

Legacy Product Modernization using Google Remote Procedure Call Framework for US based Tier-1 Global Bank

Challenges

- Limited scalability, customizability, and configurability with dependency on product vendor for periodic enhancements and upgrades
- The absence of container support in Visibroker prevented the client from considering GI Apps for their private cloud migration
- There were very few resources available in the open market with expertise in legacy CORBA technologies.
- The limited online resources provided by Visibroker impacted developer productivity

Solution

Virtusa conducted a thorough analysis to evaluate potential solutions, including Google gRPC and Java RMI, to replace the legacy Visibroker system. The client ultimately chose the gRPC framework, as it met most of the features they required.

- Created a gRPC Microservices platform by replacing Visibroker CORBA product.
- Created a registry server for registering GI services.
- Created a discovery service that enables client applications to locate the appropriate GI services for different usage scenarios, such as full-mode operation and lookback operation.
- Containerized system to enable migration to the client's private cloud platform.
- Utilized flexible API/schema evolution design to provide a secure platform for controlling API access.

Value delivered

The new gRPC-based system provided support for multiple languages and platforms while being optimized to handle both current and future volume requirements. Other key benefits include:

- Managed stringent load and TPS SLA of serving 700 TPS using 65 GI instances per DC
- Reduced efforts on maintenance and licensing costs. Saved \$250K in support cost per year
- The solution served as an enabler for containerizing and migrating GI applications to the cloud, providing greater scalability and flexibility for the client.
- Community-driven gRPC framework and platform optimizations, ensuring ongoing enhancements and updates.
- Protobuf based platform independent interface definition and binary message format optimized for serialization/deserialization