



# ENTERPRISE SCALABILITY

Global & Automated Data Delivery

This *Executive Brief* presents a global deployment model for the automated delivery of controlled and accurate synthetic data to software developers and testers using GenRocket's self-service platform.

## INTRODUCTION

The GenRocket platform can scale *Synthetic Test Data Automation* across a global enterprise with hundreds to thousands of developers and testers needing test data for hundreds of applications that rely on complex and interconnected data environments.

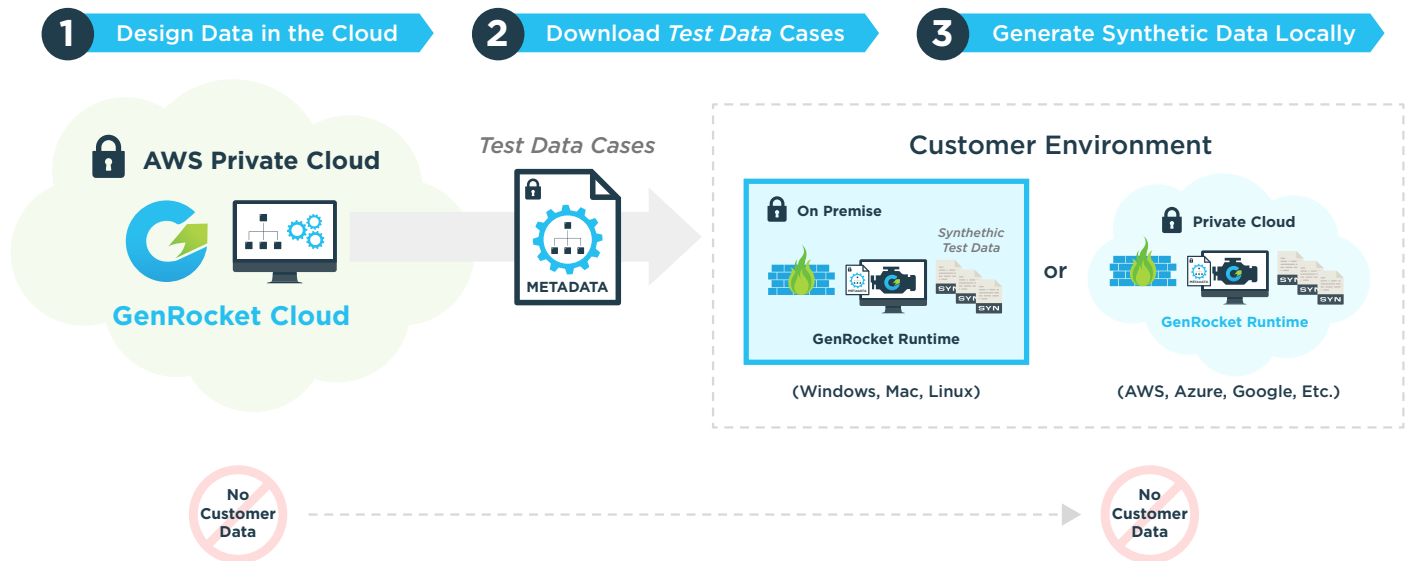


# ARCHITECTURE

GenRocket is the industry's most advanced synthetic data platform. It includes over 700 intelligent data *Generators*, an extensive library of almost 100 output formatting *Receivers*, and a wide variety of test data project modeling methods for simulating any structured or unstructured data environment.

The GenRocket solution is implemented in a secure *hybrid cloud computing environment* that separates the process of designing synthetic test data from *generating* synthetic test data. Test data modeling and design takes place in the cloud, while test data deployment and generation take place on-premise and/or in the customer's secure, private cloud environment.

The on-premise / private cloud technology for data generation includes a multi-threaded, parallel processing architecture that maximizes speed, simplicity, and scalability.



# ARCHITECTURE HIGHLIGHTS

GenRocket streamlines the process of data modeling and synthetic data design with architectural components that allow complete control over data variety, volume, and output formatting, while preserving referential integrity. Here's how it works.

## Test Data Projects

- Import the metadata for any data environment and model it as a *Test Data Project*
- *Projects* provide a template for generating any volume, variety, and format of data
- *Projects* are organized, categorized, synchronized, and version-controlled for reusability

## Test Data Cases

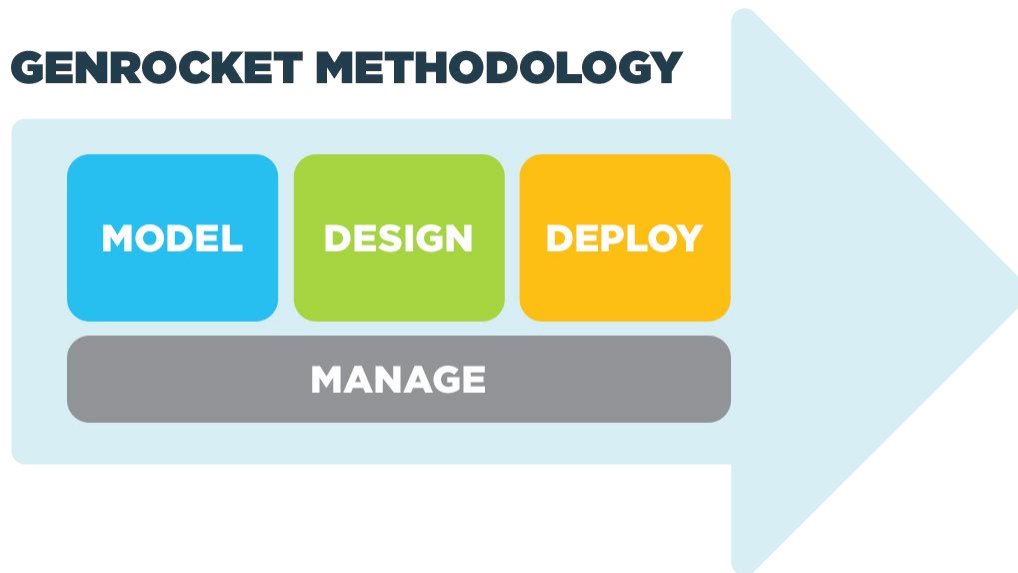
- *Projects* contain *Test Data Cases (G-Cases)* to generate limitless volumes of data
- *G-Cases* can generate data for any category of functional or non-functional testing
- Developer & Tester teams access *G-Cases* through a centralized portal called *G-Portal*
- *G-Cases* are available to users based on their pre-configured permission level
- Once downloaded, *G-Cases* are integrated into test cases and executed in real-time
- Each *G-Case* generates a fresh copy of data that can be purged upon test completion

## GenRocket Runtime Engine

- The *Runtime Engine* can be launched by numerous automated methods
- Test data is delivered on-demand to any automation framework or CI/CD pipeline
- The *Runtime Engine* can be deployed on individual machines, centrally located test automation servers, via a Maven Repository, and via Containers

# THE GENROCKET METHODOLOGY

The *GenRocket Methodology* was created to provide a fast, repeatable, and predictable process for scaling the use of *Synthetic Test Data Automation* across organizations of any size.



## MODEL

*Test Data Projects* to recreate the structure and referential integrity of your data

## DESIGN

*Test Data Cases (G-Cases)* to generate the patterns and permutations of data you need

## DEPLOY

*G-Cases* into any software development environment or automated testing environment

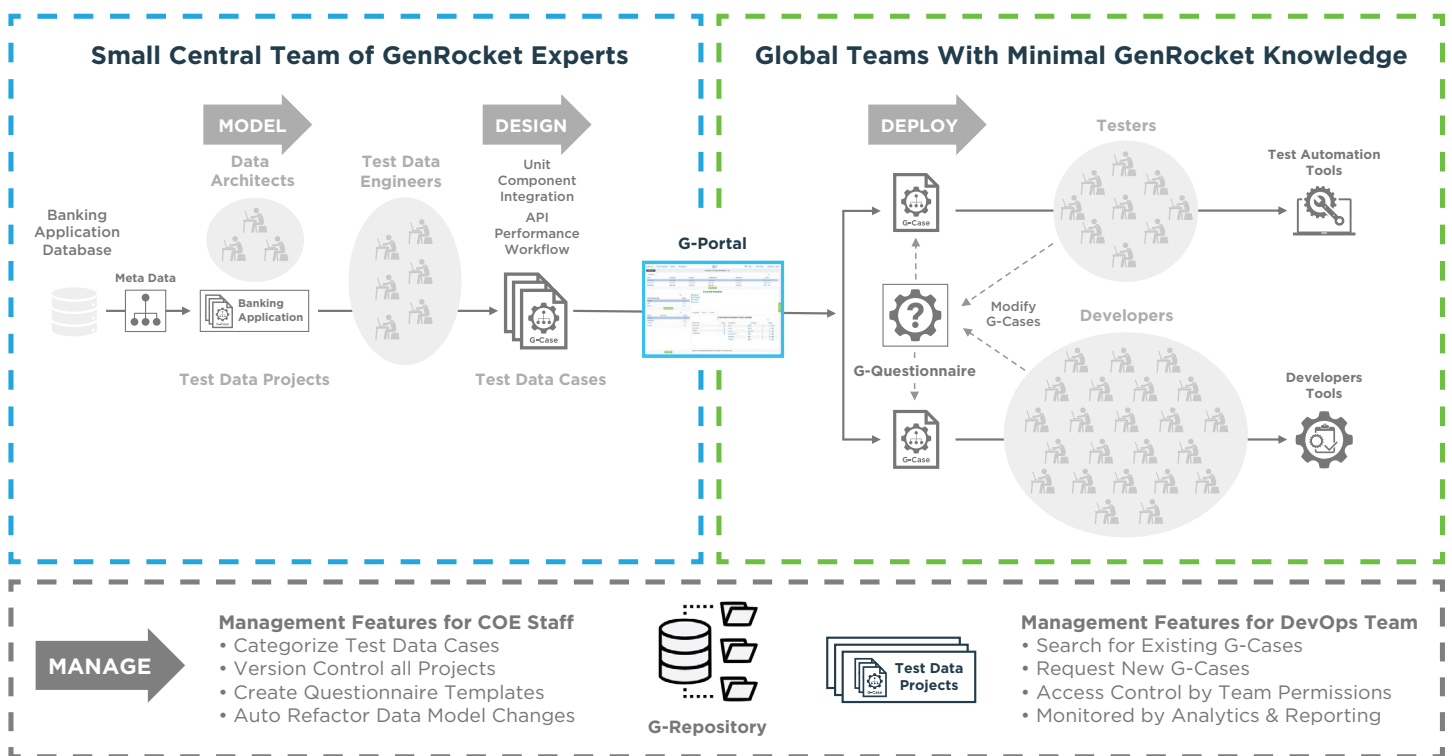
## MANAGE

The total test data lifecycle as you share, revise, repurpose, and reuse *G-Cases*

# DESIGNED FOR DISTRIBUTED SELF SERVICE

The following diagram illustrates the GenRocket workflow for deploying Synthetic Test Data Automation for any application or database. The workflow starts with a small, well-trained group of test data engineers. This can be an informal and elite team or a more formalized Synthetic Test Data Center of Excellence (COE).

The COE test data engineers model and design synthetic data for use in automated testing by distributed teams of developers and testers who only need to have minimal knowledge of the GenRocket platform. They simply need to identify a matching G-Case for their test case, occasionally modifying the G-Cases as needed, and executed as part of an automated test procedure.



This deployment model is a blueprint for enterprise scalability. The approach leverages a small, centralized resource for modeling and designing test data to support large, distributed teams of developers and testers anywhere in the world. It's an efficient model for rapid, broad-scale deployment and adoption of synthetic test data automation. It's a unique approach to automated data delivery that improves the developer experience and accelerates test cycle time as it maximizes test coverage and quality.

For more information, please visit: [www.genrocket.com/enterprise-scalability/](http://www.genrocket.com/enterprise-scalability/)