Automate Cost Optimization with nOps and Shift Left

Meet the Speakers

Satish Bora

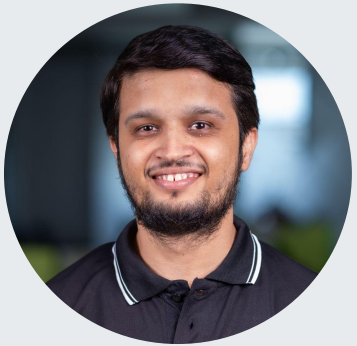
GM

nOps

Stephen Salim

Senior Solutions Architect

aws



Shreyas Damle

Solutions Architect

Opcito

Topics & Agenda

Agenda:

- **Context setting with WAFR and automation** – Stephen Salim, AWS
- **Highlight GraphQL and automation framework** – Satish Bora, nOps
- **Use cases and scenarios for automation** – Satish Bora, nOps
- **Demo of automation** – Shreyas Damle, Opcito

AWS Well-Architected
Solutions Architecture

Stephen Salim
Senior Solutions Architect
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aws

Common questions around **cost** in the cloud

Are we using resource efficiently ?

How do we gain better visibility ?

How do we build Accountability ?

How do we bring the **most value** at the **lowest price** possible ?

aws

AWS **Well-Architected** Framework

https://aws.amazon.com/architecture/well-architected/

What is Cost Optimization?

The ability to run systems to deliver business value at the lowest price point.

aws

Cost Optimization **design principles**

- Practice Cloud Financial Management (CFM)
- Adopt a consumption model
- Measure overall efficiency
- Stop spending on undifferentiated heavy-lifting
- Analyze and attribute expenditure

https://aws.amazon.com/architecture/well-architected/

https://aws.amazon.com/blogs/mt/tag/aws-well-architected-framework

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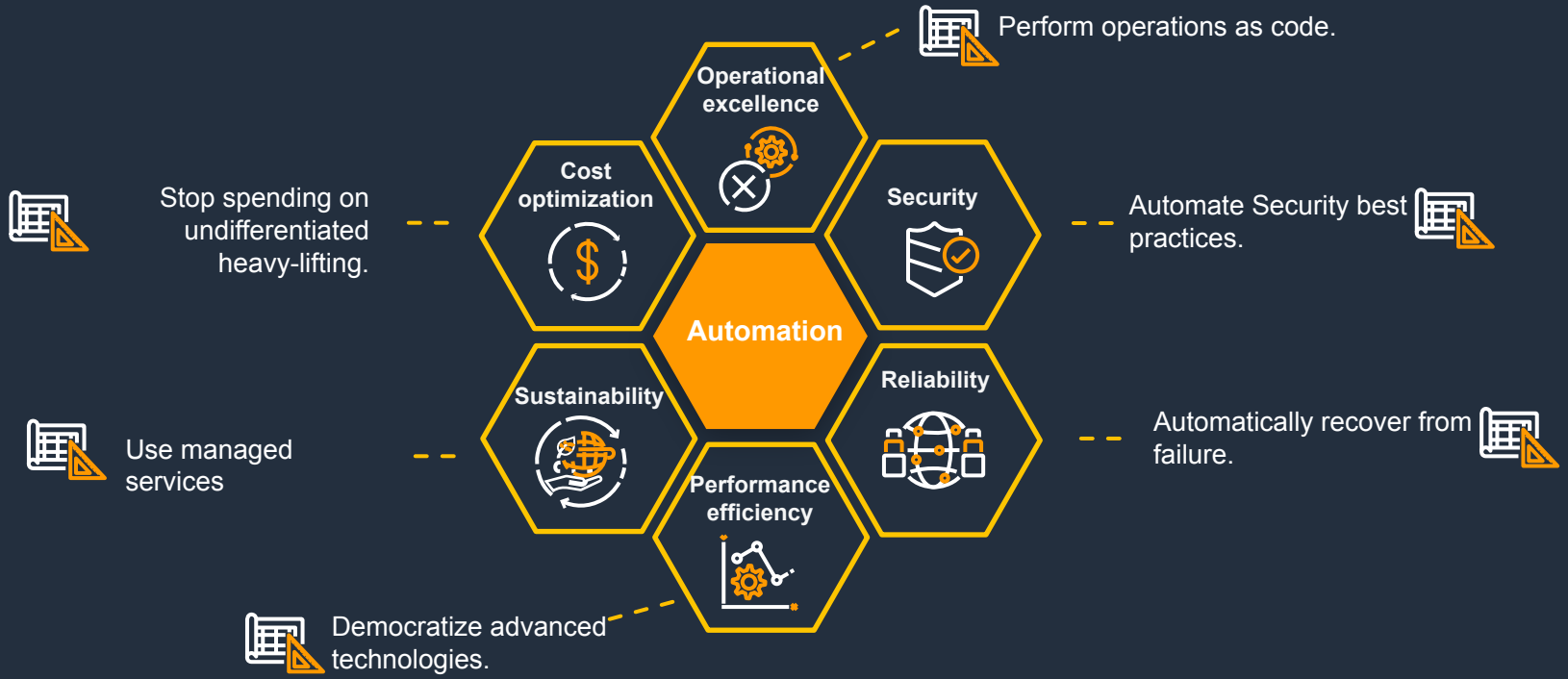
“Good Intentions never works, you need mechanism to make anything happen”

-Jeff Bezos, Amazon Founder

Automation at the core of **AWS Well-Architected**



Automating in **AWS** Cloud

AWS SDK - https://aws.amazon.com/tools/
AWS CloudFormation - https://aws.amazon.com/cloudformation/
AWS CDK - https://aws.amazon.com/cdk/
AWS CLI - https://aws.amazon.com/cli/

https://www.nops.io/

aws

nOps Automation Platform & Automation Scenarios

Satish Bora
GM
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We are serious about skills

aws partner network

Advanced

Technology Partner

aws partner network

Well architected Partner

Certified Cloud Management Tool

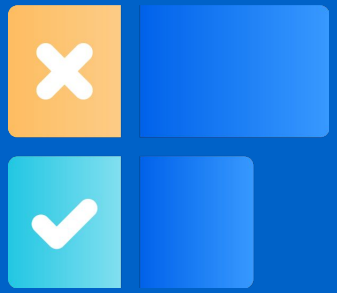
Process over $100's millions of cloud billing.

Trusted by

23andMe

houzz

paystack



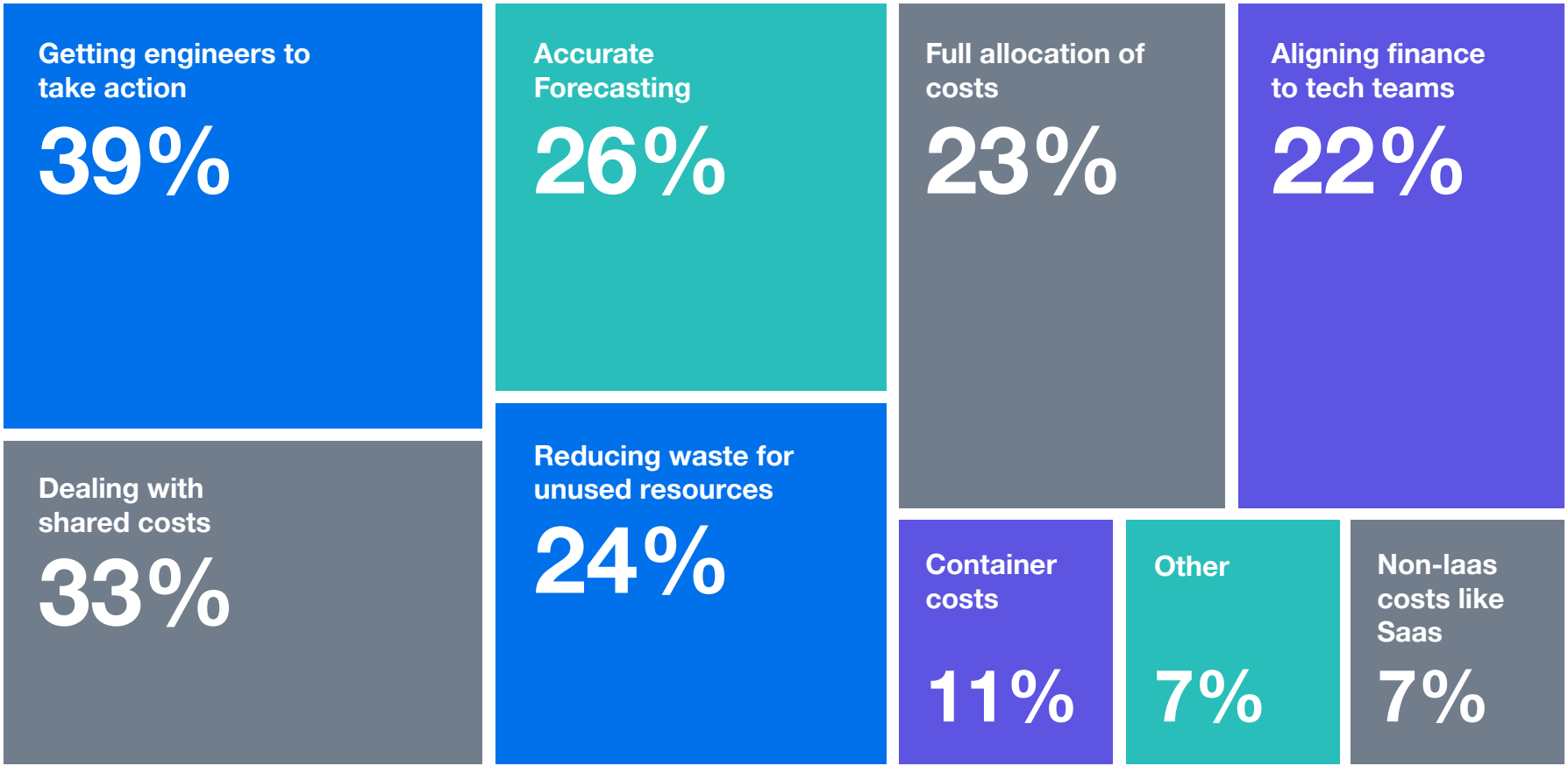
Poll

The Problem with Cloud

For most organizations, Cloud Management is a “rear view mirror” conversation.

Business operators don’t have access to cloud data to make the right decisions.

Expensive overhead costs for engineers manually wrangling cloud data.



2022 State of FinOps Report - FinOps Foundation

Cloud technology used to be an advantage.

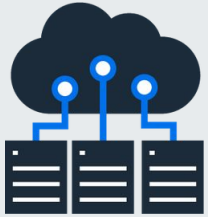
It can become a burden for every business if not managed well.

Easy to Spin Up, Difficult to Manage

Complex and Time Consuming

Expensive & Wasteful

nOps is the Solution

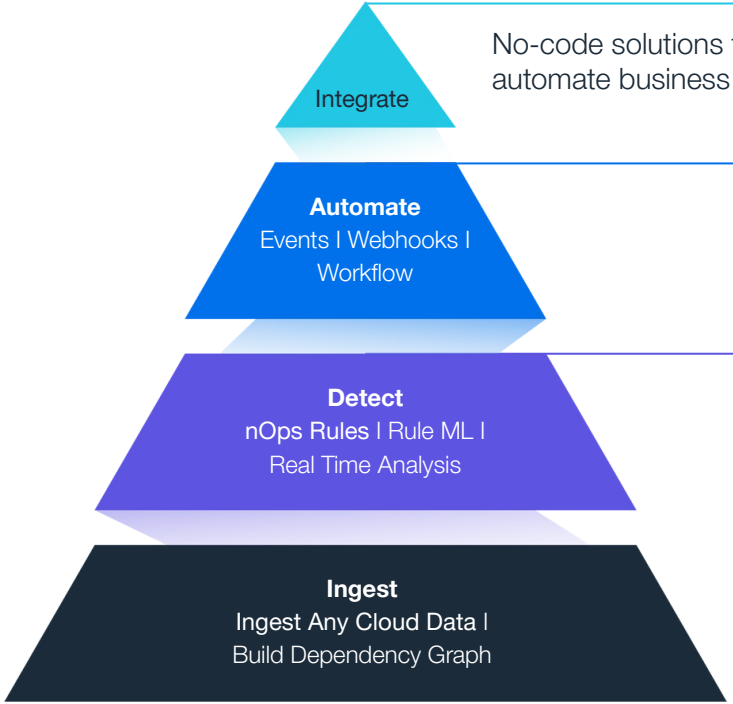


Access the precise data necessary to drive business decisions and automation.

Make cloud management a windshield conversation. Shift left!

Reduce costs through automating your cost control and workload management.

nOps Automation Platform



No-code solutions to automate business processes.

AWS **Lambda**

AWS **EventBridge**

AWS **System Manager**

- Unified Cloud Interface
- Resource Dependency
- Cost Projections
- Cost Estimations

nOps

Ephemeralization

"…the ability of technological advancement to do more and more with less and less until eventually you can do everything with nothing…"

R. Buckminster Fuller

Systems theorist, Architect, Inventor, Futurist

Why Automation?

- Out of the site out of mind
- Too many products and cloud services
- High turnover of people and getting right skilled resource
- Manual systems are prone to errors
- Saves time on repetitive tasks
- Enforces policies for security and cost governance
- Faster response time to critical issues
- Repeatable results
- Getting single version of truth and validation

Why Shift Left?

Automations

- Cost projection via CI-CD integration
- RI Automation
- Tagging and enforcing best practices
- Ticket creation for violations
- Policy checks based on predefined checks
- Trigger notifications for under utilized resources
- Start and stop instances
- Remediate violations
- Right sizing of resources
- Spot automations
- Sustainability scorecard
- Dept scorecard
- Cloud Maturity Index ...

Developer Tools

nOps SDK

Automate your dynamic cost control and workload management.

Unified Cloud Interface

Access to all your cloud data at your fingertips through GraphQL endpoints.

Shift Left Approach

nOps integrates and analyzes early, native cloud data.

Events

Near real-time, programmable events triggers for webhooks using machine learning.

GraphQL

Quick analysis that gives you a window into your cloud data with data graph API.

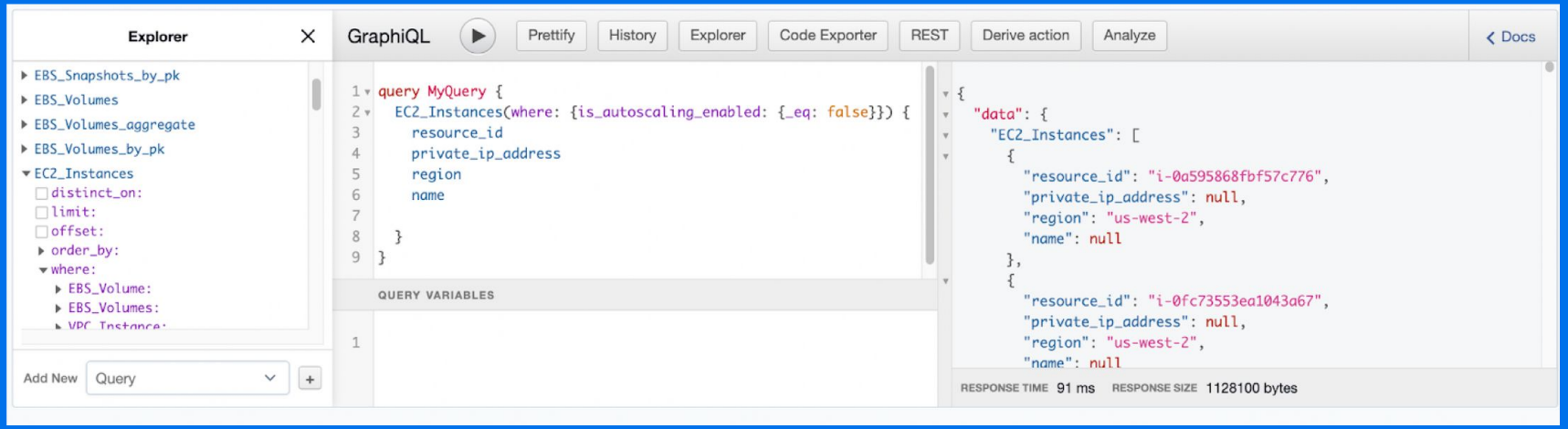
Low/No-Code Solutions

Build integrations on top of the nOps platform.

Unified Cloud Interface

Access to all your cloud data at your fingertips through GraphQL endpoints.

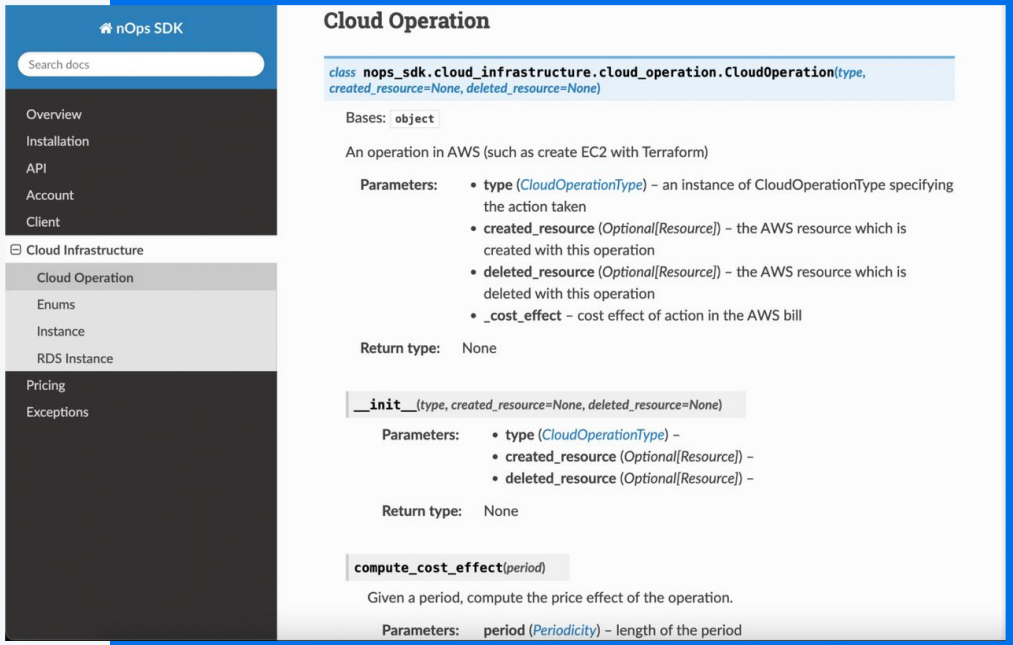
- Explore schema and create policies
- No engineering experience required
- Quickly embed cloud data in your workflow



Software Development Kit (SDK)

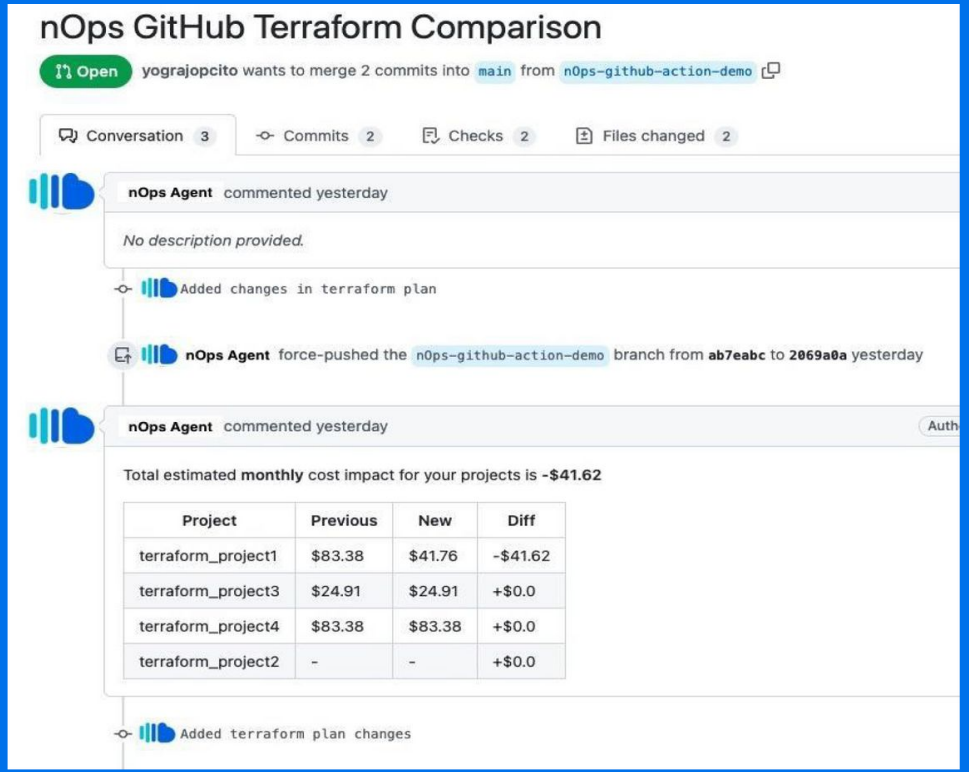
SDK abstracts complexity with its reliable interfaces. It is internally managed and easy to integrate.

- Catalyst for innovation
- Effortless to install
- Automate your dynamic cost control and workload management
- Build custom tools



Shift Left

- Through a one-step integration with GitHub Actions, automates a cost preview for any of your developer's Git Pull Requests.
- Gives early insights for changes to any of your Terraform repositories
- Enables FinOps to implement and ensure budgets proactively – now integrated with and part of the development workflow, this will be early in the process and with minimal staff churn.



Problem Statement

23andMe

Unable to understand the real-time utilization/purchase of RI

There is 12 hours gap in getting report from AWS about the RI utilization so there is no clarity about the current state so, therefore, the organization are unable to get the most cost savings from AWS regarding the RI

Organizations can not take a substantial decision to purchase the RI against their utilization

nOps Solution

nOps

Optimize the real-time RI Utilization I and with event base data when it triggered

A clear view of RI and details include instance size, Coverage, instance count etc.

A clear picture of usage history informs of the graph with the time (every hour) and date stamp

Help to understand quantified usage of Reserved instances by the hour and able to make correct purchase at low cost

nOps - Measurable Benefits

nOps

nOps Setup - Less than 15 minutes

WAFR time reduced from days to 1-2 hours

Cost Saving > 25%

Total Control over Security

Lower operating Cost and Increased Efficiency

Business Growth and Improved CSAT

Ongoing Control and Compliance

Opcito | CONTINUOUS INNOVATION CONTINUOUSLY DELIVERED

Shreyas Damle
Solutions Architect
shreyas.damle@opcito.com
Opcito

Demo of Automation

Opcito @ a Glance

80+ Amazing customers served till date

50+ Years of collective experience of founding team

140+ Brilliant Engineers

Customer Delight

Partnerships & Alliances

kubernetes

aws

Red Hat

Our partner ecosystem helps us create innovative & cutting-edged solutions for businesses to continuously evolve.

Service Lines

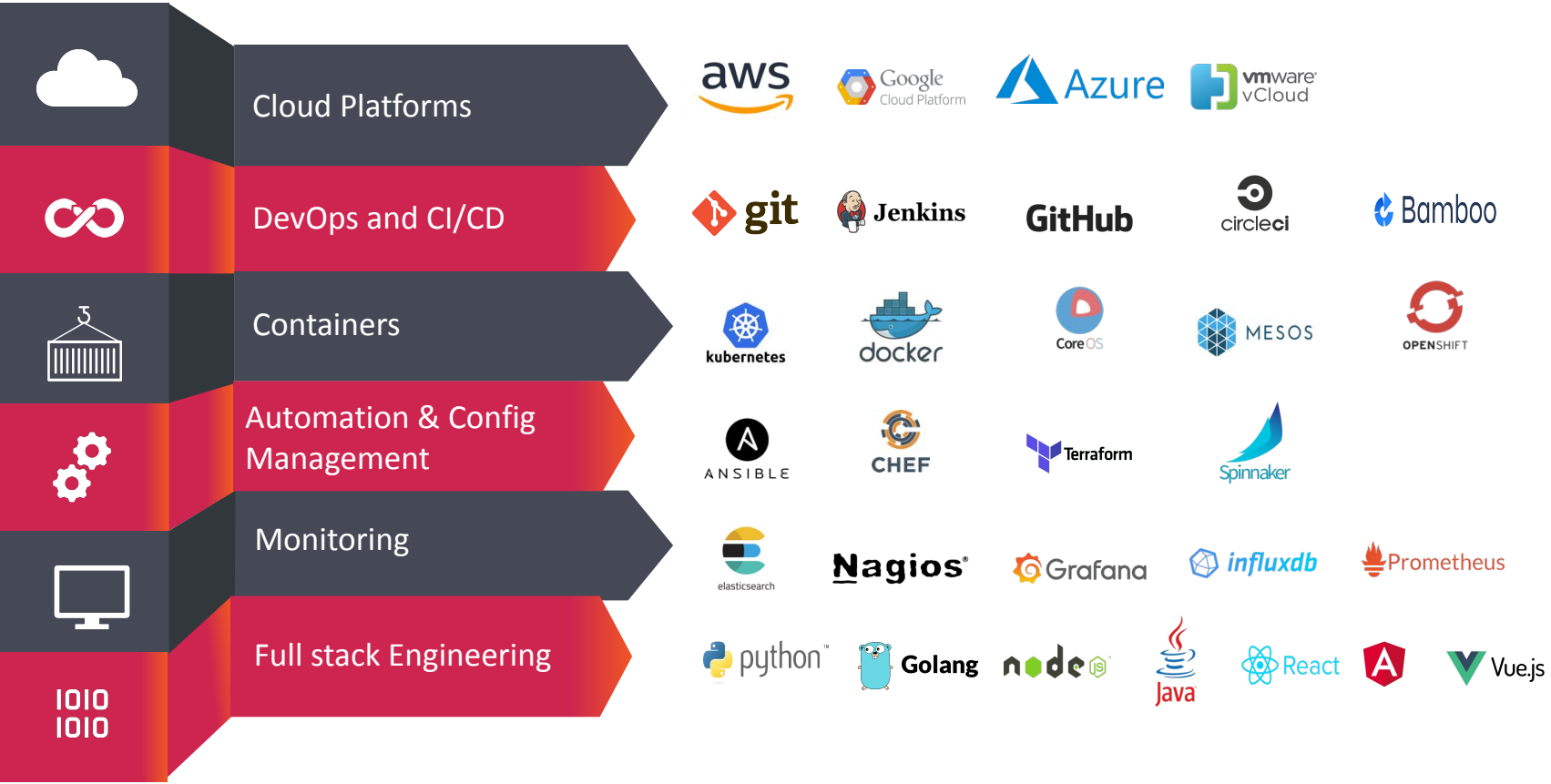
DevOps & SRE

CloudOps & Infra Automation

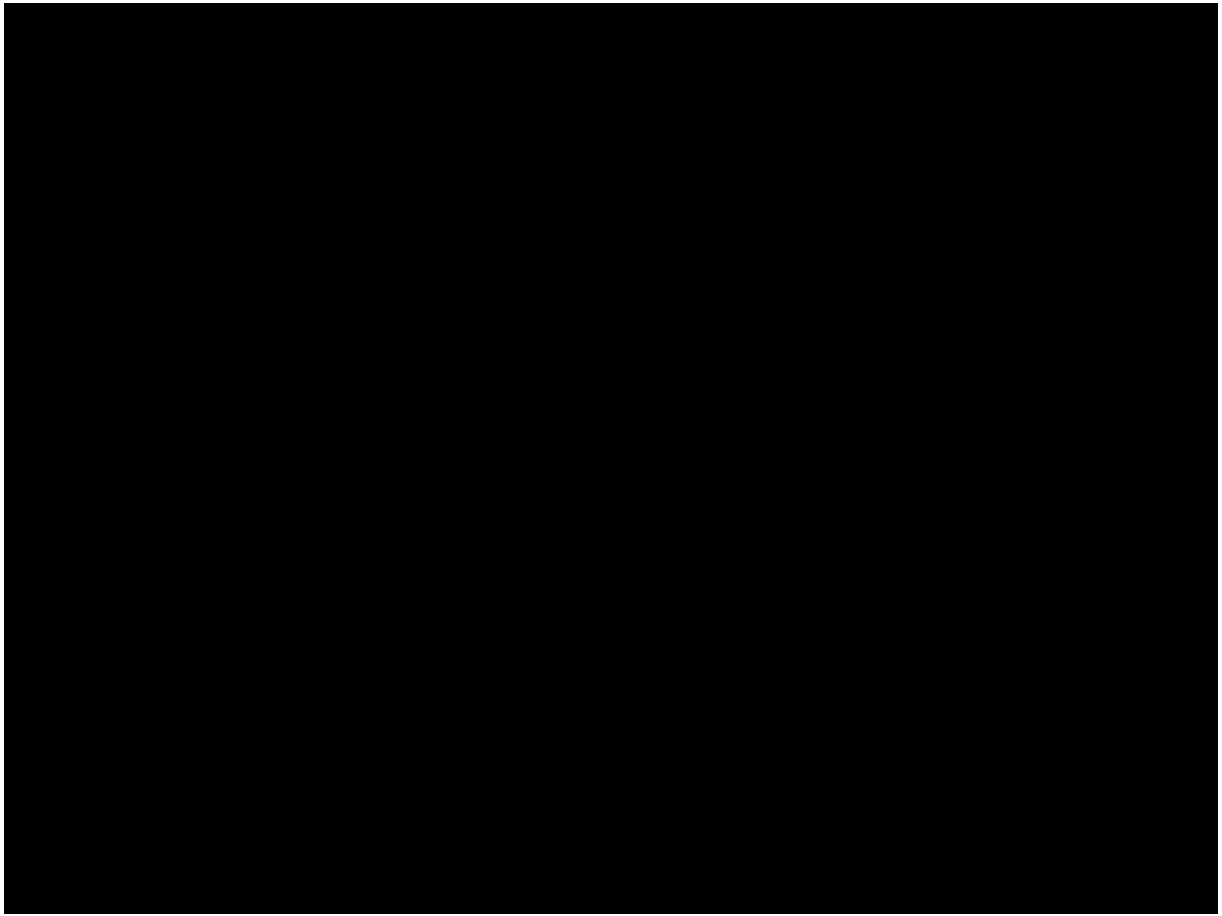
Software Product Engineering

Application Modernization

Strategic Focus Areas & Technical Sweet Spots



DEMO



Q&A