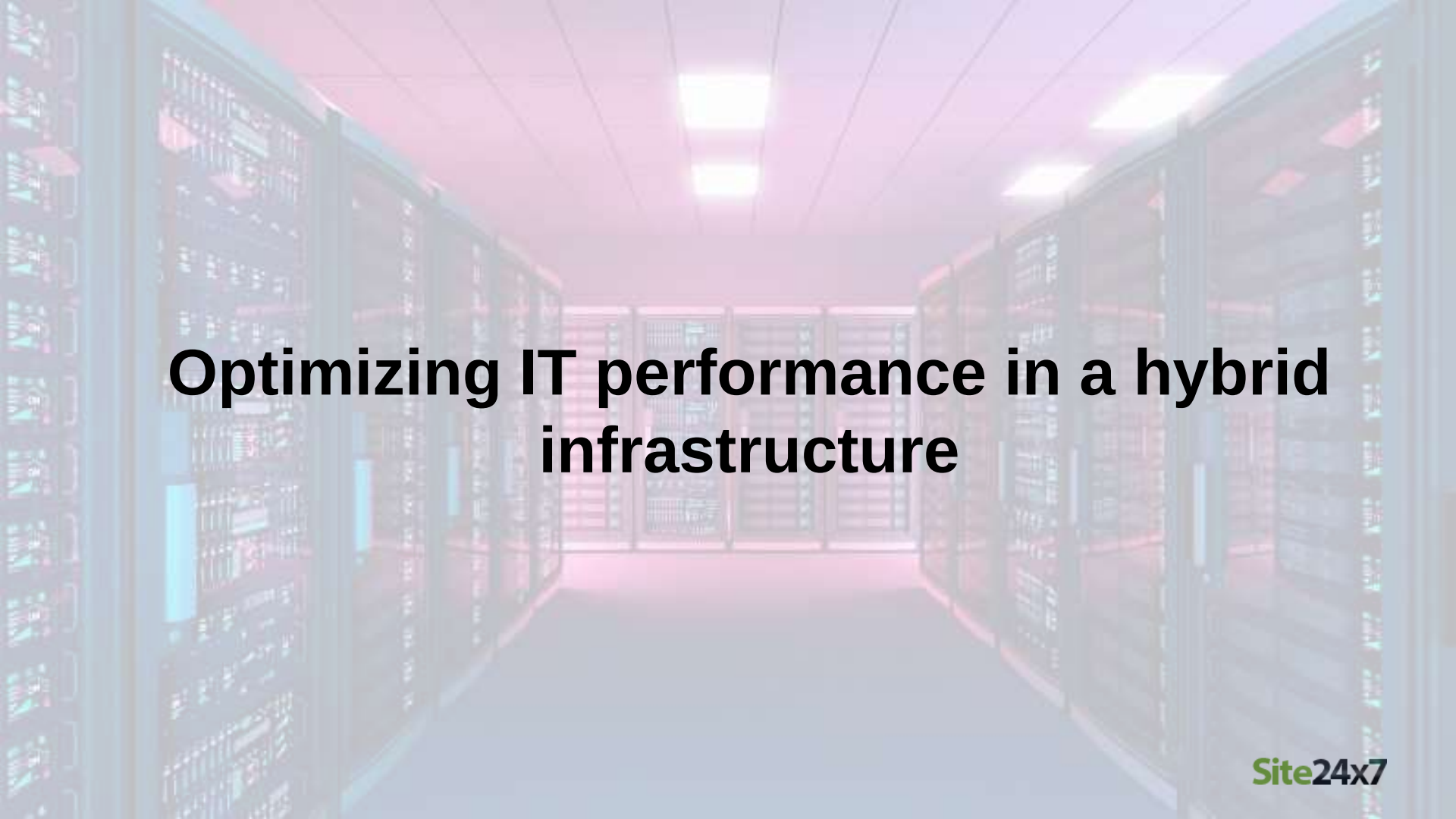

Optimizing IT performance in a hybrid infrastructure

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Agenda

- Scenario
- Traditional Server Monitoring
- Public Cloud Monitoring - AWS
- Public Cloud Monitoring - Microsoft Azure
- VMWare Monitoring
- Network Monitoring
- Focusing on end-user experience monitoring

Multiple public clouds or a hybrid cloud model are used to deliver core services critical to the business.

Scenario: A multinational company has a chain of department stores across the globe. Two servers are deployed in each store, both connected to the internet and communicating with AWS services. The stores in the US have Windows servers while those in Europe use Linux and macOS.

Should the IT team use different tools to monitor each location?

or

Can Site24x7 be used as a centralized monitoring solution?

Remote servers at each department store

- Distributed remote servers
- Real-time availability monitoring
- Performance monitoring
- Instant alerts
- Centralized monitoring

The need to monitor server metrics

- To provision and offer high availability of servers
- A high CPU value indicates how busy the server really is. It is necessary to maintain the usage at an optimal value so as to not overload and crash the servers
- High values of memory utilization could lead to memory leak making the device unresponsive
- Bandwidth utilization and traffic to the server needs constant monitoring to detect overloading of requests to the server

Use Site24x7 to monitor your entire hybrid infrastructure from the convenience of an unified web console

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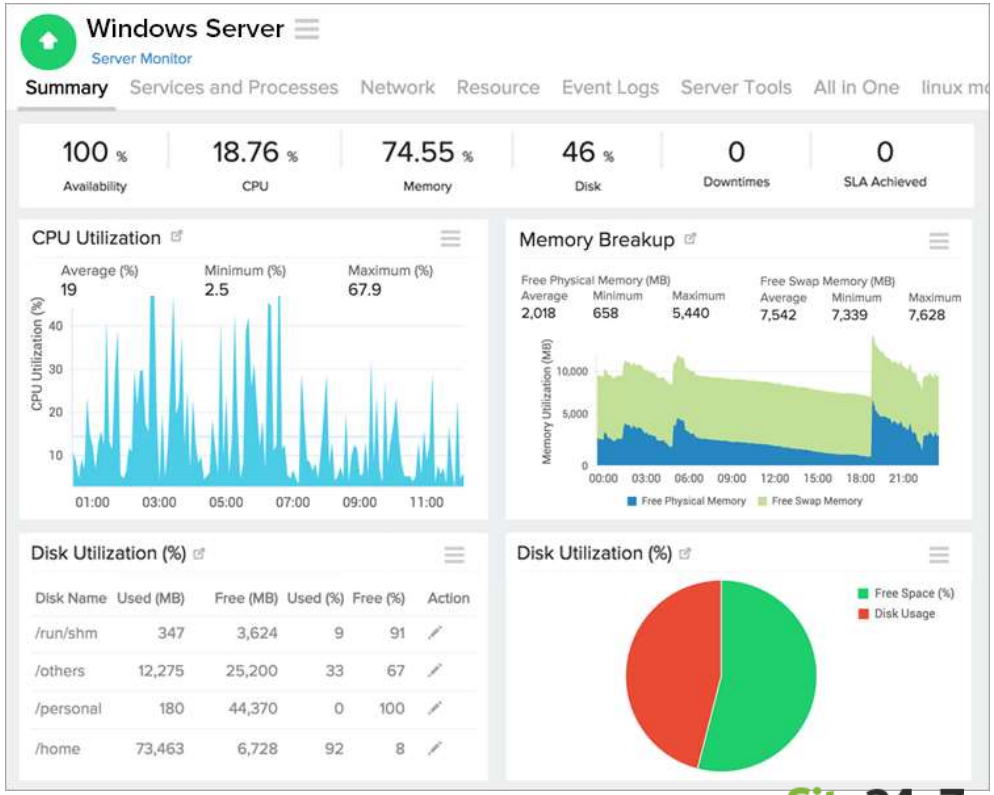
Server resources

- CPU utilization, CPU by core
- Memory utilization, break up, memory pages
- Disk utilization, individual disks
- Windows services/processes
- Event logs/syslogs
- In/out traffic statistics



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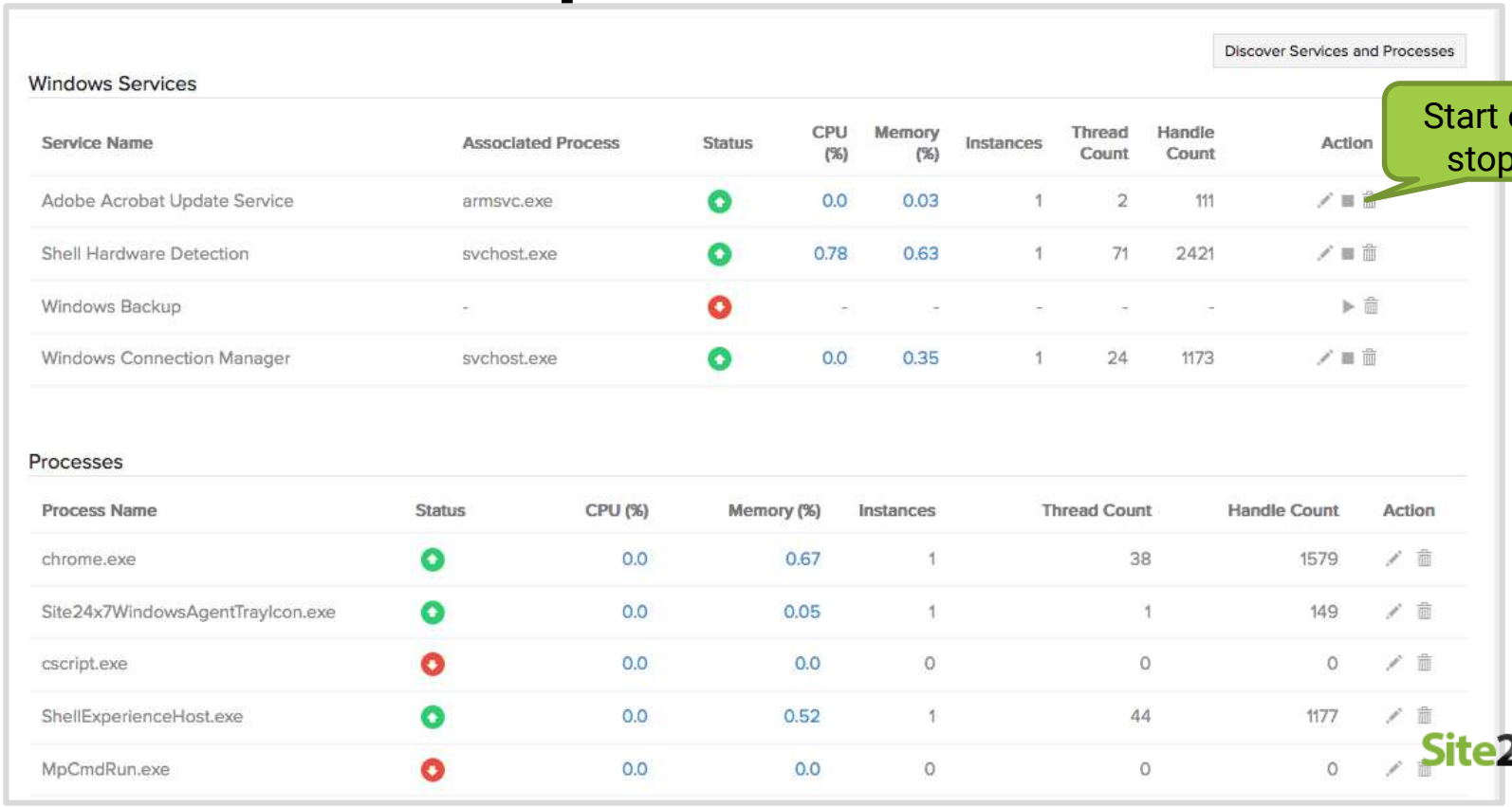
Monitor your core application services and processes



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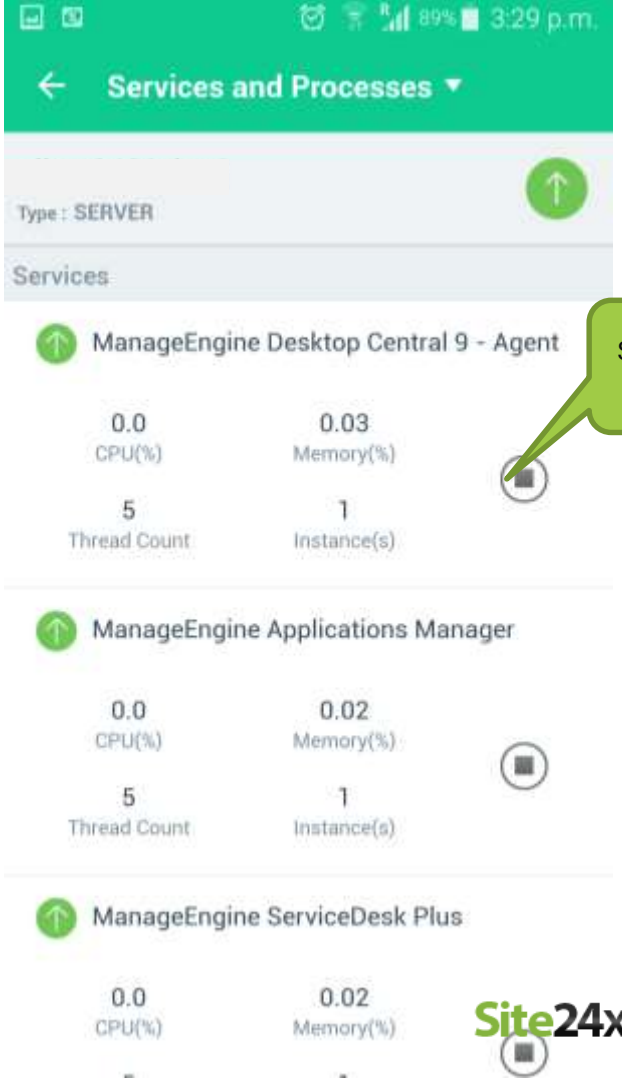
Take action from the Site24x7 mobile app

- **iOS**
- **Android**



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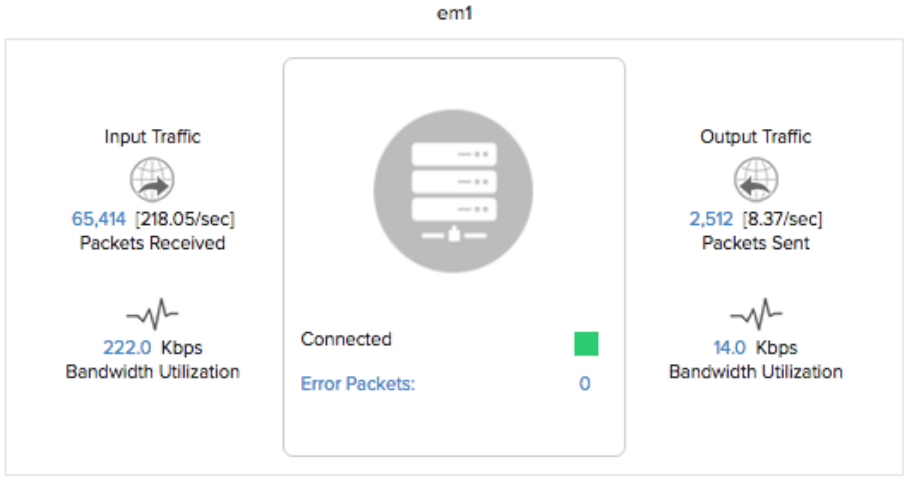
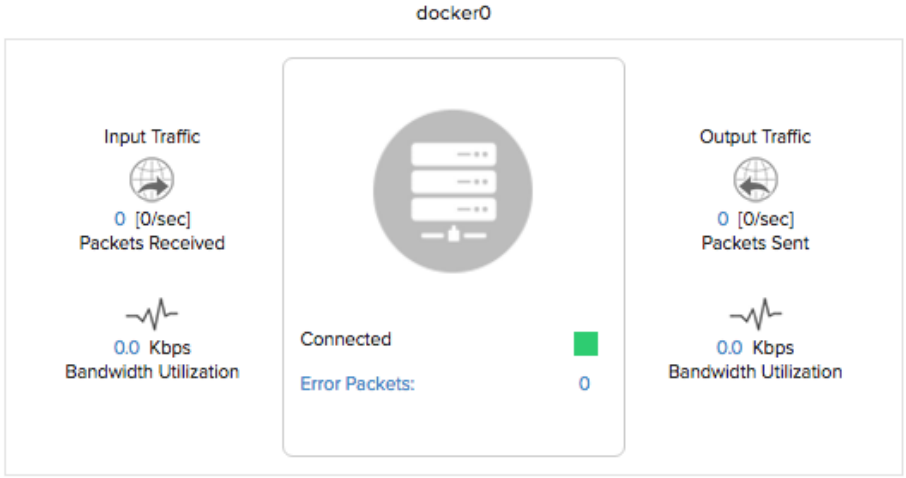
Monitor server interfaces and traffic details

Interface status | RX/TX traffic | Errors | Bandwidth utilization

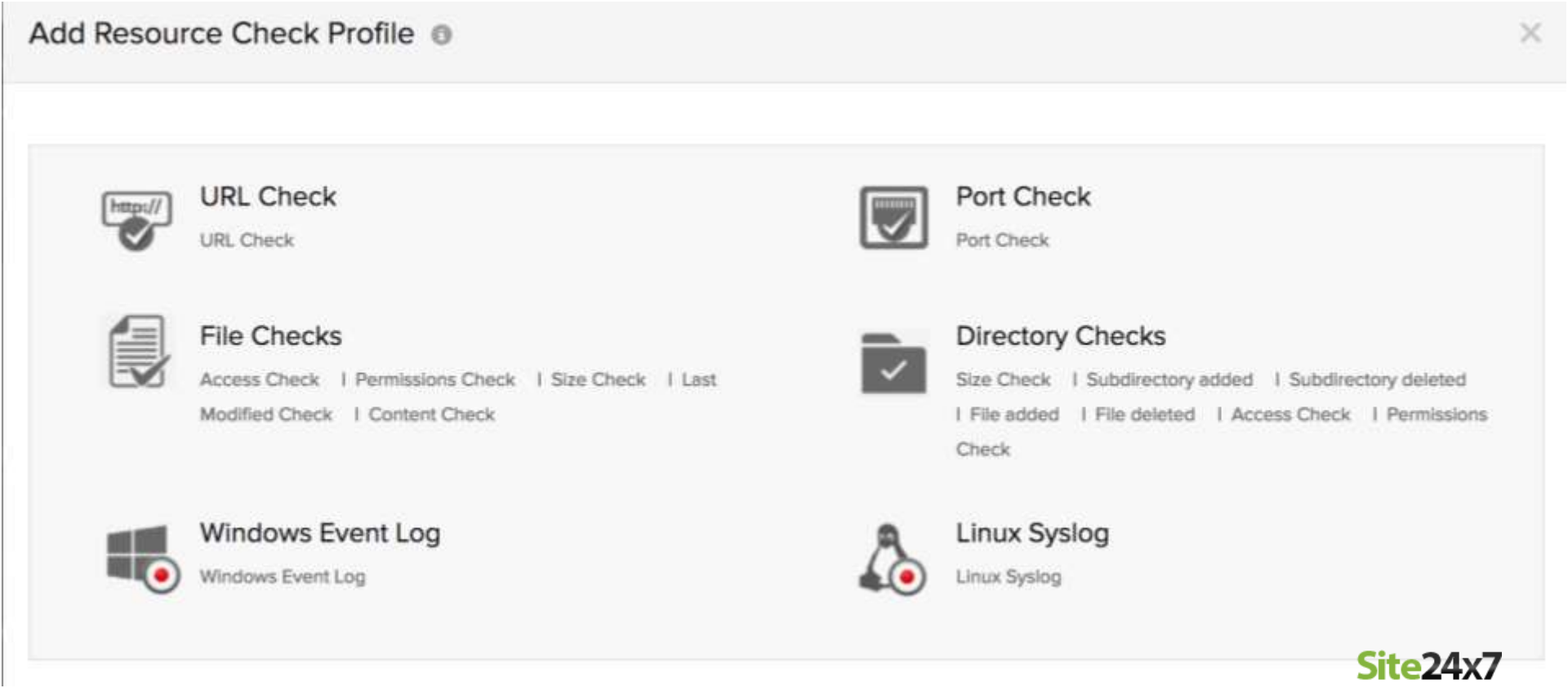




Network

Network Interface Card Name	Status	Speed (Mbps)	Data Sent (Kbps)	Data Received (Kbps)	Packets Sent	Packets Received
em1	↑	0	14	182	2,394	55,245
docker0	↑	0	0	0	0	0

Monitor resources on the server



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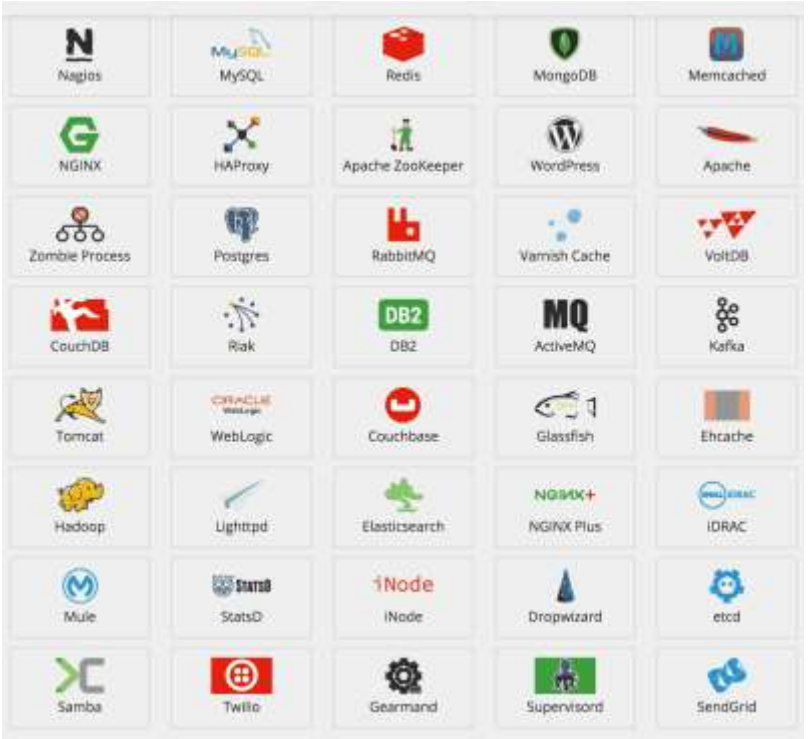
Plugins

- Measure attributes and keep track of data that matters the most, using our out-of-the-box plugin integrations
- Plugins allow you to monitor hosts, devices, services, protocols, applications and all resources, thus giving deep performance visibility
- Create Custom Plugins using Python or Shell scripts for Linux and Batch, PowerShell, VB, or DLL for Windows



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Cloud monitoring (Amazon Web Services)

- Monitor your AWS resources with CloudWatch
- Monitor your entire AWS application stack
- Automatically discover cloud resources
- EC2 hosts, RDS, EBS, DynamoDB, ELB, SNS, and S3 buckets

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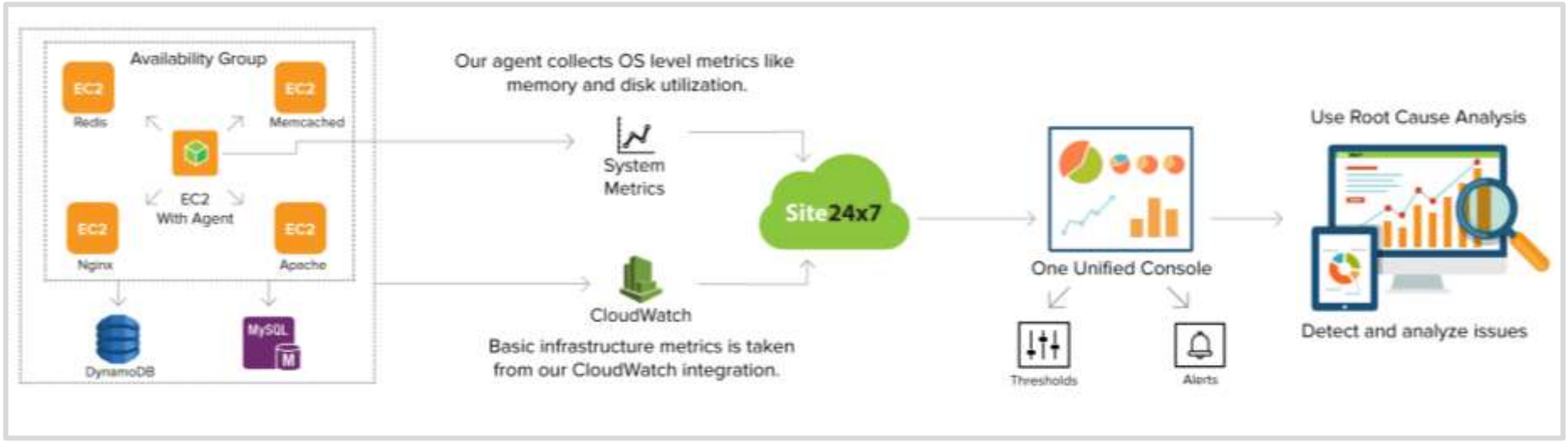
Integrate AWS with a server agent

Correlate and detect issues in your AWS stack



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CloudWatch and agent integration: Metrics

- Best of both worlds
- CPU utilization
- Memory breakup
- Process monitoring with Process CPU, Memory metrics
- Disk utilization of EBS volumes
- Bandwidth utilization
- Install and execute plugins to monitor various resources on your AWS stack
- Windows event logs and Linux Syslogs
- Process viewer

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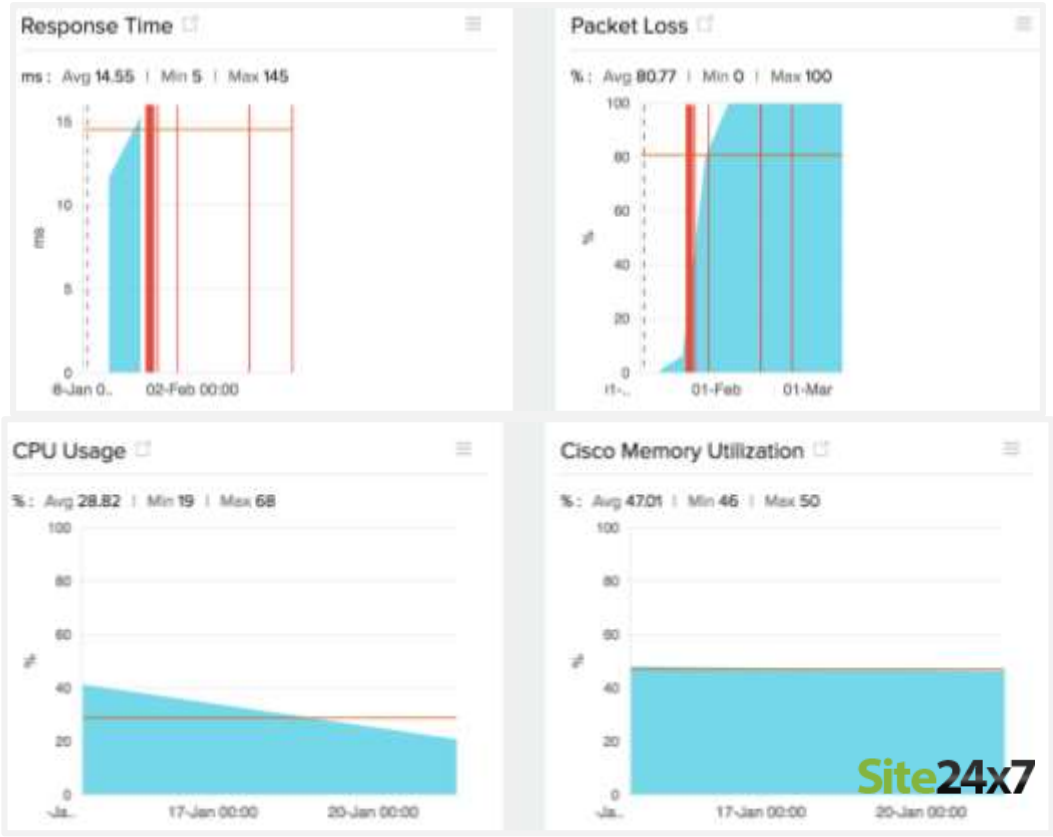
Use network monitoring to give network engineers visibility across the board

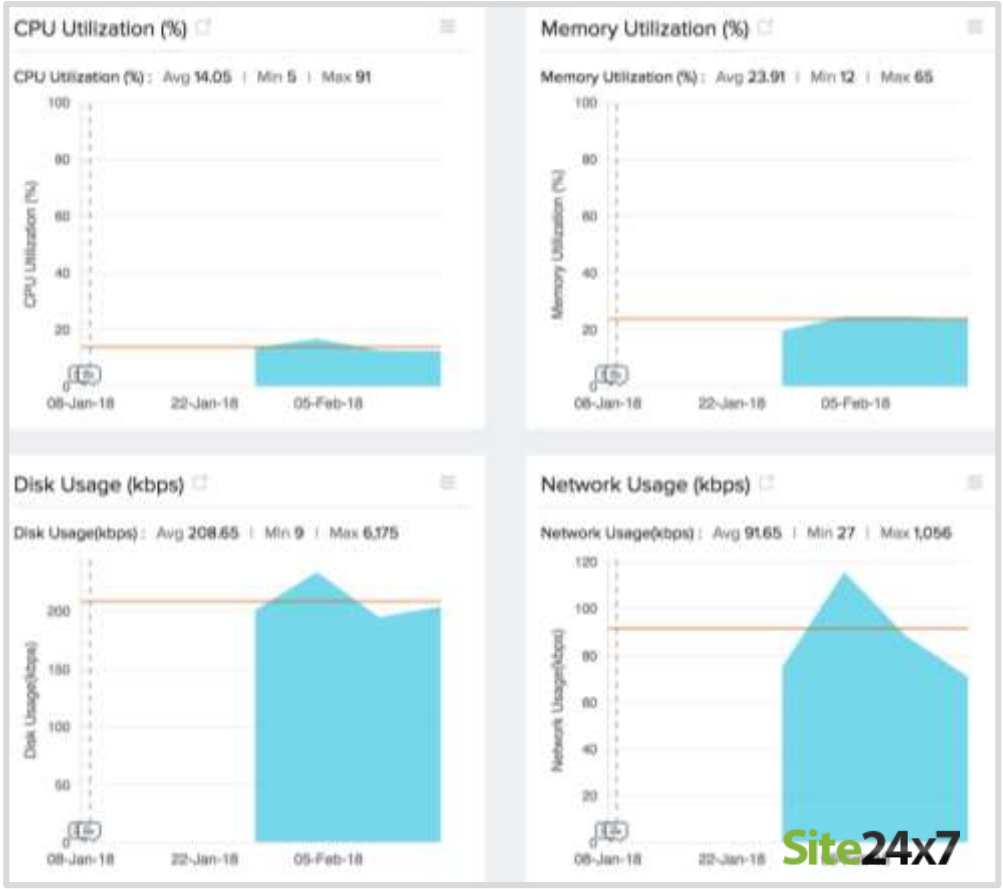
Identify and eliminate potential threats that might disrupt your network's functions

- Monitor network device uptime
- Track interface status and I/O traffic
- Uses SNMP
- Gather performance metrics and determine SLA compliance
- Track devices from multiple data centers or customer sites
- Detect random spikes in network traffic
- Spot trends in infrastructure performance and implement plans for device and infrastructure component upgrades



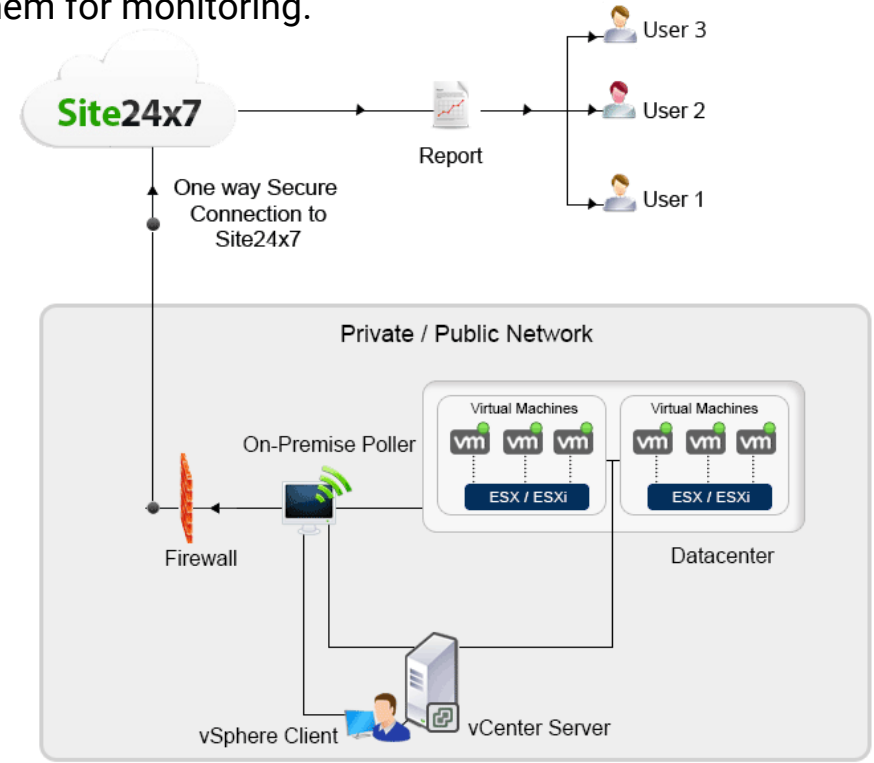
VMware monitoring

- View a summary of all computing and memory resources available for each individual cluster
- Keep track of CPU usage at the VM level
- Monitor VM memory swap usage and high balloon memory utilization
- Monitor network usage and bandwidth at the host (ESX/ESXi) and VM level
- Manage storage performance by analyzing virtual and physical disk usage for each VM and ESX/ESXi host



Easy to configure and agentless!

Install a lightweight probe: On-Premise Poller on your internal network and auto discover your entire **vSphere** environment and add them for monitoring.



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Microsoft Azure monitoring

- Monitor Azure, Windows, and Linux VMs with Site24x7's Azure VM extension
- Get critical metrics such as CPU, memory, storage, and network usage for all your virtual machines
- Monitor the performance of your applications running in the Azure environment with Site24x7's APM Insight .NET agent
- Azure services supported by the .NET agent:
    - Azure Blobs
    - Azure Tables
    - Azure Queues
    - Azure Service Bus
    - Queues
    - Topics
    - Relays
    - Event hubs
    - Azure SQL database
    - Azure Redis cache

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Additionally Focus on end-user experience

- Use Website Monitoring to understand ISP Issues, DNS and Domain Configurations issues.
- With synthetic monitoring monitor user workflows while also checking for critical keywords in the webpage
- Real User Monitoring to track experience of every single user of your services.

Web Transaction (Browser)

- Monitor complex apps that use modern web technologies
  - Typical user transactions like login checks, form filling, AJAX requests, search in a page etc. can be monitored
- No more scripts for recording
  - Easy web browser like tool - Site24x7 Recorder Tool
- Monitor the way users interact with the website
  - Capture mouse hover, User interactive element
- Intelligent capture
  - Updates the scripts automatically to changes made in a webpage

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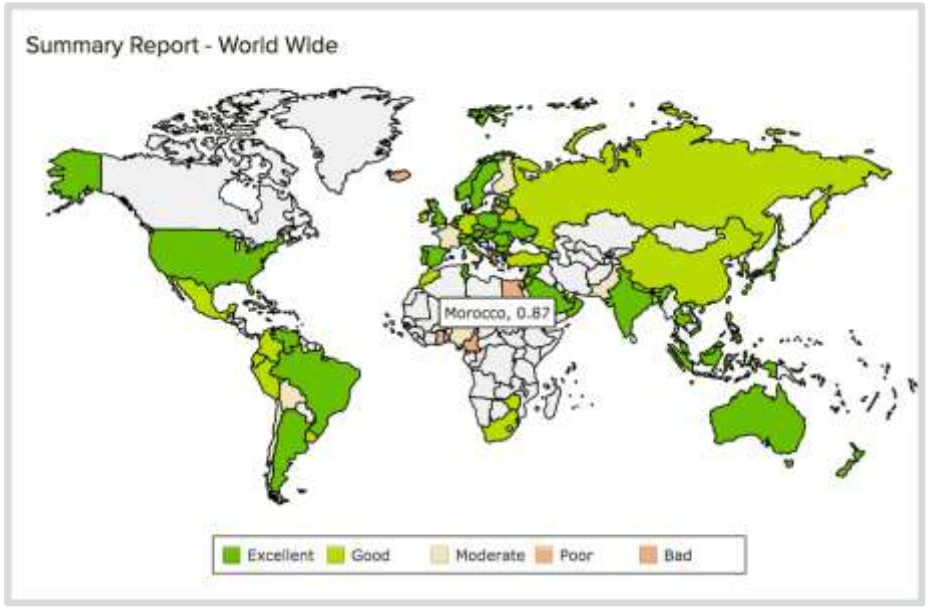
Site24x7 Real User Monitoring (RUM)

- Gain visibility into how applications are behaving in real time, troubleshoot performance problems, and fix problems before users are affected

Segment performance by:

- Browser type and version
- Transaction accessed by users
- JavaScript errors
- Device type



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Trust Site24x7 as your centralized cloud monitoring solution for hybrid infrastructures

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The all-in-one monitoring suite

Website Monitoring

Website performance

Synthetic Transaction

Real Browser Monitoring

SSL certificate

Rest API & SOAP

Internet Services

SMTP, FTP, PING, PORT, etc.

Server Monitoring

Windows, Linux, OSX, FreeBSD

Event Log/Syslog Monitoring

Microsoft Applications

IIS, SQL, Active Directory, Hyper-V, Failover Cluster

Docker Monitoring

Cloud Monitoring

AWS Monitoring

EC2

RDS

SNS

Loadbalancer

S3

DynamoDB

ElastiCache

SQS

VMware Hosts and VMs

Network Monitoring

Routers ,Switches Firewall, Wireless, Load balancer, Storage,

SNMP monitoring

Auto Network Discovery

Performance counters

Intranet monitoring

On premise poller

APM Insight

Java, .Net, Ruby, PHP

IIS and JVM Monitoring

DB operations

Identify slow queries

Pinpoint errors

RUM Monitoring

Global Application Performance

Pinpoint JavaScript errors

User Browser Statistics

Snapshots of browser traces

Performance stats by ISPs

Mobile APM

User experience on mobile apps

Alerts and notifications

- Email
- SMS
- Voice call
- Instant messaging

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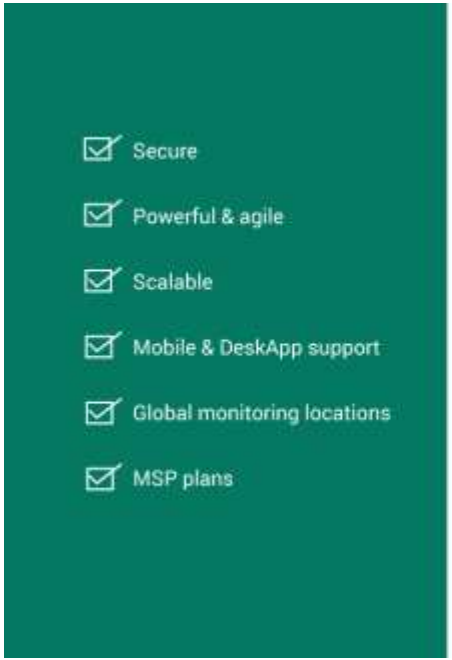
Over 10,000 customers across the globe

Scalability:

- Billions of incoming metrics
- SaaS software built from the ground up
- Zoho is a proven platform, serving over 30 million users worldwide
- Multiple data centers (USA and Europe)



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