LG U⁺ | CUSTOMER CASE STUDY
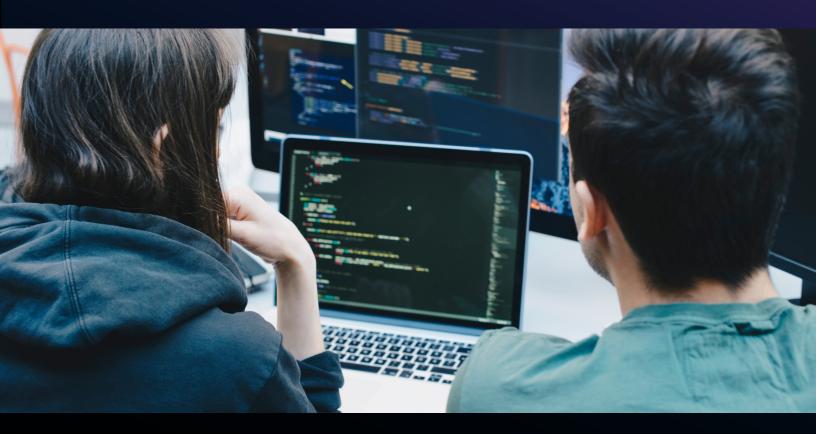
Enhanced infrastructure and a new developer experience

South Korea's major telecommunication company streamlines digital infrastructure development with HashiCorp Terraform to make waves in the global content and 5G services market.

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About LG Uplus

LG Uplus is LG Group's representative telecommunications and media company and is committed to providing services and content that adds new value to the lives of their customers.

They have earned customers' trust through various services, including ranking #1 in customer satisfaction for 'U+ Children's Country', being the first IPTV service provider in South Korea to partner with Netflix, and maintaining exclusive cooperation with Disney.

LG Uplus FAST FACTS ────────────────────────────

17,000 + mobile subscribers

Reduced time and effort to stand up critical infrastructure

Automated security and compliance thresholds to optimize stability and resilience

Built cloud management portal which enabled infrastructure provisioning in 1 hour

Enabled developers to focus on solving business problems rather than manual processes

Standardized service architecture and CICD workflow

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Creating New Developer Experiences

For many consumers, LG is synonymous with high-quality hardware. Televisions, household appliances, and other products bearing the company's name garner awards and loyalty worldwide.

But LG is also a global leader in telecommunications and media, leading the charge in delivering 5G content and next-generation connectivity for global audiences through its LG Uplus subsidiary. Pushing the communications envelope means pushing the limits of what's possible with the underlying infrastructure that drives it.

As the company continues to migrate to the cloud with AWS and GCP environments to support an array of new and more diversified services, the scale of its infrastructure continues to increase exponentially as well. Development teams using the company's CSP console and the click-based manual business process found building and managing expansive infrastructure environments with common features and functionality too time-consuming and repetitive, making it difficult to fully leverage the cloud's full potential and surfacing an immediate need to automate the infrastructure provision process.

To address these issues, LG Uplus sought an infrastructure-as-code (IaC) solution that could dramatically enhance its team's speed, efficiency, and compliance with corporate data standards — without adding overhead or excessive costs.

Challenges

Streamlining delivery and management of new services

Mitigating stability and performance risks common to rapid scale

Minimizing the click-based and repetitive provisioning workflow for developers

One size fits all (their needs)

LG Uplus adopted HashiCorp Terraform to enact a modular approach to infrastructure deployment. Terraform's native support for multi-cloud environments and effortless infrastructure rebuilding through reusable code modules makes infrastructure version management and cloud engineering a breeze.

The solution's easy-to-learn reusable code helps the company minimize changes to the existing standard operation model. Now, rather than modifying code each time a new infrastructure element or technology is added, LG Uplus developers have the autonomy to build essential cloud infrastructures rapidly and bring new products and digital experiences to market faster with code templates and custom workflows in its GitHub repository and automatically deploy infrastructure as code across various nodes and services in AWS and GCP.

Not only does the solution alleviate the time-consuming manual processes that plague many development teams trying to scale quickly, but it also enables LG Uplus to enhance security and compliance with corporate standards for greater performance, reliability, and control.

LG Uplus developers can quickly and easily modify individual infrastructure configurations to the specifications of a particular market or region even when the frontend and backend are called separately, dramatically reducing the amount of time and effort required to build the foundation of geographically-specific services.

With Terraform, they can respond immediately to urgent requests while maintaining a consistent infrastructure code and help to ensure the operational stability of the infrastructure as a whole — a necessary and welcome part of delivering the latest K-POP, Disney+, Netflix, or other content and services to millions of loyal customers around the world.

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Outcomes

Reduced time and effort to stand up critical infrastructure

Automated security and compliance thresholds to optimize stability and resilience

Built the CMP (cloud management portal) which enables infrastructure provisioning in 1 hour

Standardized service architecture and CICD workflow across LG Uplus with governance and security in place

Solution

LG Uplus uses HashiCorp Terraform to automate and rapidly deploy infrastructure as code as the foundation for the multi cloud infrastructure provisioning process.

LG Uplus Partner

JaeJun Kim, a product manager for DevOps solutions like Terraform and Github, is responsible for establishing governance teams and environments required to adopt cloud and DevOps. Before joining LG Uplus, he was in charge of software development related to commerce and fintech.

JaeJun Kim,
Service Platform
BuildGroup, Cloud
Technology Lab,
Cloud CoE, LG Uplus

Technology Stack

- Infrastructure: AWS, GCP
- Version control: Github
- Provisioning: HashiCorp Terraform
- Orchestrator: HashiCorp Nomad
- Secret Management: HashiCorp Vault