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How Next-Generation Managed Services Drive Transformational Growth With Site Reliability Engineering

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Introduction

The evolution in operational engineering, driven by advancements in technology, has urged the need for next-generation managed services. They play a vital role in transformational growth for organizations with AI-driven operations and automated management. Cloud technology has taken over traditional IT models, including development methodology. New features are being rolled out by cloud providers owing to increasing expectations of end customers. This creates a dire need for seamless and high system performance with minimal or zero downtime. Furthermore, it is necessary that end-customers maintain a high uptime while implementation of new features and technologies in their infrastructure. This is where SRE, which is integral to next-generation managed services, comes into the picture.

Why Next Generation MSPs?

In the world of business, transformational growth is becoming inevitable. The reason is obvious. It is the need of the day! Changing expectations of end-customers are driving MSPs to change their methodologies and approaches, which in turn help solving evolving business challenges. Digital Transformation brings significant changes in the requirements of end-customers. This empowers organizations to optimize their growing costs.

The next-generation managed service providers address changing dynamics of end-customers' needs such as high and consistent uptime of infrastructure. A set of automation-first, operational, and developmental practices are leveraged by next-gen MSPs to meet these requirements. Site reliability engineering (SRE) and infrastructure as a code (IaaC), as part of these practices, enable end-customers with effective management of resource provisioning, changes, updates, and configurations.

The Advent of Next - Generation Managed Services

Evolving business challenges have led changes in technologies, methodologies, and architectures. The next-generation managed services, by leveraging SRE, ensure fulfilling these requirements of organizations to help them maintain a competitive edge.

Changes in Technologies

- Container
- Cloud Infrastructure
- Hybrid Infrastructure

Changes in Architectures

- Micro Services
- APIs
- Event Streaming

Changes in Methodologies

- Agile
- DevOps
- Continuous Delivery

The Dawn of SRE

Let's take a scenario to explain this better!

> *Consider a Managed Service Provider offer a development strategy for an application. This strategy utilizes DevOps along with tools for enhancing agility. However, the end-customer would face a significant disadvantage of downtime and productivity in the case of a system failure due to uncertain event/s. The factors contributing to such downtime or disruption fundamentally involve unemphasized threshold limits and absence of remediation measures. Also, when the system crashes, there is a massive impact on the end-customer's revenue as their site becomes unreliable during incidents.*

The intelligence leveraged by DevOps is limited to deployment and development, leaving the operations prone to challenges. While DevOps ensures continuous deployment and integration with agility, IT operations remain improperly managed. This further results into a system instability and non-reliability. Adapting an agile approach is important for preventing failures and maintaining fault tolerance. Site reliability engineering is a feasible approach, where development and operations are both enhanced by infusing better stability into the latter.

SRE - An Approach for Refining DevOps

DevOps in its most refined form is believed to be what site reliability engineering radically does. This is something that organizations are prioritizing for a parallel enhancement of both internal productivity and customer experience. The SRE model leverages cutting-edge technologies for integrating DevOps with continuous testing of infrastructure as code. Also, it utilizes automation-first practices for improving reliability and reducing effort, which is the fundamental objective of SRE as a system scales.

Key Branches of the SRE Stem

Release Engineering and Response:

Release engineering offers a thorough understanding of configuration languages, source code management, automated build tools, and package managers. On the other hand, response facilitates troubleshooting and notifying about critical events, along with incident response and emergency protective measures. Moreover, SRE focuses on auto-healing and self-service to enable resolution of challenges with minimal manual intervention.

Cultural Shift:

SRE is the practice of removing silos through shared ownership, preventative planning for budget failures, automation, monitoring, and measurement. This introduces a cultural shift within organizations in terms of collaboration, stability, and reliability. The shift itself drives a prescriptive approach for realizing DevOps objectives in tandem with reliability and automation.

Automation-First Approach:

Site reliability engineering is driven by infrastructure as code and implements an automation-first approach for ceasing failures. It applies leading software practices for codifying all facets of IT operations and builds reliability within applications and infrastructure.

Reliability Measurement:

Service level objectives (SLOs) and service level indicators (SLIs) are used for measuring reliability in the SRE model. Key risk metrics are also considered for highlighting issues with high impacts and queuing the problems that don't have immediate impacts. This further helps in early detection of risks, meeting reliability goals, and building resilience within the infrastructure.

Visibility:

SRE spreads the knowledge of services and operations across an organization. The specialists governing the SRE model are already experts in determining what to observe for taking right measures to evade any issue.

Driving Value:

High scalability and reliability results in optimized uptime for enhanced user experience with real-time service availability, which renders SRE as a value driver. Creation of SLOs driven by SLIs further helps organizations build capabilities around the infrastructure while integrating AI and automation into IT operations.

How Does Next-Generation Managed Services and SRE Benefit Organizations?

The drive among organizations for faster release has given an impetus to operations teams for ensuring stability of the code. Also, it is important that development teams pace up before release dates loom with a potential stringent bottleneck. The next-generation managed services and SRE model dedicates significant time and resources to traditional operational tasks. This has helped organizations drive efficiency and clarity, making reliability more achievable within the fast transforming IT environment.

As established traditional organizations continued to advance on transformational growth, site reliability engineering continues to gain unabated popularity. There are **5 core constructs** that rest in the heart of SRE adoption by organizations, which are detailed below.

Faster Incident Resolution:

Through adaptive and AIOps-based incident management technologies and approaches, SRE enables organizations to maximize customer experience by automating resolution tasks. This further helps them in curtailing the time needed to identify and mitigate incidents while improving collaboration and streamlining technology operations.

Factual Decision Making:

By aligning their priorities with goals, SRE facilitates organizations to make data-driven decisions that bring better operational and development velocity. This further enables organizations to measure budget failures in real-time, instead of prioritizing resolutions subjectively.

Collaborative Functions of Development and Operations:

The SRE model leverages the capabilities of digital collaboration tools for enhancing the efficiency and productivity. This guides organizations in improving cooperation between teams in all developmental activities including, but not limited to, operations, development, planning, design, and engineering.

Assurance of Proactive Stability:
Empowering organizations to spend only half of their time and resources on incident resolution, SRE enables the utilization of the remaining time for proactive improvements in system resilience and stability. The model embeds a cultural shift within an organization while instilling proactive stability.

System Stability and Balanced Changes:
A friction between operations and development is witnessed by most organizations. In this case, the development team is constantly pushing for changes while the operations team is reluctant to change for ensuing system stability. With continuous measurement, the SRE model brings a sound balance between these, thereby maintaining stability of systems for organizations.

Blazeclan's Cloud Management Platform (CMP) Drives Tranformational Growth For you

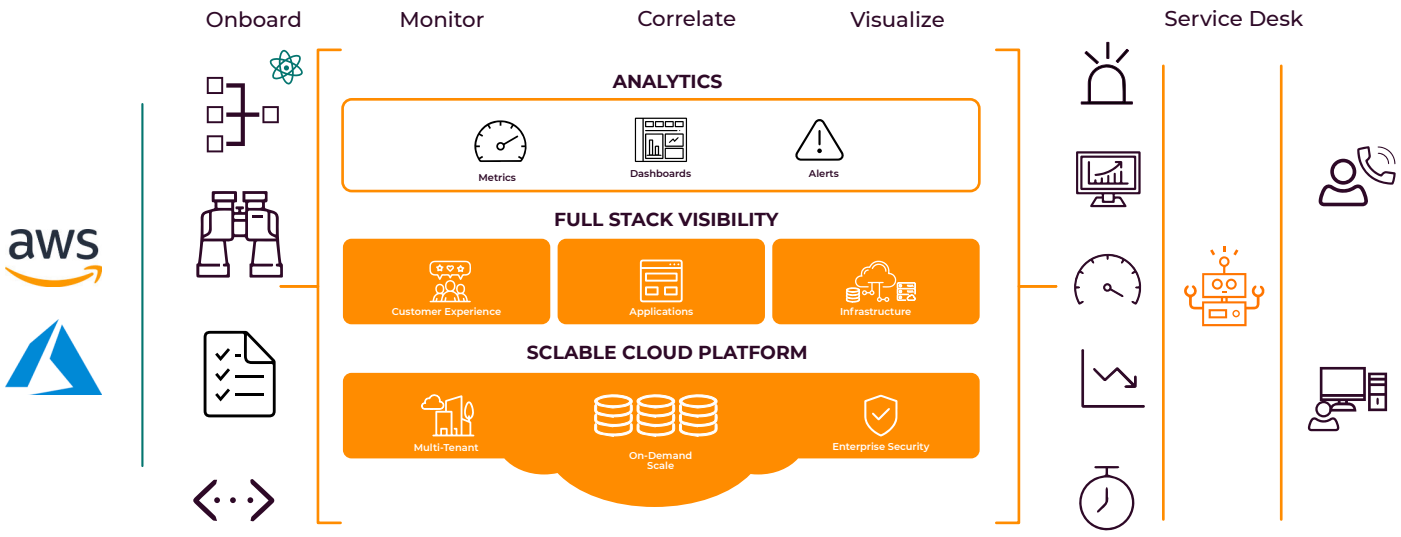
Blazeclan CMP platform is a multi-cloud, ITIL-compliant platform that offers Service Desk, Delivery Management, Service Management, Cloud Platform Management, Monitoring Including APM (Optional), Patch Management, Database Management, Lifecycle Management, Provisioning, Service Support / Queries, Automation, Cost Management, and Service Performance Management services. Also, it equally focuses and delivers capabilities on security with a comprehensive and configurable compliance aligned to customer ISMS, security incident management, and SOC integration.

Blazeclan's CMP resolves all the onboarding, observability, and service-related challenges. It makes onboarding a time-effective process while bringing validation and correlation for enhanced observability in the infrastructure. This helps the organizations in identifying the root cause of challenges. Also, with all operational tools integrated into a single platform, it ensures an unparalleled service delivery.

Key Elements

- Visibility for Every Hosting Strategy
- Multi-Cloud Support
- SaaS Based Multi Tenancy
- Automated Alerting and Call management
- Self Healing Features
- Deep Container and Microservices Support
- Automated Discovery and Onboarding
- Reporting and Governance
- Security Compliance
- Configuration Management Tool Integration
- Application Performance Monitoring
- ITMS Compliant Ticketing System

Blazeclan's CMP Framework



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Why You Need Blazeclan's Cloud Management Platform!

	Feature	Execution
 On-board	Customer Creation	• Creating Sub Accounts in New Relic • Creating Organisation in JIRA
	User Administration (For Customer creation portal)	• User Creation • User privilege management
 Observe	Monitoring Management	• AWS account/infrastructure discovery • Attaching AWS resource monitoring template from the New Relic portal • Attaching AWS resource alert policies from the New Relic portal • Set SLA's in Jira Service Desk
 Service	End to End ticket / incident flow	• End to end flow for a ticket/incident • Incident Management
	Reporting	• Ticket Status report • Resource Utilization reports