Company and Technology Overview

Banking & Financial Services
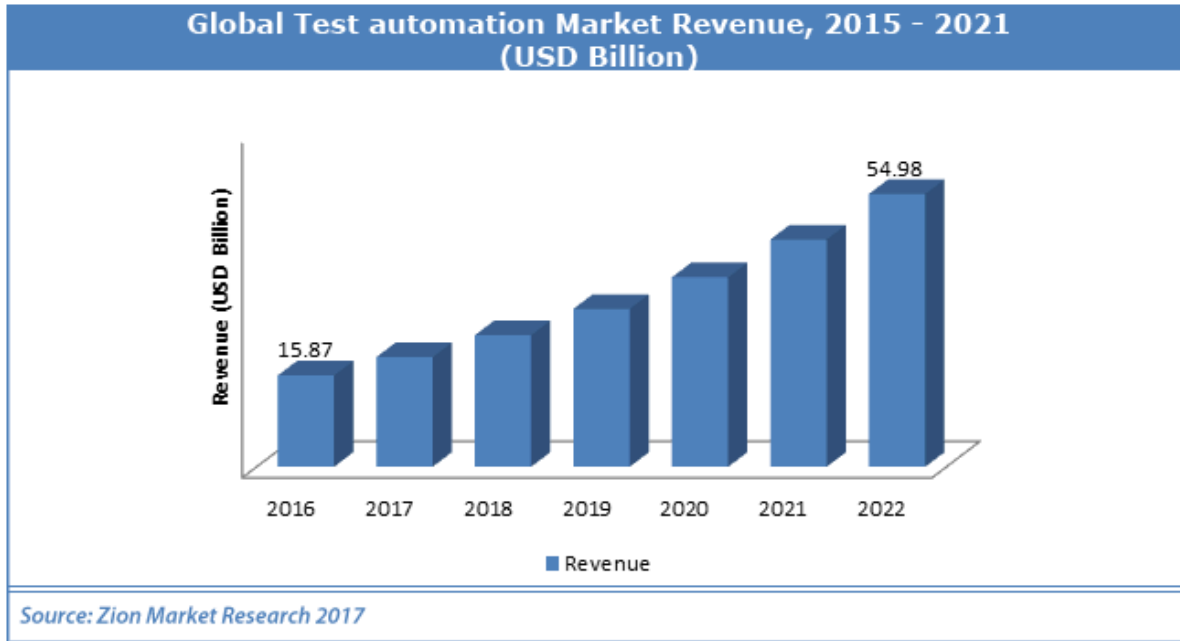
May 2020

Proprietary and Confidential

![GenRocket logo]

Test Data is an Industry-Wide Problem

Testing is rapidly becoming Automated…

Global Test automation Market Revenue, 2015 - 2021 (USD Billion)

15.87 (2016) ... 54.98 (2022)

Source: Zion Market Research 2017

But **Test Data isn't…**

- **33%** of test case needs met "as is" by TDM production data – global financial services firm

- **69%** use spreadsheets to manually generate new test data (2019-20 World Quality Report)

- **59%** create data manually with every test run (2019-20 World Quality Report)

SLOW **POOR QUALITY** **MANUAL**

Test Data Provisioning Evolution

Test Data Management

Test Data Management

- Copy production database
- Mask sensitive information
- Subset volumes of test data
- Centralized provisioning model

Test Data Evolution

Test Data Automation

Test Data Automation

- Quickly setup a test data project
- Generate test data on demand
- Query production data on demand
- Self Service test data provisioning

GenRocket Test Data Automation

- Fast, automated, industry leading data quality, lower cost

- 9+ years of development, refinement, customer experience

- Customers across the world in 10 different vertical markets

  - 60% of customers have revenue > $1 Billion

  - 99.6% license retention rate across customer base

- *Only* Patented Test Data Platform (2017)

  # US 20140143525 A1 for Systems and Methods for Data Generation

Component Based Architecture

GenRocket Term	Think of it like…	Example
Domain	A person, place or thing – Often equivalent to a database table	A User Domain
Attribute	The characteristics of the Domain – the columns in the database	Name, Phone, SSN, DOB, Customer#
259 Generator	Generates data or queries production data for the Attribute	NameGen, PhoneNumberGen, SSNGen, DateGen, QueryGen Generators
64 Receiver	Receives the data from the Generator and morphs it into a usable format	XML, JSON, SQL, DB2, JDBC, VSAM, CSV, NACHA, BAI2 etc.
Scenario	Instruction set that tells the GenRocket engine how much data to generate	Generates data into a typical test case in about 100 milliseconds

BFS Use Cases

Payment Data Feeds

Accurately simulate millions of rows of nested payment feed transactions for a numerous proprietary financial services data feeds

Loan Origination

Simulate up to 5,000 new, valid loans with over 6,000 data permutations & combinations while testing 10 different API's

Credit Cards

Generate over 30,200 permutations & combinations of data to fully test a new credit card line increase platform

Soak Testing

Generate 22 billion rows of data for a credit card validation system

SWIFT & ISO 20022 Messages

Accurately generate nested Swift and ISO 20022 message formats.

ETL / Data Lake

Accurately generate huge variety of data combinations and formats to fully test a data lake. NoSQL data support for large data lakes

Salesforce Integration

Direct integration with standard & custom Salesforce Objects and related fields. Maintains Master-Detail relationships. Can directly insert data into a Salesforce instance or sandbox.

AI / Money Laundering

Simulate money laundering transactions to "teach" a new AI system to recognize money laundering behaviour

Other Use Cases

- FIX Messages
- PDF forms
- NACHA
- BAI2
- Blockchain Nexo

The GenRocket Ecosystem

Virtual Private Cloud

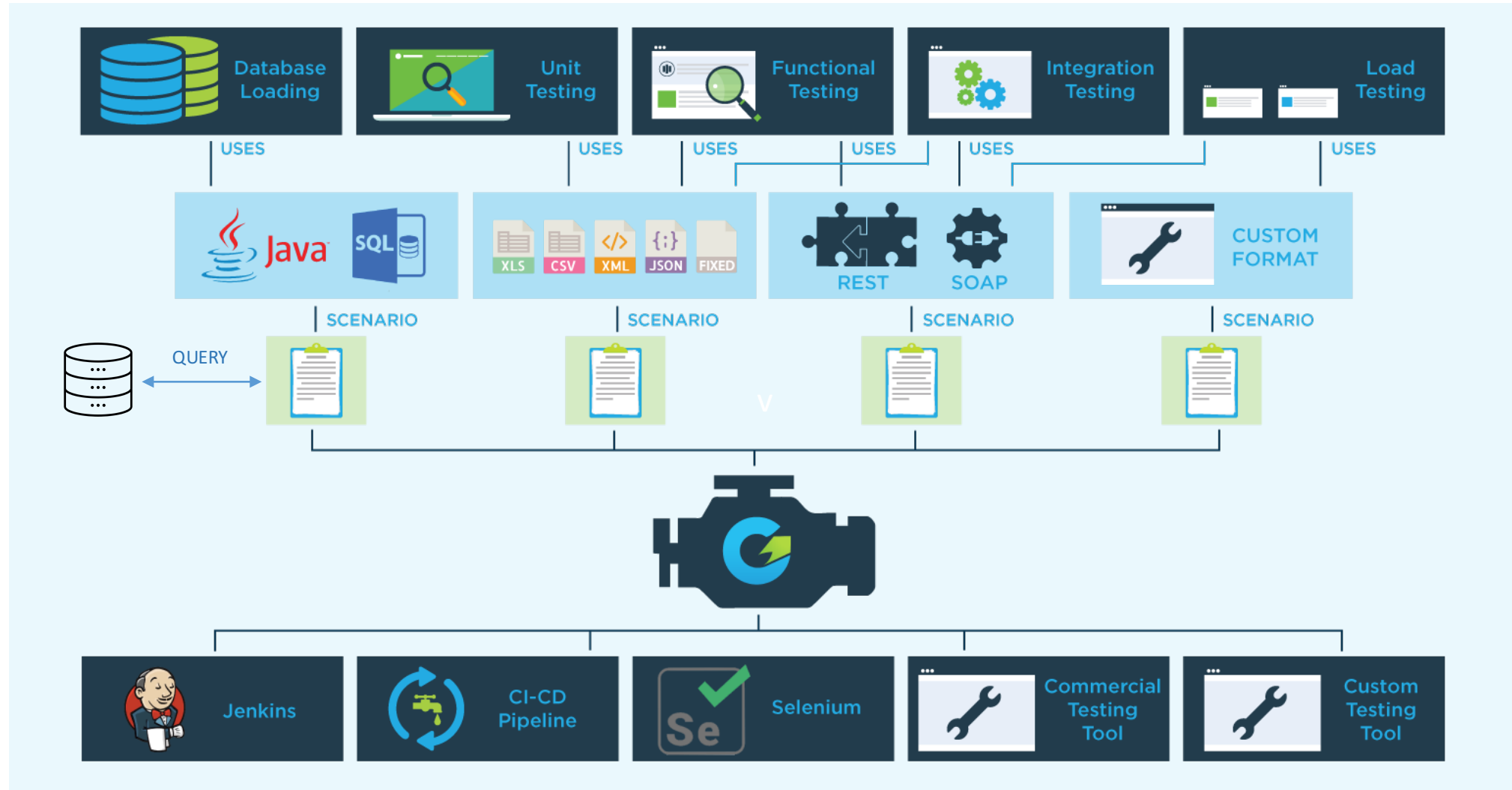
3. Your Corporate
Firewall (HTTPS)
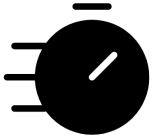
4. Local Machine +
GenRocket Runtime

RANDOM
DATA
749-49-0182
797-59-7445
135-93-8060
214-82-8447

5. Test Data

On Premise

Generate Test Data for any Type of Test in any Format

Key Benefits

Speed

Test data for functional tests as fast as 100 milliseconds. Millions / billions of rows of test data in minutes.

Security

Synthetic data is 100% secure. GDPR, HIPAA compliant. No PII identification needed. No data masking needed.

Data Quality

Industry leading accuracy, predictability and control with referential integrity. Can query and blend production data values like member ID's.

Versatility

Component based architecture allows complete versatility for the most complex requirements of large healthcare organizations.

Self Service

Powerful self service platform with many automations. Testers can quickly create an unlimited range of test data cases and scenarios. No waiting for data.

Cost / ROI

Customers can usually get started for under $15,000. ROI usually calculated in weeks or less than six months.

Solution Architecture

Cloud

Management

- Test Data Projects
- Security / Permissions
- Reporting / Analytics

Data Model Setup

- Extract Table Schema
- DDL
- X12 EDI XSD
- Setup Wizards

Self Service
Test Data Design

- Test Data Scenarios
- Test Data Cases
- Test Data Rules
- Test Data Queries
- Test Data Stories

On Premise

GenRocket Runtime

Tester

- Execute Scenarios
- Manage Scenarios and Test Data Cases
- Runs on Linux, Mac and Windows

Multi-User Server

- Manages high volume of test data requests
- API dynamically creates and delivers test data
- Record, playback, messaging and logging

259 Generators

- Permutations
- Edge Case
- Percentages
- SSN, Credit cards, Tax ID
- Dates
- Name, address, phone, email
- Query from database or file

64 Receivers

- Any SQL DB – e.g. Oracle, DB2
- Any NoSQL DB – e.g. MongoDB
- XML, JSON (and nested)
- CSV, Excel, VSAM
- JDBC, SOAP, REST
- NACHA, Nexo, Parquet, Avro
- Complex data feeds
- Salesforce
- X12 EDI 837, 835, 274, etc.
- HL7

Test Automation Integration

- Any testing tool / framework
- Any type of test
- Jenkins, Selenium, Cucumber
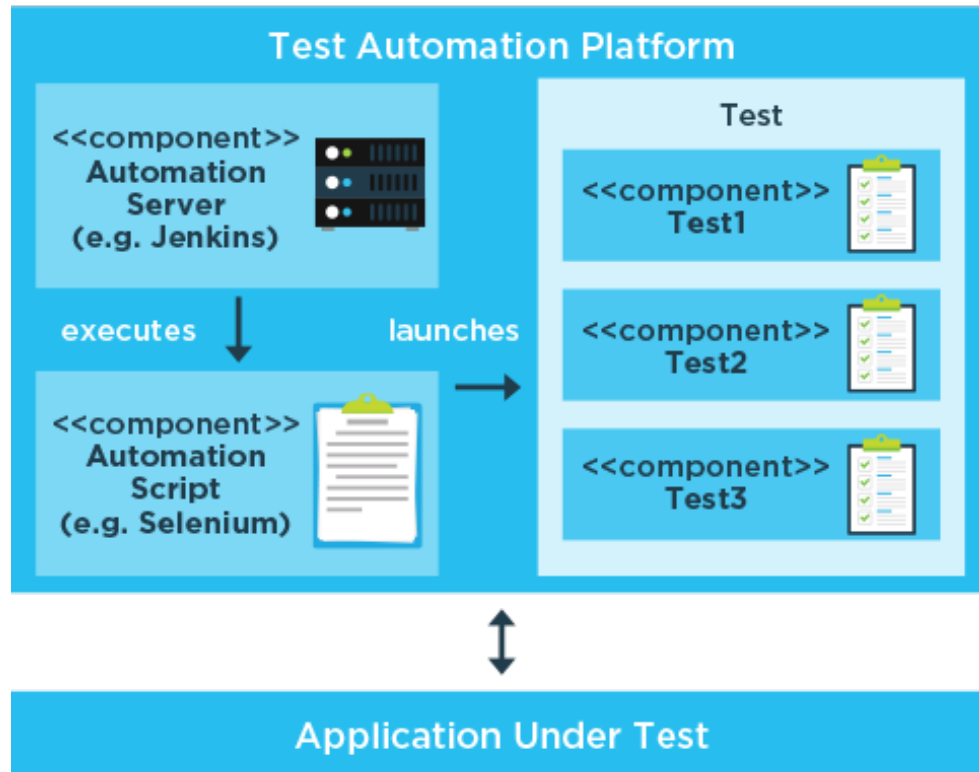- JMeter, Sauce Labs, pCloudy
- Functionize, SmartBear, UFT, etc.

API & Data Engines

- API for dynamic data
- REST & Socket Engines
- Partition Engine
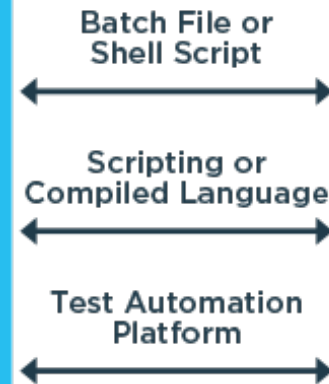- Data Migration Engine
- Refactoring Engine

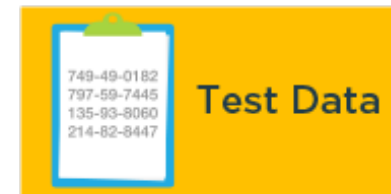# Test Automation and CI/CD Pipeline Integration

① AUTOMATE

② INTEGRATE PLATFORMS

③ GENERATE TEST DATA

GenRocket

Test Automation Platform

<<component>> **Automation Server (e.g. Jenkins)**

executes ↓

launches

<<component>> **Automation Script (e.g. Selenium)**

Test

<<component>> **Test1**

<<component>> **Test2**

<<component>> **Test3**

Batch File or Shell Script

Scripting or Compiled Language

Test Automation Platform

Test Data Generation Platform

<<component>> **GenRocket Engine** → <<component>> **Scenario** → **Test Data** 749-49-0182 797-59-7445 135-93-8060 214-82-8447

<<component>> **GenRocket Engine** → <<component>> **Scenario** → **Test Data** 749-49-0182 797-59-7445 135-93-8060 214-82-8447

<<component>> **GenRocket Engine** → <<component>> **Scenario** → **Test Data** 749-49-0182 797-59-7445 135-93-8060 214-82-8447

Application Under Test

④ VALIDATE CODE

749-49-0182 797-59-7445 135-93-8060 214-82-8447 **Test Data** —— *Real-Time Synthetic Test Data: Generated in real-time when it's needed and can be discarded when testing has completed.*

Go To Market Approach

1. Discover & Demo

- Identify Test Data challenges
- Joint sales calls with GenRocket
- Demo #1 – to initial stake holder
- Demo #2 – to full stake holder group

2. POC

- Capture POC requirements
- Completed POC in 2 weeks – some will be set up by the GenRocket team
- Demo solution to stake holder group

3. Land & Expand

- Close for 5 to 20 licenses
- Onboard, validate ROI / Value
- Expand across the enterprise

Message to Buyers

CIO

Problem Statement
- Test Cycle Time
- Test Quality
- Data Compliance
- Data Security

Message
- TDM > Test Data Automation
- Self Service On-Demand Delivery
- Data Security / Data Compliance
- Future Proof – AI/ML compliant

Money Questions
- What are your top challenges with Test Data Management (TDM)?
- Is test data delivery speed fast enough?
- Is test data quality high enough for all tests?
- What are the measures taken to assure data security and regulatory compliance for test data?

QA Director, Engineering Director

Problem Statement
- Test data delivery is too slow
- Test data lacking for all test requirements
- Data security restrictions for remote workers

Message
- TDM > Test Data Automation
- Self Service On-Demand Delivery
- Integration with DevOps and Continuous Testing
- Data Security even for WFH (Work from Home)

Money Questions
- How do your teams create test data today?
- Is any test data created by hand or spreadsheet?
- Is test data delivery speed fast enough?
- Is test data quality high enough for all tests?
- Is there enough test data *variety* for all tests?

Pricing

FEATURES	GROUP EDITION	PROFESSIONAL EDITION	ENTERPRISE EDITION
Annual License Cost	**$1,000**	**$1,500**	**$2,500**
Min # licenses	1	5	5
Max # licenses	10	50	Unlimited
# Projects	3	25	Unlimited
Hosting	VPC	VPC, DPC, On Prem	VPC, DPC, On Prem
DB Copy / Migration	No	Yes	Yes
Multi-User Server	No	Yes	Yes
Data - Millions/Billions	No	Yes	Yes
G-Workflow*	No	No	Yes

*To be released Q3 2020

Latest pricing is available on the GenRocket Web site

GenRocket

Partner Support

Support Offerings	
Sales Training	Yes – online course / Request on Website
Technical Training	Yes – online course / Request on Website
Joint Sales Calls	Yes – Zoom / WebEx / MS Teams
Non-Commercial Licenses	Yes
No Cost POC's	Yes
Support Hours	5 X 24 support for partners & customers
Knowledge Base	Yes – Over 700 Help Articles
Special Pricing	Only for Registered Deals – Case by Case
Brochures / Case Studies	Yes – download from Website

GenRocket