TRANSFORMATION WITHOUT TREPIDATION

Simplifying Cloud Migration With OpsRamp

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Cloud Migration: Historically Not Easy, But Worth It

Analyst firm IDC forecasts that organizations will collectively spend $370 billion on public cloud services and infrastructure in 2022. Given the skyrocketing adoption of public cloud platforms, enterprises are using a number of approaches (lift and shift, replatforming, and refactoring) to smoothly transition on-prem workloads to the cloud.

There are different types of cloud migration scenarios, including shifting from legacy datacenter to public cloud(s), moving workloads from a private cloud to a public cloud, migrating from one cloud provider to another, or shifting from a specific cloud service (IaaS) to a different set of cloud services (PaaS/FaaS). Calculating cloud migration costs haven't been easy, with some estimates running anywhere between $100 per machine to more than $1,000 per machine.

Successful cloud migration projects can deliver tremendous efficiency and operational agility to keep up with the demands of customers by modernizing legacy workloads, meeting capacity demands, and containing costs. But given the significant failure rates for a cloud migration initiative, it is critical IT organizations adopt a clear set of processes and the right tools to mitigate risk across project execution, budgets, staffing, and timelines.

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Enter OpsRamp: Ease The Challenges of Handling Hybrid, Multi-Cloud Complexity At Scale

OpsRamp is a true multitenant SaaS platform that helps enterprise IT teams manage the complexity of hybrid, multi-cloud, and cloud native environments. DevOps and Site Reliability Engineering (SRE) teams can use OpsRamp to manage the three distinct phases of a cloud migration project with:

Visibility. Cloud operations teams can dynamically discover and onboard public cloud services across different business units for leading cloud providers like Amazon Web Services, Microsoft Azure, and Google Cloud Platform.

Intelligence. With OpsRamp, enterprises can comprehensively monitor 100+ cloud infrastructure and platform services, correlate multi-cloud events into actionable inferences, and alert the right on-call teams for rapid resolution.

Optimization. IT teams can assess and automatically fix patch vulnerabilities for compute instances, use policies for on-demand incident remediation, and ensure secure remote access with auditable session recordings for both internal and external staff.

In the following pages, we'll discuss how OpsRamp helps IT teams through each phase of the Pre-Migration, Migration, and Post-Migration stages.
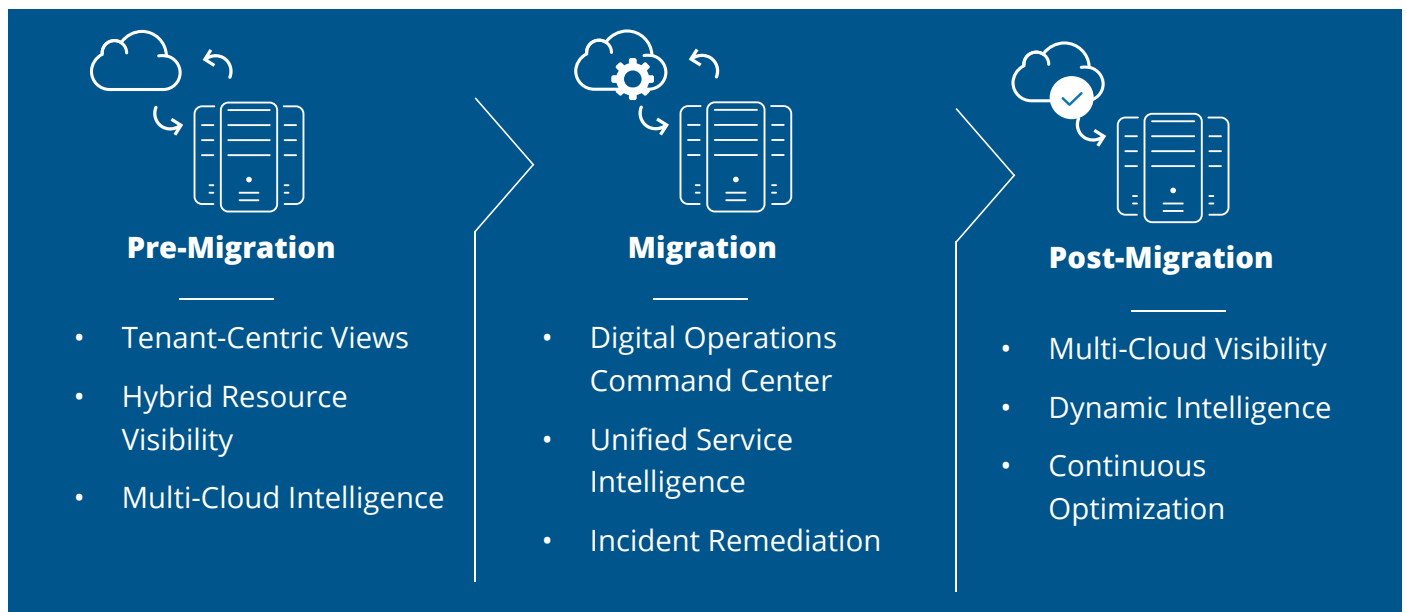

Pre-Migration

- Tenant-Centric Views
- Hybrid Resource Visibility
- Multi-Cloud Intelligence

Migration

- Digital Operations Command Center
- Unified Service Intelligence
- Incident Remediation

Post-Migration

- Multi-Cloud Visibility
- Dynamic Intelligence
- Continuous Optimization

Figure 1 - Manage the three distinct phases of a cloud migration project with OpsRamp's scalable and flexibile platform.

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Pre-Migration:

Pre-Migration

During Pre-Migration, IT teams are establishing goals, creating the right roles and defining the end-state of their migration project. Here's how OpsRamp can help IT teams manage the pre-migration phase of their cloud journey:

1. Tracking Progress Through Tenant-Centric Workload Visibility:

Successful cloud migration outcomes are about delivering reliable, available, and responsive workloads that can tap into the cloud's scalability, flexibility, and utility-based pricing models. OpsRamp's multitenant and multi-tier SaaS architecture helps enterprises measure the progress and performance of migration initiatives across their current IT environment and future state cloud environment.

Cloud architects can create two tenants ("Pre-Migration" and "Post-Migration") in OpsRamp both for their current workloads and destination cloud services to ensure the right guardrails are in place for availability, performance, security, and governance.
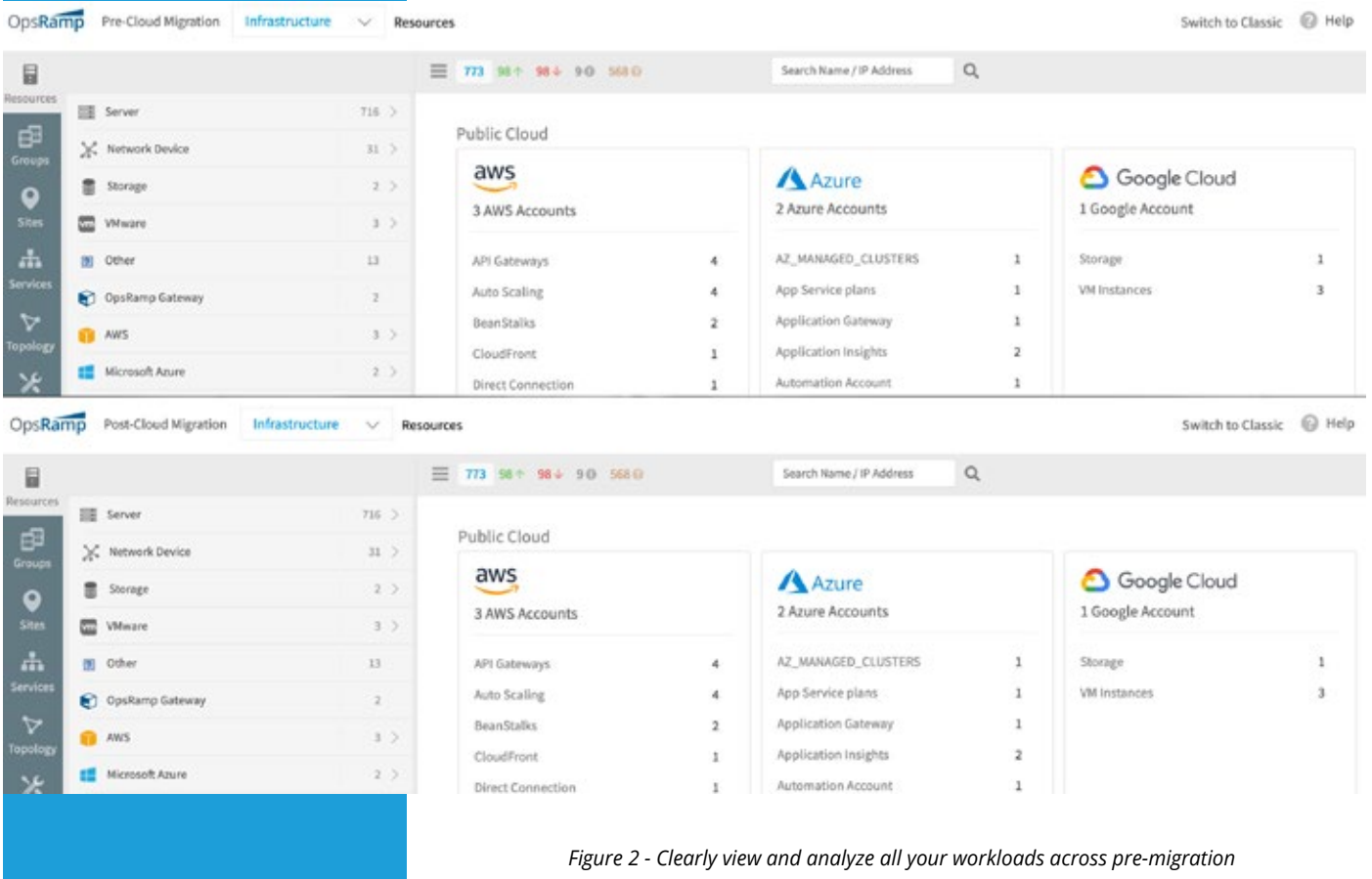

Figure 2 - Clearly view and analyze all your workloads across pre-migration and post-migration tenants in OpsRamp.

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Pre-Migration

2. Simplifying Resource Management:

OpsRamp dynamically discovers hybrid IT resources and clearly presents a resource view that delivers actionable insights for resource attributes. Cloud migration teams can access workload information for CPU, memory, disk, IP address, FQDN, BIOS, and network/video cards and view related alerts and incidents impacting a specific resource without any context switching. OpsRamp also brings in topology details at both application and network levels for tracking the progress of cloud migration activities.

Finally, cloud architects can view and measure the right set of availability and performance insights (CPU, Disk, RAM, Swap, Network, Load, and User-defined metrics) for existing infrastructure and take the right decisions for hosting specific workloads on public cloud services.
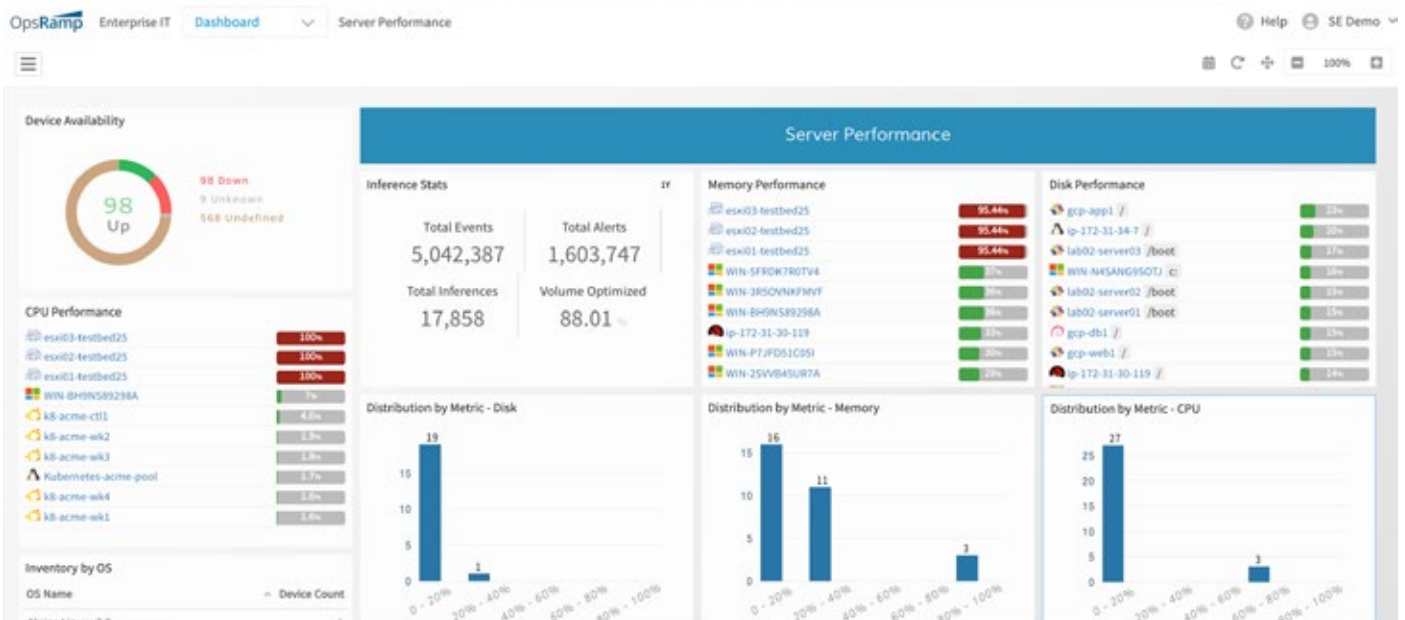

Figure 3 - Gain the right performance insights for all your hybrid workloads.

Pre-Migration

3. Delivering Multi-Cloud Intelligence:

This is perhaps the most critical aspect of pre-migration and shows how to confidently maintain service uptime and SLAs. OpsRamp monitors the availability of both hybrid and multi-cloud services through a native monitoring engine and via integrations with third-party tools.

OpsRamp's service-centric AIOps solution lets service delivery teams gain control over alert storms with machine learning-powered alert correlation and escalation. OpsQ, the event management engine behind service-centric AIOps, ingests, correlates, deduplicates, and suppresses events from both legacy and modern workloads and resolves issues before they become business-critical problems.

IT teams can also take advantage of role-based dashboards and a wide range of monitoring templates to customize performance management views across their entire enterprise.
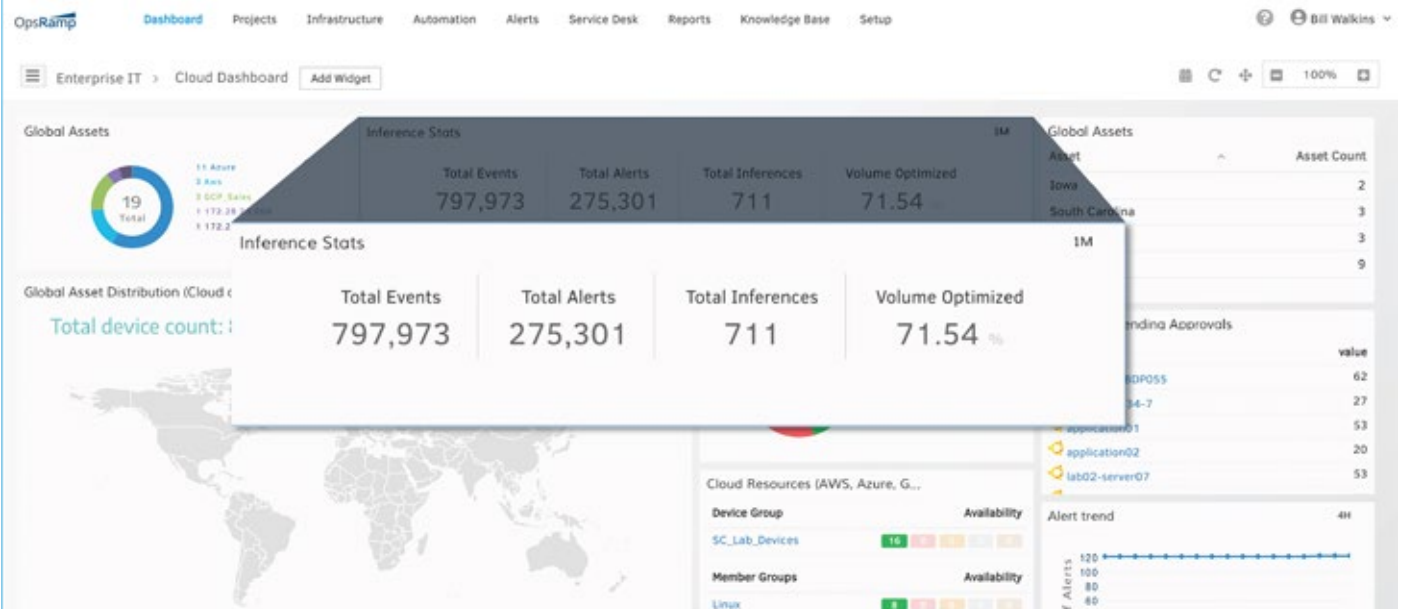

Figure 4 - Gain control over datacenter and cloud alerts with service-centric AIOps.

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Migration:

During Migration, IT teams can build the migration blueprint and test different migration activities in the staging environment using the data collected and processes established during the pre-migration phase.

Migration

The migration blueprint and related testing help identify gaps, requirements, and barriers to designing a successful migration, including:

- In-depth analysis of the current environment
- Change management processes to track execution and record output
- Backup plans where necessary
- Acceptance testing
- Final sign off and approval

Here's how OpsRamp can help optimize the migration phase of the cloud journey:

1. Digital Operations Command Center:

IT teams can maintain contextual visibility and clear control for different migration processes with a single source of truth for hybrid infrastructure. Enterprises can measure business service availability and uptime during migration with intuitive service maps and dynamic network topology maps for their IT infrastructure.

2. Unified Service Intelligence:

Custom monitoring templates for specialized workloads deliver real-time status updates and rapid detection of issues through intelligent alerting. Cloud architects can track the performance of entire business transactions and maintain service levels for workloads hosted on public cloud services with synthetic monitoring.

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Even though IT services or underlying infrastructure might change, IT teams can ensure optimal user experiences with the right performance insights across datacenter and hybrid cloud services.
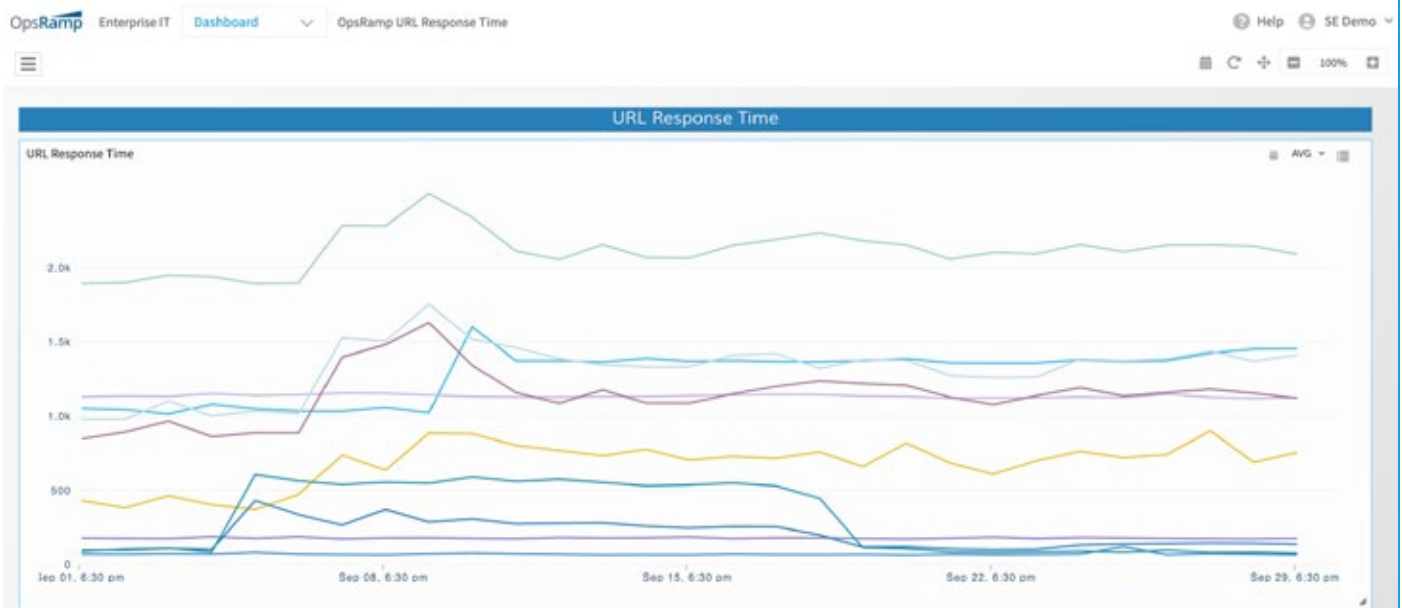
Migration

Figure 5 - Track the performance of cloud infrastructure and platform services with Synthetics.

3. Incident Remediation:

Migrations rarely go off without a hitch. OpsQ, OpsRamp's AIOps powered event management engine helps incident management teams proactively monitor potential service disruptions and identify root-cause alerts before, during and after migration.

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Post-Migration:

Post-Migration

Now that migration is complete, IT organizations will be responsible for monitoring and managing a mix of hybrid, multi-cloud resources across a distributed footprint.

OpsRamp ensures comprehensive visibility, rapid remediation, and constant optimization for these dynamic, multi-cloud environments at scale.

Here's how OpsRamp Visibility, Intelligence and Optimization help IT teams deliver service availability, performance and uptime in the new world of the cloud:

1. Visibility

IT teams can align operational tasks to ensure compelling digital experiences using OpsRamp's on-demand discovery capabilities for cloud workloads and the ability to link business services back to underlying hybrid resources:

- **Policy-Based Discovery.** DevOps teams can use OpsRamp to auto-discover cloud resources with API-based Discovery Profiles. OpsRamp's Discovery Profile engine automatically assigns cloud resources to service groups and logically organizes cloud workloads once credential sets, policies, and cloud discovery schedules are defined.

- **Business Service Maps.** Cloud teams can create and share relevant service maps with business units so that they can monitor the IT services that matter to them.
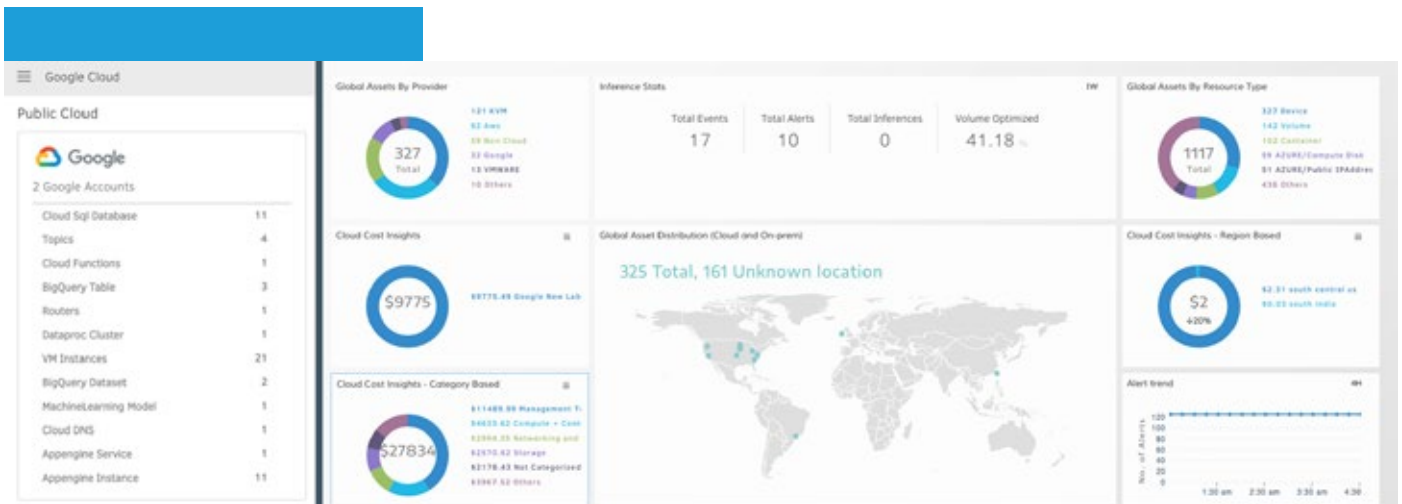
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Figure 6 - Discover and dynamically onboard your cloud workloads with API-based discovery.

Post-Migration

2. Intelligence:

OpsRamp's performance monitoring capabilities for 100+ cloud services across Amazon Web Services, Microsoft Azure, and Google Cloud Platform ensure that enterprise IT teams can quickly monitor, alert, and optimize their cloud resources with:

- **Cloud Native Monitoring.** Enterprises are increasingly hosting production-ready microservices on containerized workloads. OpsRamp can discover and monitor cloud native services built on Kubernetes clusters across both on-prem and cloud deployments.

- **Robust Integrations for Cloud Monitoring Tools.** OpsRamp's service-centric AIOps solution can ingest events from cloud monitoring tools like Amazon CloudWatch, Google Stackdriver, and Azure Monitor. The OpsQ event management engine processes and correlates raw events into contextual incidents so that IT teams can quickly troubleshoot issues with the right information.

- **Auto Scaling Monitoring.** OpsRamp's monitoring templates can manage auto scaling resources using scheduled or on-demand cloud discovery. Operational dashboards track the real-time performance of auto scale instances by displaying relevant infrastructure metrics and alert trends in a single place.

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Post-Migration

- **Synthetic Monitoring.** IT teams can detect network performance issues for cloud workloads with synthetic transaction monitoring. Synthetics deliver better performance visibility by tracking end-user experience across different geographic locations.

- **Multi-Cloud Database Monitoring.** Optimize and finetune the performance of database-engine level health with metrics and smart alerts for Amazon Relational Database Services (Aurora, PostgreSQL, MySQL, MariaDB, Oracle, and Microsoft SQL Server), Microsoft Azure (SQL Database, Azure Database for PostgreSQL, Azure Database for MySQL), and Google Cloud Platform (Cloud SQL).

- **Cloud Event Monitoring.** Events from cloud services are a primary source of signal for the health and performance of public cloud environments. OpsRamp collects and monitors events for a wide variety of cloud services like AWS Health, Database Migration Services, EBS, ECS, ELB, and Redshift. DevOps teams can make sense of critical cloud events in a single place, without having to log into multiple AWS accounts.

- **Alert Escalation Management.** Multi-channel alert notifications and multi-level escalations help incident management teams be the first to know about an IT outage and reduce the mean-time-to-resolution with priority-based escalation matrices.

amazon web services	Google Cloud	Azure
OpsRamp + Amazon Web Services	**OpsRamp + Google Cloud Platform**	**OpsRamp + Microsoft Azure**
Visualize, manage, and troubleshoot with actionable insights for 30+ AWS services.	Monitor, manage and troubleshoot with OpsRamp's support for over 20+ Google Cloud services.	Manage the fast-moving world of Microsoft Azure with support for 45+ Azure Services.

Figure 7 - Ensure holistic visibility and control for your entire cloud ecosystem with OpsRamp.

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Post-Migration

3. Optimization:

OpsRamp's automation workflows let IT teams deliver the right levels of multi-cloud governance and control with:

- **Cloud Cost Visibility.** OpsRamp's multi-cloud visibility dashboard lets IT leaders track cloud consumption across business units, IT services, resource types, and custom attributes. Finance teams can also create budget policies in OpsRamp to receive alerts when cloud budgets exceed allocated amounts.

- **Patch Management.** OpsRamp identifies missing patch updates across Windows and Linux servers and mitigate risk with automated patch deployment policies.

- **Process Automation.** OpsRamp's built-in policy library helps standardize hybrid infrastructure management with automated remediation for streamlined execution.

- **Audit Trails and Process Training.** Remote consoles not only enable secure access to hybrid infrastructure but also deliver reliable audit trails through automatic session recordings. Session recordings help train staff on the right approaches to troubleshoot and resolve cloud-related issues.
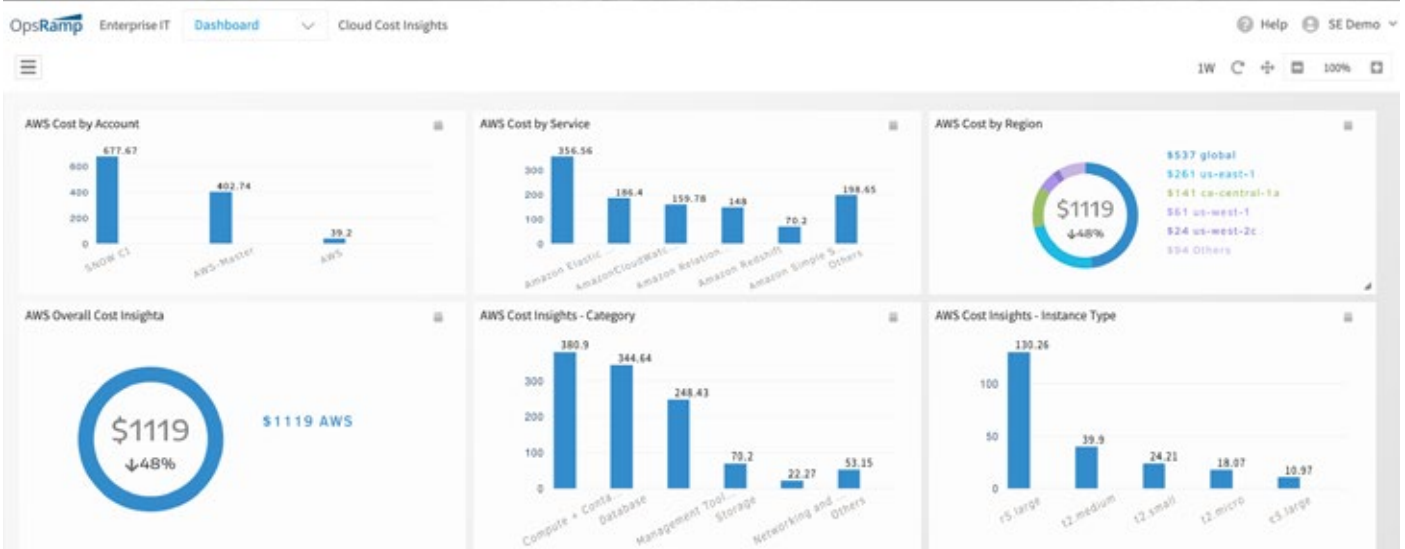

Figure 8 - Keep a close watch on cloud spend management with OpsRamp's cloud cost trend widgets.

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Move to the Cloud On Your Terms

Cloud migration doesn't have to mean a loss of control. With OpsRamp, IT teams can maintain the visibility, intelligence, optimization, flexibility, governance, and automation they need throughout their cloud journey. And they can do it entirely on their terms.

To learn more about how to control the chaos of the modern, hybrid, multi-cloud world, visit OpsRamp.com.

About OpsRamp

OpsRamp enables IT to control the chaos of managing their hybrid IT operations and act like a service provider back to the business. Built in the cloud, the OpsRamp service-centric AIOps platform drives total visibility across hybrid infrastructures, offers complete multi-cloud infrastructure monitoring and management of business-critical services, and optimizes services through automation and integration with ITSM and DevOps tools.

Now enterprise IT can deliver IT operations as a service and power a digital operations command center that's built for the challenges of modern, hybrid infrastructure.

To learn more

OpsRamp.com // 1.855.847.8272