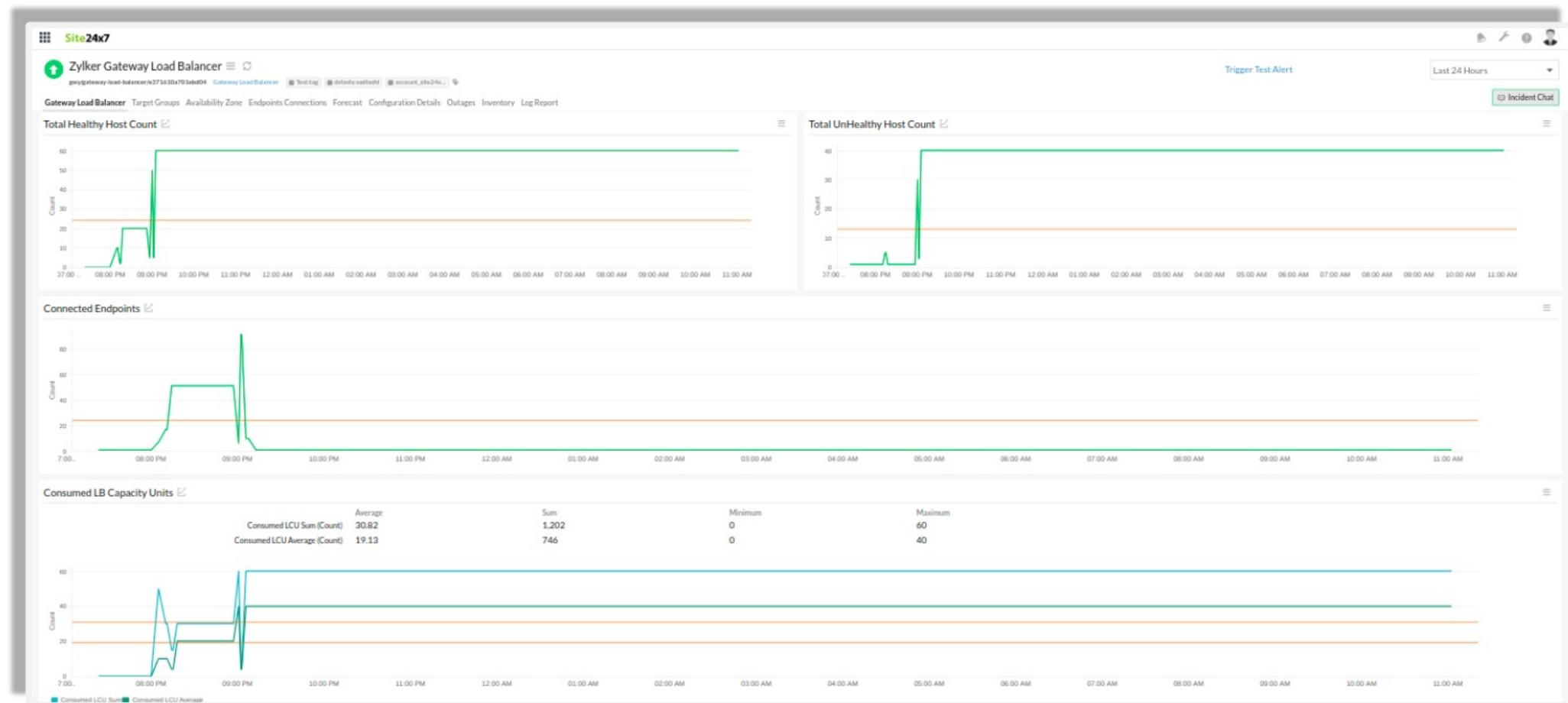
Actual CPU Utilization
CPU Utilization (%): Avg 4.3 | Min 3 | Max 10.8
The chart shows actual CPU utilization over the same period.



AWS Gateway Load Balancer Monitor

- You can now monitor the availability, health, security, and performance of AWS Gateway Load Balancer at the Target Group, Availability Zone, and Endpoint levels.
- AWS Gateway Load Balancer monitoring metrics can provide you with information on:
 - Active Flow Count
 - Connected Endpoints
 - Consumed LCUs
 - New Flow Count
 - Processed Bytes
 - Unhealthy Host Count
 - Healthy Host Count

AWS Gateway Load Balancer Monitor





Uptime Monitoring for AWS Resources

- Providing the availability status and configuration for each monitor
- Helps you avoid consuming CloudWatch API calls to fetch metrics, thereby cutting down your CloudWatch costs
- Uptime monitoring can be configured in three different ways:
 - > Editing a monitor
 - > Defining an action as a configuration rule
 - > Using Tags

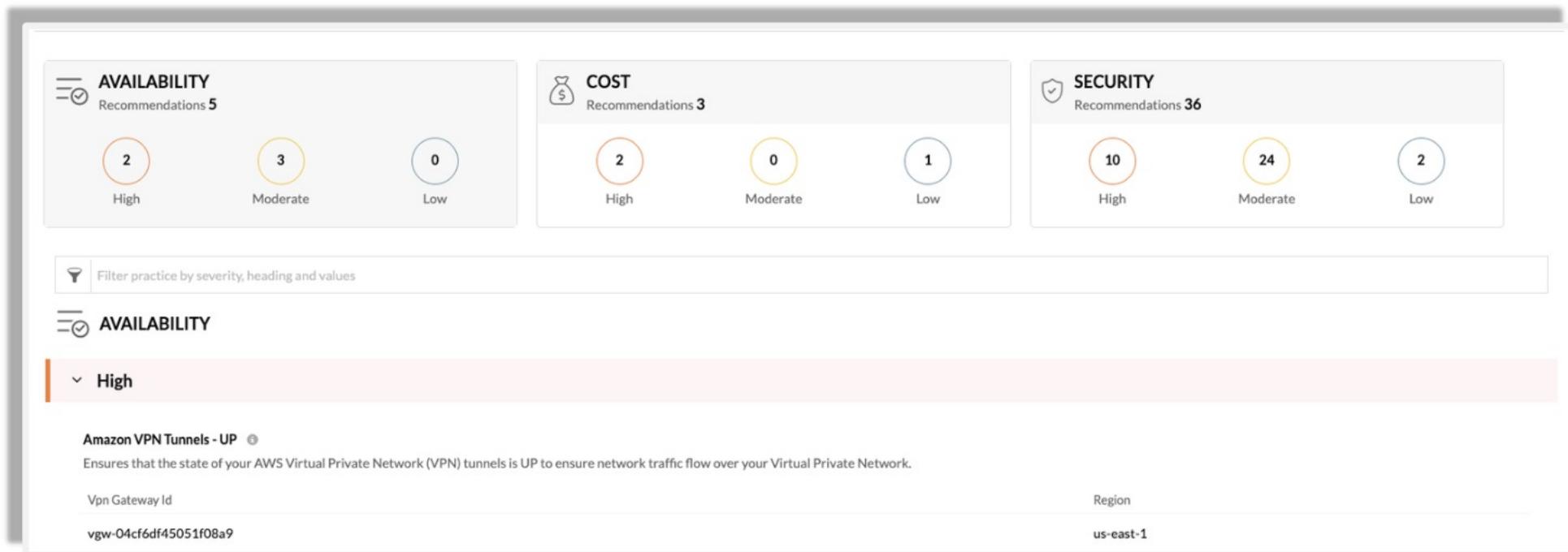


Metric Profile for AWS Monitors

- Providing you with the capability to select and obtain only the CloudWatch metrics you choose
- Consume CloudWatch API calls to retrieve only those metrics you choose to monitor, reducing your overall Amazon CloudWatch costs
- Metric Profile can be configured in three different ways:
 - > Configuration Profiles
 - > Integrate AWS account
 - > Defining an action as a configuration rule

Guidance Report

- Site24x7's Guidance Report for Amazon Web Services examines configuration and resource utilization of AWS services like EC2, RDS, IAM, S3, SES, etc., and provides recommendations to optimize costs, improve fault tolerance and performance of your AWS account.



Instance Type Recommendations

- Identify a better instance category based on your instance usage
- Available for Amazon EC2, RDS, MQ, DocumentDB, Neptune, and ElastiCache

Guidance Report ⓘ This Report was generated on Nov 9, 2021 2:01:04 AM. Share This

AVAILABILITY Recommendations 3

- 0 High
- 2 Moderate
- 1 Low

COST Recommendations 6

- 1 High
- 3 Moderate
- 2 Low

SECURITY Recommendations 20

- 12 High
- 5 Moderate
- 3 Low

Filter practice by severity, heading and values

COST

▼ **High**

Underutilized EC2 Instances ⓘ Elastic Compute Cloud (EC2) instances deemed as underutilized are listed below. Learn more about our baseline criteria.

Instance name	Region	CPU Utilization (%)	Network In	Network Out	Current Instance Type	Suggested Instance Type
i-0387f318ee998364e	us-east-1	0.68	28413.8667	19415.5667	t2.micro	t2.nano
i-007fde8a95248f580	us-east-1	1.89	73889.5333	39807.4	t2.micro	t2.nano
i-06b6fb615d540f271	us-east-1	1.3	72975.4333	38739.0333	t2.micro	t2.nano
i-062839eb6bf888fd	us-east-1	0.75	33551.2	30570.1667	t2.micro	t2.nano
i-0316432a341ede75	us-east-1	0.11	1393.5	1427.9333	t2.micro	t2.nano
i-0d5338953b9c4f412	us-west-1	0.1	528.8333	471.1333	t2.micro	t2.nano



Service Quotas

- Service Quotas allows users to view and manage quotas for AWS services. Quotas are simply the maximum limits for the resources in your AWS account. These limits are predefined with default values and can be increased as your business demands.
- Site24x7's Service Quotas feature is supported for the following services in a global AWS account:
 - Amazon EC2 instance [the only instance supported in the AWS GovCloud (US)]
 - Amazon Route 53

Service Quotas

The screenshot shows the Site24x7 interface for managing AWS service quotas. A modal window titled "Quota Request for Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances" is open, displaying the following information:

- Region: US East (N. Virginia)
- Quota Name: Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances
- Current Limit: 101
- Desired Limit: 150

Below the modal, the main dashboard shows the "Criticality Of Quotas" section with a count of 2 High criticality items. The "High" section lists EC2 INSTANCE quotas:

Quota Name	Location	Usage	Action
Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances	US East (N. Virginia) us-east-1 L-1216C47A	46/101 Used 45.5%	Raise request to AWS
Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances	US West (N. California) us-west-1 L-1216C47A	46/101 Used 45.5%	Raise request to AWS

The dashboard also includes a "Resolved Requests" section with a count of 0.



Azure Monitoring

Adding an Azure Monitor

Monitor 90+ Azure resources with Custom App

- Create your own app in the Microsoft Azure portal
- Assign the necessary permissions to enable Site24x7 to start monitoring the Azure resources

Auto-discover and monitor Azure services with a single-click authentication and view the performance trends for every Azure service type.

[Get Started with Azure Monitoring](#)

* Perform health checks for Azure Deployment Manager (ADM) rollouts! Grant Access to your Azure Account to get started.

The interface includes a grid of service categories:

- COMPUTE: Includes icons for Virtual Machines, Container Registries, Disks, Services Fabric Clusters, Container Service, and VM Image (Classic).
- STORAGE: Includes icons for Batch Accounts, Cloud Services (Classic), Availability Sets, and Citrix XenApp Essentials.
- MACHINE LEARNING: Includes icons for Images, Citrix XenDesktop Essentials, and Container Services (Managed).
- ANALYTICS: Includes icons for Disk (Classic), OS Images (Classic), and Virtual Machines (Classic).
- WEB + MOBILE: Includes icons for Container Groups, Functions, and Snapshots.
- NETWORK: Includes icons for Integration and Management Tools.
- SECURITY: Includes icons for Developer Tools.
- DATABASES: Includes icons for Management Tools.
- INTEGRATION: Includes icons for Management Tools.
- MANAGEMENT TOOLS: Includes icons for Management Tools.

Compute

Container Registries	Virtual Machines	Virtual Machines Scale Sets	Container Groups
Disks	Batch Accounts	Disk (Classic)	Functions
Services Fabric Clusters	Cloud Services (Classic)	Images	OS Images (Classic)
Container Service	Availability Sets	Citrix XenDesktop Essentials	Virtual Machines (Classic)
VM Image (Classic)	Citrix XenApp Essentials	Container Services (Managed)	Snapshots

Configuration

Azure Resource Filter

Subscriptions

Pay-As-You-Go, Pay-As-You-Go - Sit...

Resource Groups

AzureBackupRG_centralus_1, S247-D... and 157 more

Auto-add New Resource Groups for Monitoring

Yes No

Service/Resource Types

Azure App Service Plan, Azure App ... and 85 more

Exclude/Include Azure Resources using Tags

Exclude Include

Key

Value

Auto-discover New Resources

Enable Disable

Install the Server Monitoring Agent in VMs

Yes No

Resource Termination Settings

Mute Resource Termination Alerts

Yes No

Monitor Terminated Resources

Yes No

Automatically Remove Terminated Resources

Yes No

Activity Logs Collection Configuration

Activity Logs Collection

Enable Disable

Log Collection Interval

15 mins

Select Log Categories

Administrative, Resource Health and 2 more

Infrastructure Dashboard

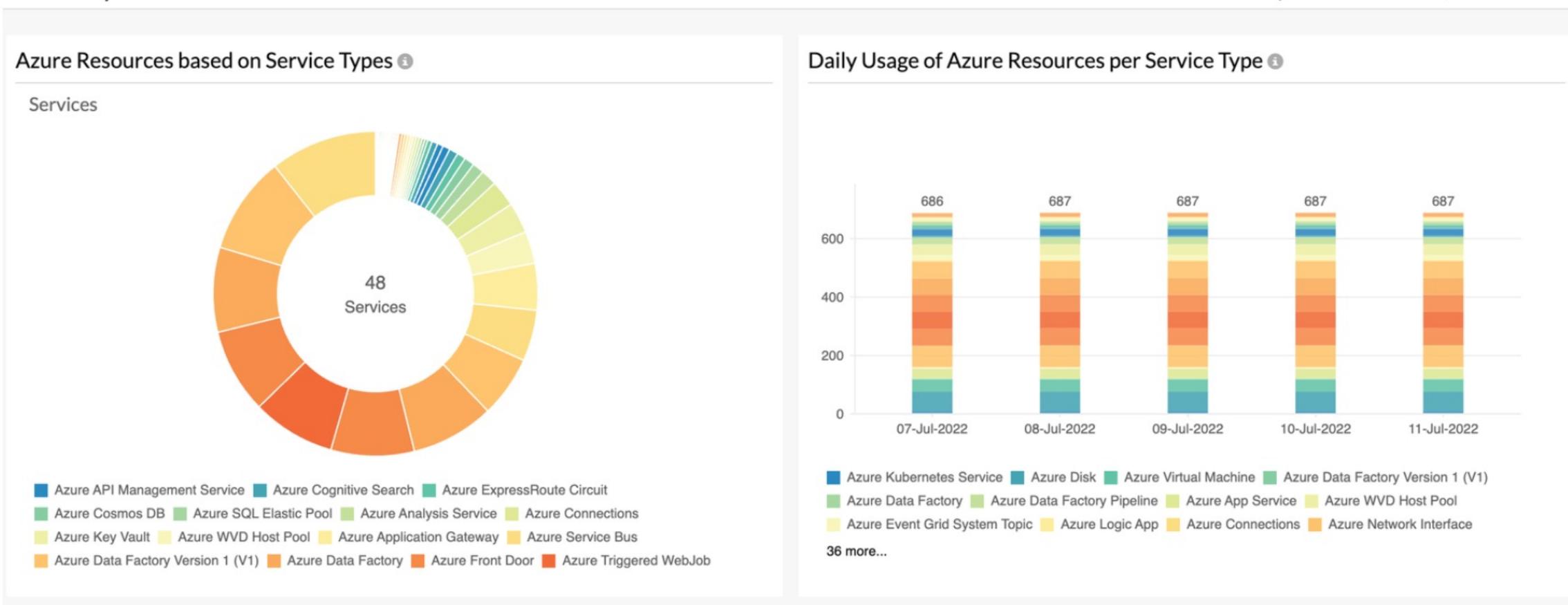
Infrastructure Dashboard		Live		Page Tips														
adm2027ServiceEU5rg, adm2027Servic... and 99 more				Azure Storage Account, Azure Stora... and 34 more				East US, East US 2, Central US and 9 more				Down, Up, Critical, Trouble, Disco...						
2k8r2	2K8R	47ffb6	Accou	ntingS	Accou	ntingS	admte	admTe	admTe	admte	admte	admte	admte	admte	aks-	aks-		
327	2_Osd	b3974	ntingS	ntingS	st202	admTe	stDow	stDow	stdow	stdow	stdow	stdow	stdow	stdow	agentp	agentp		
aks-	aks-	aks-	nodep	aks-	aksan	od	aksan	od_0	aksap	Anant	anant	Anant	anant	apm-	aks-	aks-		
agentp	nodep	nodep	nodep	od	mclust	hTest	hTestv	hTest	hTestv	hTestv	hTest	hTest	hTest	test90	sight	agentp		
apmte	Applo	Applo	gAppli	AppSv	AppSv	cPlan	AppSv	cPlan	ar617t	ar617t	uhufd	ar617t	uhufd	ar617t	ASP-	aks-		
stregis	g	g	g	cPlan	cPlan		cPlan		uhufd	uhufd	uhufd	uhufd	uhufd	Anbur	Autom	aks-		
centos	centos	centos	centos	centos	centos	8-	centos	8-	IUSPla	IUSPla	whm6	cpanel	WHM	cs210	cs210	cento	cento	
7.8-	7.9-	7.9-	7.9-	7.9-	7.9-	8-	7.9-	8-	Centra	Centra	033fff	033fff	033fff	033fff	10621	S-7.9	7.8-	7.8-
csg10	csg10	csg10	csg10	csg10	csg10	03200	csg10	03200	csg10	csg10	03200	csg10	03200	csg10	03200	centos	centos	
03200	03200	03200	03200	03200	03200		03200		03200	03200	03200	03200	03200	03200	03200	-8460	-8460	
csg10	csg10	csg10	csg10	csg10	csg10	03bffd	csg10	03bffd	csg10	csg10	03bffd	csg10	03bffd	csg10	03bffd	csg10	csg10	
03bffd	03bffd	03bffd	03bffd	03bffd	03bffd		03bffd		03bffd	03bffd	03bffd	03bffd	03bffd	03bffd	03bffd	03bffd	03bffd	
f7t7r	f7t7r	f7t7r	f7t7r	f7t7r	f7t7r	mwma	f7t7r	mwma	flatcar	flatcar	-sri	flatcar	-	freel	Guest	hisha	hisha	
mwma	mwma	mwma	mwma	mwma	mwma		mwma		-sri	-sri		-sri	-sri	BookC	mdiag	mdiag	mdiag	
kuber	kuber	kuber	kuber	kuber	kuber	netess	19	Latest	LB-	linuxv	linuxv	linuxv	linuxv	linuxv	LoginS	Netwo	Netwo	Netwo
netess	netess	netess	netess	netess	netess	19	NetCo	plus-	mtest	mtest	mtest	mtest	mtest	service	rWat	rWat	rWat	
Order	Order	Payme	Payme	Plus	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	plus-	
Proces	Proces	ntServ	ntServ	plus-	eventg	eventg	eventg	sdp-	sql-	sql/db-	sql/jbo	sql/mal	sql/sit	sql/sit	sql/sit	sql/sit	sql/sit	sql/sit
pluste	pluste	pluste	pluste	pluste	pluste	stbedd	stbedd	pm-	pm-	pm-	pm-	pm-	pm-	pm-	pm-	pm-	pm-	
st1	st1	st1	st1	st1	st1	stbedd	stbedd	team-	team-	team-	team-	team-	team-	team-	team-	team-	team-	
site24	site24	Site24	Site24	Site24	Site24	x7-	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	
site24	site24	Site24	Site24	Site24	Site24	x7-	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	x7Azu	
Site24	Site24	Site24	Site24	Site24	Site24	x7Azu	x7Azu	x7Azu	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	
site24	site24	site24	site24	site24	site24	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	
site24	site24	site24	site24	site24	site24	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	x7azur	
SRI-	sriram	sriram	sriram	test	test	-rh-8-	-rh-8-	test-	expres	VM	test-vm59	test20	test20	TestA	teststa	teststa	teststa	teststa
AKS-	-rh-8-	-rh-8-	-rh-8-	test	test			VM	VM	VM	VM	VM	VM	VM	piApp	tddia	tddia	tddia
Type6	Type6	Type6	Type6	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	vault1	vault1	wind	wind
09_2	09_3	09_4	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	52	92	wsad8	wsad8
SRI-	sriram	sriram	sriram	test	test	test	test	VM	VM	VM	VM	VM	VM	VM	VM	VM	VM	
AKS-	-rh-8-	-rh-8-	-rh-8-	test	test	test	test	VM	VM	VM	VM	VM	VM	VM	VM	VM	VM	
Type6	Type6	Type6	Type6	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	ubunt	wins2	wins2	wins2	
09_2	09_3	09_4	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	18-	12-	12-	12-	



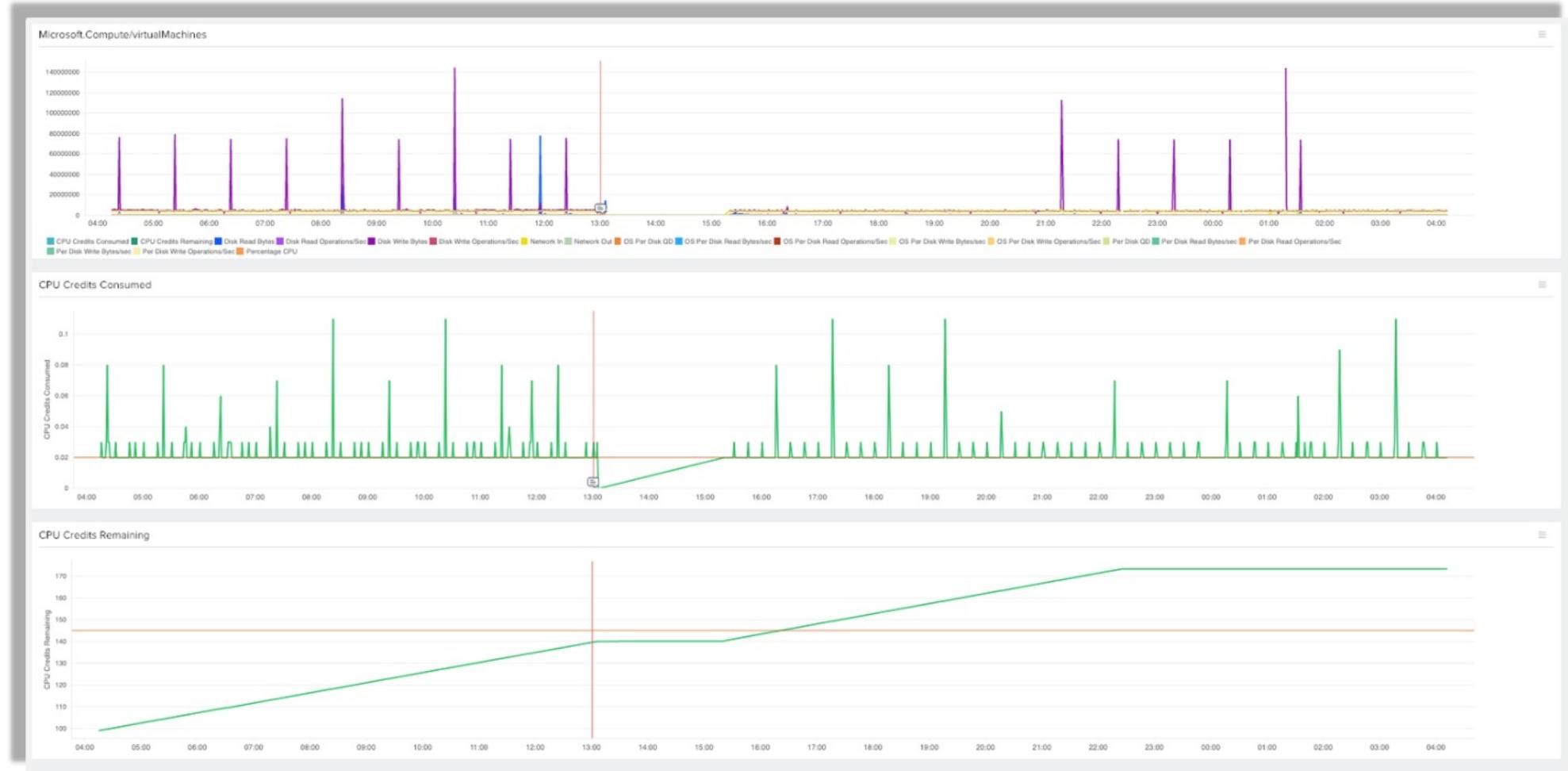
Inventory Dashboard and Reports

Inventory Dashboard ≡

Next Resource Discovery Time : 11-Jul-2022, 6:21:55 PM



Virtual Machines





Google Cloud Platform (GCP) Monitoring



Supported GCP Services

- Google Kubernetes Engine
- Virtual Machines
- Google Cloud Functions
- Storage Services
- Redis
- Cloud Pub/Sub
- Networking Services
- Cloud Spanner
- Google App Engine
- Cloud Firestore
- Cloud SQL
- Load Balancing



Adding a GCP Monitor

- Create a service account key in GCP
- Roles - Viewer / Compute Admin
- Save the JSON file
- Add GCP Monitor by uploading a Service Account JSON File



Infrastructure Dashboard

Infrastructure Dashboard ● ●

Use the filter options to view the GCP resources based on specific criteria

Filters

By Service Types

Compute#Disk, Compute#Net and [7 more](#) ▾

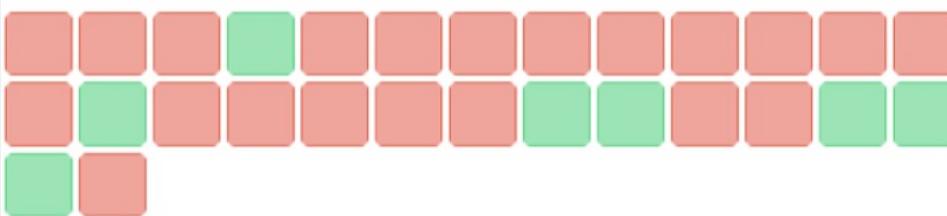
By Location

global, us-east1, us-cent and [5 more](#) ▾

By Status

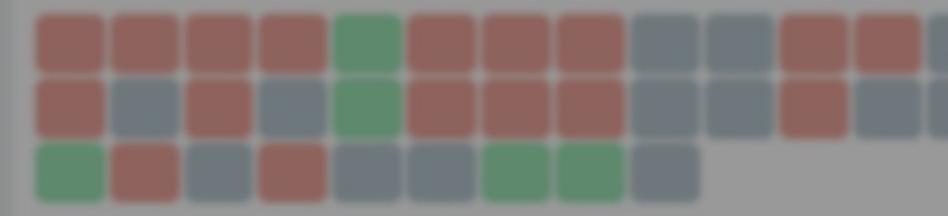
Down, Up, Critical, Troub and [4 more](#) ▾

App Engine (8) Name of the service type



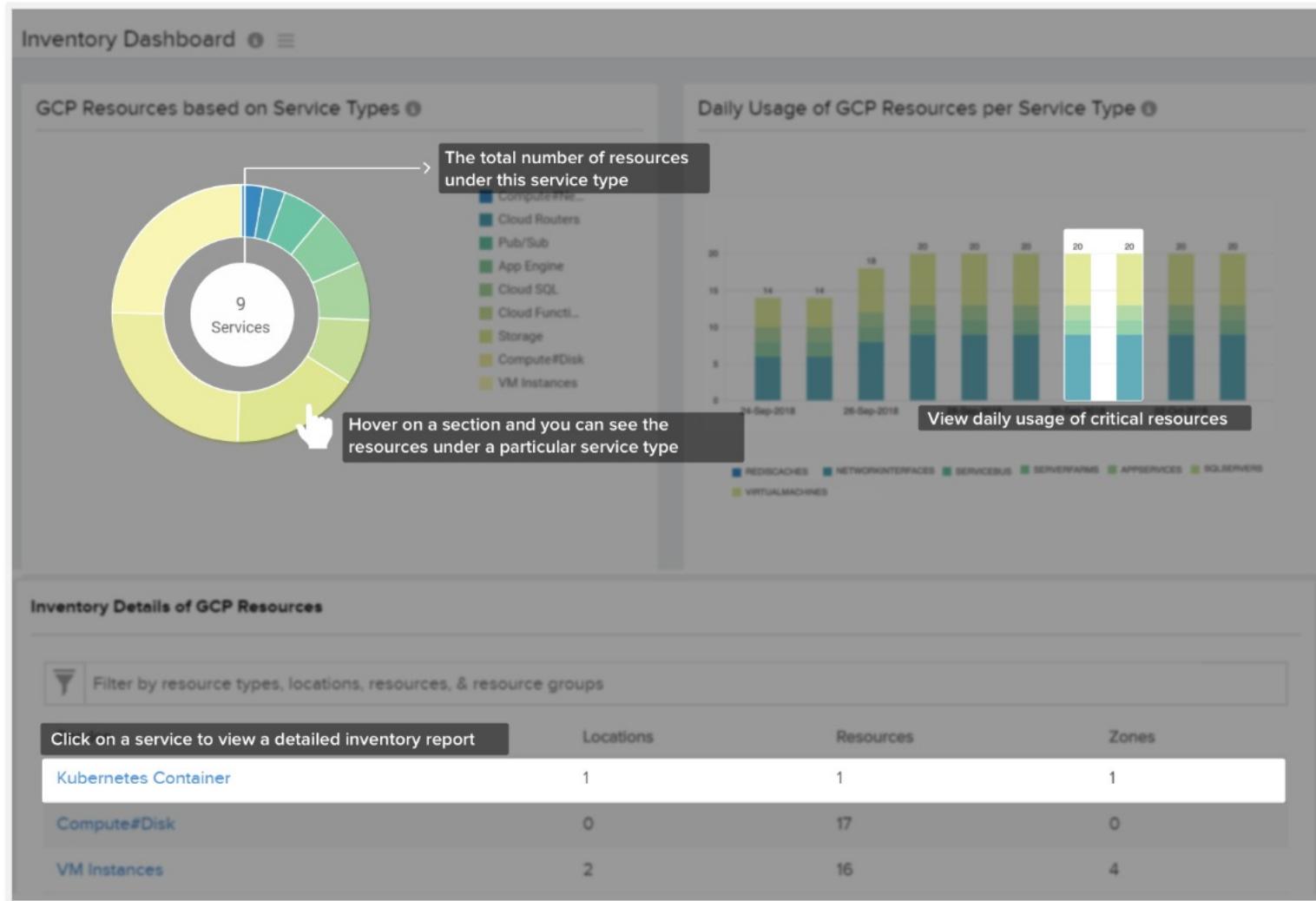
A NOC view of all the resources in this service type

Cloud Functions (9) Number of resources in this service type





Inventory Dashboard





CloudSpend



Making Informed Decisions

- CloudSpend is a SaaS-based cloud cost management software, built to help businesses to gain precise insight into their cloud costs
- Public cloud platforms like Amazon Web Services (AWS) and Microsoft Azure offers tremendous opportunity to not only innovate but also reduce the total cost of ownership associated with running on-site data centers.
- Yet, understanding how and where you are accruing costs, identifying cost drivers or keeping costs down can become difficult once you start to scale
- To overcome these challenges, we build a new product : Site24x7 CloudSpend

How + How Much =

CloudSpend

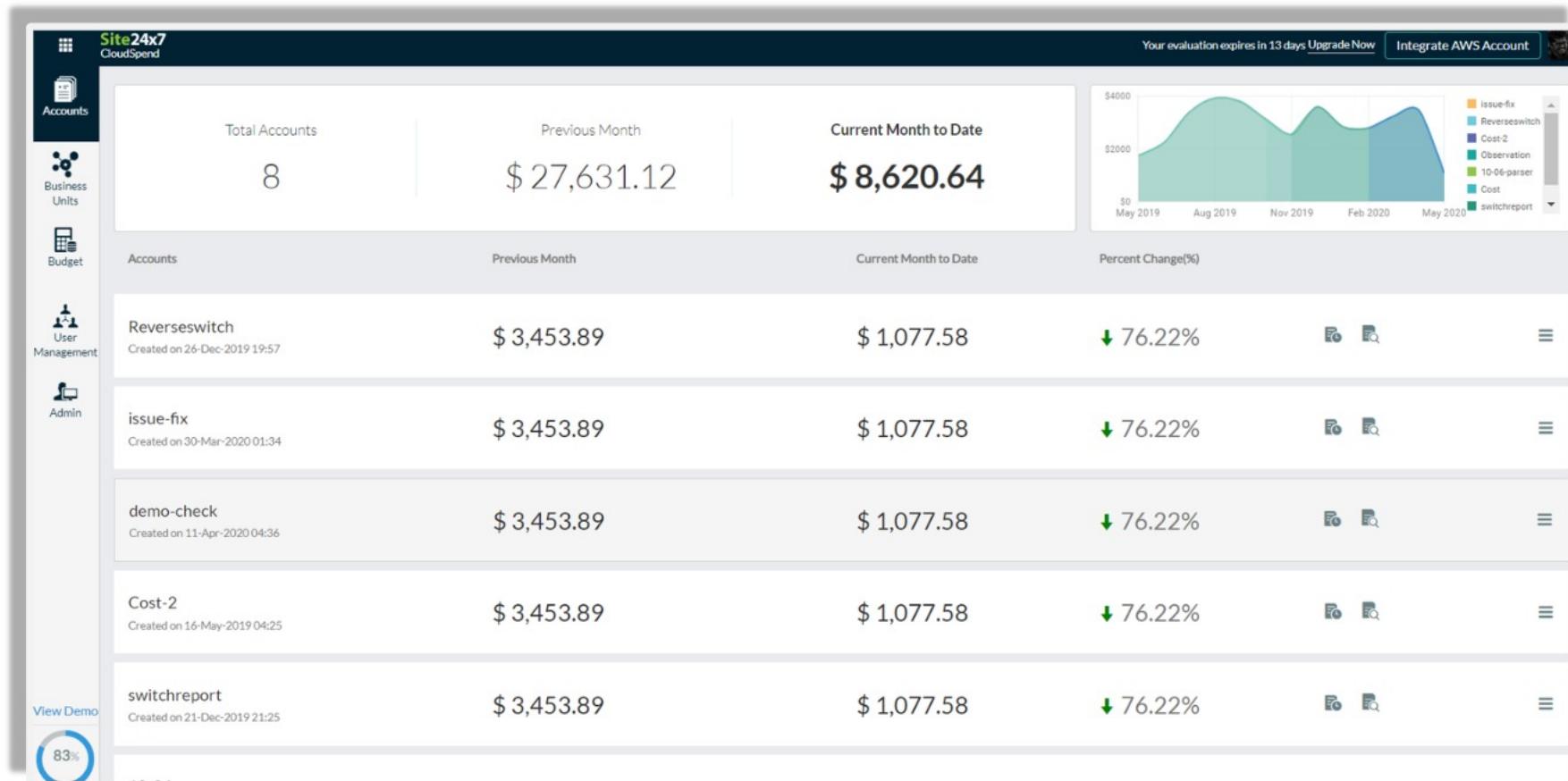
“

Now make informed decisions !

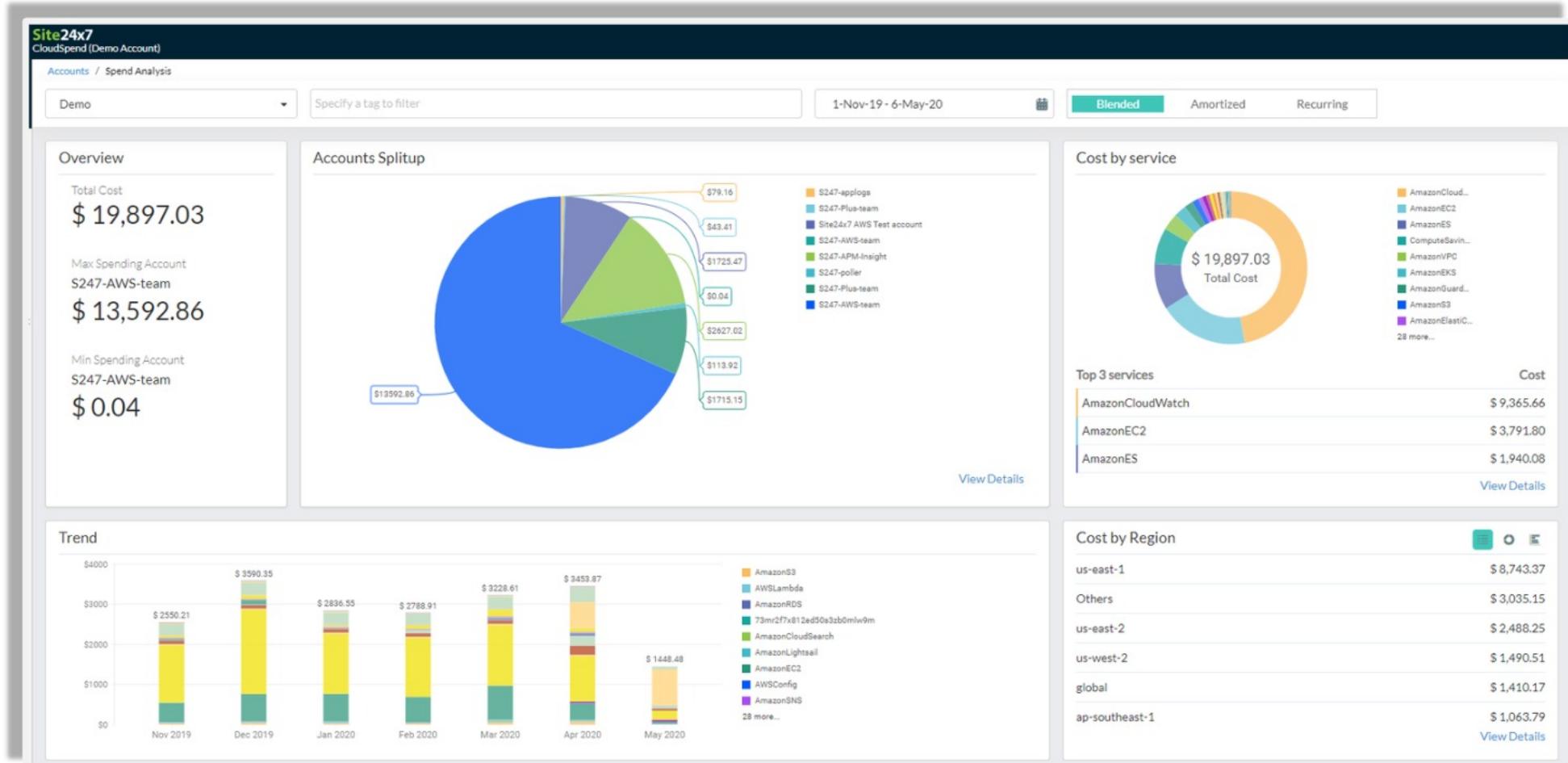
”

Site24x7

Accounts Dashboard - Combined View of All Reports



Spend Analysis - A Bird's Eye View of the Cost Accrued





Schedule Reports

- Analyze the AWS bills more conveniently by scheduling a report to your inbox directly
- All the dashboard views of Accounts and Business Units can be scheduled independently
- Reports can be scheduled Monthly, Quarterly or Yearly
- If you wish to view the reports immediately in your e-mail, click "**Schedule Now**"



Best Practices

- Make sure that you are always using the latest agent version, so that you won't miss any enhancements and bug fixes, for which we highly recommend you to enable auto-upgrade
- Make use of IT Automation wherever it is necessary
- Install server monitoring agent in your EC2 instances to get both CloudWatch and agent-based metrics in a single console, and for effective monitoring



2022 Q3 Updates

- Enhanced visibility into your Apache servers using Plugins
- Track your email usage for the Site24x7-AWS Simple Email Service (SES) integrated monitor
- Monitor your data sources by integrating AWS AppSync with Site24x7
- Get an S3 folder for each S3 bucket, and auto-discover your S3 folders
- Achieve full-stack visibility into your Site24x7-AWS Lambda integrated resources
- Install your Site24x7 Kubernetes Agent using Helm chart



Learnings from the session

- Detailed view on server monitoring
- Use of IT Automation
- Configuring plugin monitors
- Learned about the configuration of AWS, Azure and GCP monitors
- Enhancing EC2 monitoring by installing the monitoring agent
- How CloudSpend can help in tracking and controlling the cloud costs



Crafted at ZOHO Corp.

Seminar

Beyond Monitoring: Leverage AIOps for observability

Tuesday, 15 Nov 2022
Sydney, Australia

Thursday, 17 Nov 2022
Melbourne, Australia





Agenda

09:00 AM	 Registration  30 minutes
09:30 AM	 ★ Site24x7 observability platform: A shift from reactive to proactive monitoring  45 minutes
10:15 AM	 ★ Digital experience management strategies for the modern enterprise  45 minutes
11:00 AM	 Break  15 minutes
11:15 AM	 ★ Leverage AIOps for remote infrastructure monitoring in multi-cloud environments  30 minutes
11:45 AM	 ★ Analyze, control, and track your spending on AWS and Azure cloud services  15 minutes
12:00 PM	 ★ Certification  30 minutes
12:30 PM	 ★ Lunch and Networking  45 minutes



Agenda / Registration Link

→ For Agenda and Registration : Click [this link](#)

Thank you

Next session: Network & Virtualization Monitoring and Log Management
(Wed, Oct 12, 2022)

Send your feedback to **training@site24x7.com**
<https://www.site24x7.com/training.html>