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Sony Pictures Technologies Develops DevOps Solution with Stelligent to Create Always-Releasable Software

The Challenge

In developing the next generation of an important software system to manage entertainment assets, the Digital Media Group (DMG; a unit within Sony Pictures Technologies, Inc.) was challenged with the "last mile" of the software delivery life-cycle. The "last mile" is the process of delivering the software system to users after software development is "complete." In many companies, this last mile is often burdened by manual processes and other constraints that prevent regular delivery of software to users. On previous generations of this system, it took months after development was complete before the software was delivered to users.

In seeking increased agility for its customers, DMG sought a way to click one button to deliver new features and changes—along with infrastructure updates—to users while reducing infrastructure and delivery costs.

AWS services used

- AWS CloudFormation
- AWS OpsWorks
- Virtual Private Cloud (VPC)
- Amazon Elastic Compute Cloud (EC2)
- Amazon Simple Storage Service (S3)
- Amazon Route 53
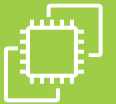- AWS Identity and Access Management (IAM)

The Solution

Working with Stelligent, DMG created a full-featured, automated Cloud Delivery system running on Amazon Web Services' (AWS) infrastructure. The AWS components include the following:

AWS CloudFormation for managing related AWS resources, provisioning them in an orderly and predictable fashion

AWS OpsWorks for managing application stacks

Virtual Private Cloud (VPC) for securely isolating cloud resources

Amazon Elastic Compute Cloud (EC2) for compute instances

Amazon Simple Storage Service (S3) for storage

Amazon Route 53 for scalable and highly available Domain Name Service (DNS)

AWS Identity and Access Management (IAM) for securely controlling access to AWS services and resources for users

The fully automated solution makes use of open-source tools such as Chef, Ruby, Jenkins, and Cucumber along with SaaS solutions from Loggly, New Relic, and Cloudability. The entire infrastructure is committed as code to DMG's version-control repository.

DMG's Executive Director Charles Cole said, "By teaming with Stelligent, we were able to stand up a complete Continuous Delivery (CD) system and AWS infrastructure in much less time." Cole added, "Stelligent brought their experience in Continuous Delivery and AWS and seamlessly meshed with our team to create the CD system and infrastructure. With this fully automated approach, we can be more adaptive and responsive to our customers by releasing new features and changes based on business needs in a matter of minutes rather than a multi-month release process."

The Benefits

This Continuous Delivery solution resulted in several benefits in AWS for DMG:

- More frequent and one-click releases
- Less internal constraints
- Higher levels of security
- Developer focus on value-adding features over running manual processes
- Elasticity, which reduces cost and idle resources

Each of these benefits is described in greater detail below.

By creating a fully automated pipeline in which the complete software system—including the application code, configuration, infrastructure, and data—is built and tested with every change, Cole added "...we can release software to users whenever we choose to do so as there isn't a separate manual release process; releasing is built into the development process. This reduces a multi-month release process into a matter of minutes."

While many larger organizations can be burdened by organizational silos, the Continuous Delivery model helps eliminate the constraints that impede regular software releases. Since the complete software system—including the infrastructure—is defined in code, any authorized team member from development to operations can make changes without the burdensome organizational bureaucracy that hinders many larger companies.

AWS also helps DMG maintain a high level of security through tools such as Virtual Private Cloud (VPC), MultiFactor Authentication (MFA), IAM Roles, and Server-Side Encryption. By coupling AWS with security best practices including encryption, DMG is able to maintain secure operations even extending to its own data center.

When developers can focus on adding new features rather than spending months trying to release the software, DMG gets happier customers, happier developers, and a significant cost reduction as releasing becomes a "non-event" that happens with the click a button.

By only paying for usage, DMG can automatically scale its infrastructure up and down based on user demand. This way they only pay for what they're using rather than paying for unutilized hardware.

About Sony Pictures Technologies

The Digital Media Group (DMG) is a unit of Sony Pictures Technologies, which is part of Sony Pictures Entertainment, Inc. (SPE). SPE's global operations encompass motion picture production, acquisition, and distribution; television production, acquisition, and distribution; television networks; digital content creation and distribution; operation of studio facilities; and development of new entertainment products, services, and technologies.

ABOUT MPHASIS STELLIGENT

Mphasis Stelligent, a professional services and consulting firm with deep expertise in DevOps automation services on Amazon Web Services (AWS), enables security-conscious enterprises to focus on developing software users love by leveraging automation on AWS. Our goal is to work closely with customers to develop fundamentally secure infrastructure automation code, deployment pipelines, and feedback mechanisms for faster, more consistent software and infrastructure deployments. By embedding with our customer's engineering teams, we empower customers through education and knowledge transfer of our expertise while developing the automation to make them self-sufficient on AWS. As a Premier AWS Consulting Partner, AWS Public Sector Partner, and AWS DevOps and Financial Services Competency holder, we use our demonstrated expertise to help customers benefit from continuous AWS innovation.

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