Kyndryl Cloud-Native Services for Application Modernization with Microservices using Google Cloud

Customer challenges

Inflexible, monolithic software applications are not meeting the dynamic requirements for faster delivery of new services. The addition of new business functions and upgrades to these monolithic applications are often limited to a few releases per year. To counteract that, today's developers are upgrading applications using a microservices-based architecture that supports a continuous pipeline of smaller, individual software services that can be tailored to support business requirements.

Solution highlights

Kyndryl Cloud-native services for application modernization with Google Cloud is designed to modernize applications allowing for integration and portability using APIs. The solution is security-rich by design, making it easier to scale and meet availability and performance service level agreements (SLAs). This Kyndryl cloud-native solution helps developers with an end-to-end application modernization solution from discovery through to managed services. Kyndryl uses an element-based approach for application modernization helping customer in all aspects of their journey towards modern applications.

We provide alignment to Google best practices and cloud-native services and our modernization solution on Google Cloud has adopted the Google Security Foundation Framework, Google Cloud Application Modernization Program (CAMP), consumes Google cloud-native services and follows SRE principles. In addition, we bring our Kyndryl intellectual property and assets to help provide an agile, efficient, and predictable life cycle of services for modernizing legacy infrastructure and applications.

Google Cloud
Partner

Our cloud-native solution for modernized applications typically operates on cloud-native services, like GKE, Compute Engine, Cloud Run or App Engine which allow applications to scale seamlessly. Modernized applications are deployed using Cloud Build, Cloud Deploy, Artefact Repository, and Cloud Source Repository for continuous deployment and integration with every CodeCommit to enable agility. Infrastructure and application can be easy-to-monitor and manage, using Alerting, Uptime Check, System Log, Audit Log, and others, which provide a single pane of glass for management. Both application and infrastructure can be secured via the out-of-the-box cloud-native services, such as the Security Command Center, Identity Aware Proxy, Key Manager, Secret Manager, Cloud Armor and several other services.

The solution is designed to be scalable from simple containerization of individual modules to more complex application modernization projects. Regardless of size, we use the same standardized, repeatable methodologies, IP, automation and assets to help enterprises become more agile and sustainable through modernized applic-ations and infrastructure.

Customer benefits

In partnership with Google, Kyndryl offers a defined cloud adoption framework to speed your cloud adoption journey. With Kyndryl cloud-native services for application modernization with microservices using Google Cloud, you can create a microservices architecture and containerize and automate your existing applications. GKE unifies development and production, speeds deployment and simplifies the management and scaling of containerized applications. GKE also enhances application reliability and security. Other benefits include:

Almost instantaneous scalability. Using modern architecture, we don't have to scale the whole application—only to scale the service that's in high demand.

Deliver features faster. Decoupling the services allows us to update a microservices behavior without having to rewrite a lot of code.

Improve maintainability and automation. Because each individual microservice acts as an application in itself, this structure helps us with maintainability.

Improve reliability and security. With microservices-based architecture on Google Cloud, security and resiliency are designed to be built-in.

Optimize resources with pay-as-you-go to help improve TCO.

Agile application development and deployment

Unlike monolithic applications, containerized modern applications can be deployed quickly. This Kyndryl solution helps the development and deployment processes more agile. Using a microservices architecture, Google Kubernetes Engine, and Kyndryl assets, various teams can work in parallel with agility to accelerate application deployments. This simplifies and speed deployment and management in your continuous integration and delivery (CI/CD) pipeline.

Kyndryl offers a well-defined methodology for application modernization using the Google Cloud Application Modernization Program (CAMP) model and our end-to-end life-cycle services, can help you create an environment to better support business demands. This helps you efficiently orchestrate the compute, network, and storage resources needed to run multiple containers and large workloads—with little-to-no downtime.

Implementation, migration, and accelerators

Kyndryl unique IP for automation assets and lifecycle services framework, together with Google Cloud and the GKE solution, deliver a high degree of automation. In addition to automation for microservices and containerization, these automation features also enable significant consistency and standardization for discovery, implementation, and migration activities.

Kyndryl application modernization solution on Google Cloud uses Google Cloud Best Practices, such as Google Cloud Application Modernization Program (CAMP), and Google Security Foundation Framework. This solution also consumes Google cloud-native services and follows SRE principles.

Kyndryl has global delivery centers with a vast pool of certified Google cloud engineering and application modernization skills and a dedicated Google Cloud Centre of Excellence for building IP assets and automation on various use cases.

Why Kyndryl?

Kyndryl has deep expertise in designing, running, and managing the most modern, efficient, and reliable technology infrastructure that the world depends on every day. We are deeply committed to advancing the critical infrastructure that powers human progress. We're building on our foundation of excellence by creating systems in new ways: bringing in the right partners, investing in our business, and working side-by-side with our customers to unlock potential.

Next steps

Explore the value of your business and technology potential with a Kyndryl consultation. Get a 30-minute, no-cost strategy session with a Kyndryl expert. Or visit kyndryl.com

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