GENI Script Generation

How Appvance IQ converts plain-English test cases into fully executable test scripts using transformer models and a proprietary code generator — no Blueprint, no Digital Twin, no recorder.

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What is GENI Script Generation?

GENI Script Generation is the generative-AI engine inside Appvance IQ that converts plain-English, step-by-step test cases into fully executable test scripts. You describe what to test the same way a manual tester documents it — GENI writes the automation.

Scripts are produced in bulk — roughly **100 scripts per hour**, and up to **400x faster** than a human scripter — and they require no ongoing maintenance. When the application under test changes, you regenerate instead of repair.

GENI Script Generation is available from **AIQ 5.3.6 (build 536)** onward, and is accessed from the **GENI** area in AIQ.

> **In short:** describe the test in English, and GENI Script Generation delivers the executable script — at scale.

What you get in the GENI area

Opening the GENI area in AIQ presents three options. **Script Generation** and **Script Generation Import** are enabled by the GENI license; the Transformation Factory is a separate, complementary capability.

- **Script Generation** — converts your Excel- or TMS-based test cases into executable test scripts.
- **Script Generation Import** — imports generated scripts and scenarios back into Appvance IQ, so they run inside the AIQ scenario editor alongside other test types.
- **Transformation Factory** — automates the full QA artifact chain (requirements to scripts and back). See the GENI Transformation Factory chapter.

> **Remember:** Script Generation is *English test case in, executable script out*. No Blueprint, no Digital Twin, no recorder.

Important — GENI Script Generation is NOT AISG. AISG (AI Script Generation) is the autonomous-testing module inside AIQ that explores applications and builds the **Digital Twin**. GENI Script Generation does not use Blueprint or Digital Twin technology: it converts the English test case directly into a script using specially tuned transformer models and a proprietary code generator. AISG is documented in its own book: AI Script Generation (Autonomous Testing).

Key numbers

100
scripts generated per hour

400x
faster than human scripters

70%
of end-to-end testing is manual today

85%
of QA automation resources go to scripting & maintenance

Batch runtime is roughly constant. Because every test case runs in parallel on its own isolated instance, a batch takes about **2 hours** whether you submit 1 test case or 100 — capacity scales linearly.

GENI Script Generation vs AISG — side by side

GENI Script Generation	AISG (AI Script Generation)
Converts plain-English test cases into executable test scripts	Explores applications autonomously and builds the Digital Twin (`.abp`)

GENI Script Generation	AISG (AI Script Generation)
100 scripts per hour · 400x faster than human scripters	Formerly “Blueprint Designer” / “AI Blueprinting”; under **Autonomous Testing** in AIQ 5.2+
Input: an Excel file or a TMS connection. Output: a script you can download and edit	Input: an application and specific flows. Output: the Digital Twin plus coverage insight
No Blueprint, no Digital Twin, no recorder	Uses the Digital Twin as its core artifact

How it works — at a glance

1. **Bring your test cases** — the English, step-by-step scenarios you want to automate, in Excel or from your TMS.
2. **Map and validate the batch** — GENI auto-detects the columns and tells you exactly how many test cases are ready.
3. **Generate** — a single action, *Transform Test Scripts*, converts each test case into a script in parallel.
4. **Run and schedule** — group the scripts into scenarios and run them on demand or in CI/CD, with screenshots and reports for every execution.

Sources: appvance.ai/geni · Appvance announces GENI (Mar 18, 2025) — press release · GENI Script Generation — Technical Overview

Last updated: September 10, 2026

How GENI Works

How GENI Works

GENI is not a single AI model — it is a stack of AI technologies working together. According to Appvance, GENI leverages **Appvance's patented AIQ Digital Twin**, **multiple specially tuned transformer models**, and a **proprietary code generator**.

Blueprint Designer (AI 3.0) overview

The AI Script Generation / Blueprint Designer UI introduced in AIQ 5.0.

The GENI process

1. A business analyst writes **step-by-step test cases in plain English** — the same way manual testers document them.
2. GENI's transformer models understand the **natural language, page layouts, and visual cues** in those steps.
3. The steps are compared against the **AIQ Digital Twin** — an offline, AI-built model of the application.
4. A proprietary code generator produces **executable test scripts** — in bulk, hundreds of test cases at a time.

What is the AIQ Digital Twin?

The Digital Twin is created by **AI Script Generation (AISG)**: AIQ's AI explores the application like a user would, discovers pages and states, and asks for input (for example via CSV data sets) to dig deeper. The result — previously called a "Blueprint" — is saved as a `.abp` file. Because of GENI, this is no longer a mere map of the app: it is a **true Digital Twin**.

> **Did you know?** AISG itself is powered by some **twenty underlying AI models** that together generate actual test scripts after a single training session with a QA engineer.

Data privacy

- GENI models are **private and fixed** — they do **not** learn from your application or data.
- No data is shared between clients, and no PII is stored.
- All models run on a **GPU-centric AI server**, with on-prem and cloud deployment options.
- AISG self-healing ML learns each time a script runs, but only to build accessor data for *your* application.

Source: AIQ AI and Data Privacy (docs.appvance.net)

GENI Key Benefits

Per the official **Appvance GENI press release** (March 18, 2025), GENI delivers measurable value across the organization:

Audience	Benefit
CIOs and CTOs	Accelerates AI-first digital transformation while significantly reducing end-to-end test time and eliminating manual testing. Material cost reductions with increased quality standards and more strategic allocation of technology investments.
Software development & QA	Optimizes resource allocation by redirecting teams toward higher-value activities and reducing dependency on third-party testing services. Broader application coverage within existing or reduced budgets — and **10x faster time to results**, speeding up the SDLC.
Enterprises	Significant competitive advantage through streamlined deployment processes and accelerated development cycles. Ship new features with confidence — robust testing without sacrificing speed to market.
Services & solution providers	New horizons in AI-first QA offerings and reduced labor costs. Design advanced SQA services that deepen testing coverage while augmenting human capabilities.

The zero-maintenance model

Traditional automation rots: the application changes, selectors break, and engineers spend their days repairing scripts. GENI Script Generation is built on the same technology as the AIQ Web Designer — **fallback accessors and self-optimizing element selection** — so scripts intelligently choose the best locator for every element.

- **A small UI change** (for example, a renamed button)? The script still works — accessors adapt automatically.
- **A flow changed?** Edit the English line in the test case and regenerate that one script.
- **The whole application changed?** Rewrite the test case in English and generate a brand-new script.

> **The result:** no selector repair, no maintenance backlog. **Regenerate instead of repair.**

Why it matters

Roughly **70% of end-to-end testing is still manual**, and about **85% of QA automation resources** go to scripting and maintenance. GENI Script Generation attacks both numbers at once: it produces the scripts in bulk, and it removes the ongoing repair work that normally consumes the team.

> **The bottom line:** faster releases, higher quality, and lasting competitive advantage — while eliminating the need for manual testers, scripting, and recorders.

Source: Appvance announces GENI (Mar 18, 2025) — press release · GENI Script Generation — Technical Overview

Last updated: September 10, 2026

GENI Pricing & Availability

GENI Script Generation turns plain-English test cases into production-grade Playwright scripts at scale. It is licensed **per application** and is delivered as a hosted service managed by Appvance, with an on-premises option available as an add-on.

Availability

- Available in **AIQ 5.3.6** and later.
- Requires an active **GENI license** on the AIQ account. The licensed entry point signs you directly into the GENI interface.
- **Enterprise licensing** is available — ask your Appvance team for the terms that fit your organisation.
- The **GENI Transformation Factory** (GTF) is a separate, related capability, available from **AIQ 5.3.1** onward.

Licensing and pricing

GENI is licensed **per application**, with coverage sized to the applications you look after, on-premises or in the cloud. Pricing, minimum coverage and enterprise terms are handled by your Appvance team — contact your **account manager**, your **sales representative** or your **TAM**.

Access and administration

Your Appvance team enables GENI on your controller and creates an administrator account for your organisation. That administrator decides who on your team can use GENI, and can grant or revoke access at any time. Usage is shared across the organisation, so it is worth keeping an eye on how the team is drawing on it.

> **Note:** the GENI Transformation Factory (GTF) is a separate, related capability available from Appvance IQ 5.3.1. See the GENI Transformation Factory chapter.

Sources: Appvance announces GENI (March 2025) — press release · GENI Script Generation — Technical Overview

Last updated: November 2, 2026

What GENI Can Generate

Overview

GENI Script Generation converts plain-text, step-by-step test cases into fully executable test scripts. No recording, no manual scripting. Describe the test the way a manual tester would document it, and GENI writes the automation.

Provide your test cases (in Excel or via a supported TMS), and GENI transforms them into ready-to-run scripts, generated in bulk.

GENI Script Generation produces:

- Executable test scripts (Playwright, Java/JavaScript, and Python scripts)
- Test scenarios (grouped scripts, runnable on demand or on a schedule)
- Execution reports and screenshots for every run

How to Provide Your Test Cases

You can bring test cases into GENI in two ways:

- **Excel file** — using the standard column format below
- **TMS integration** — TestRail is supported today, with additional integrations rolling out

Excel Format

Column	Required?	Purpose
Step Description	Yes	What the tester does in this step
Test Data	Yes	URLs, usernames, passwords, and other inputs used in the step
Test Script Name	Yes, if more than one test case	Names the resulting script

Expected Result	Optional	Your validations — leave blank if none
Test Case ID / Name / Preconditions / Step Number	Optional	Metadata, auto-mapped when present

Column mapping is auto-detected and can be adjusted manually. Once mapped, GENI shows how many test cases are ready to generate before you proceed.

Generating Scripts

1. Upload your Excel file or connect your TMS.
2. Review and confirm the column mapping.
3. Confirm the count of ready test cases.
4. Click **Transform Test Scripts** to start generation.

Each test case is processed independently and in parallel, so a batch of 100 takes about as long as a batch of 1.

Generation Status

Status	Meaning
Pending	Queued, waiting for an available instance
Running	Actively being translated into a script
Failed	Could not be resolved. Re-run or adjust the test case
Completed	Script generated and ready to execute
Needs Input	GENI found something that needs your input

Once complete, scripts appear in the **Test Scripts** area, where you can inspect the steps and execution history of any script.

Running Your Scripts

- Group scripts into **scenarios** to run them together, like a CI/CD pipeline.

- Run a scenario manually, or schedule it (daily, weekly, monthly, or custom cadence, in any time zone).
- Every execution captures a screenshot of each state visited, plus a screenshot of the failure point if a run fails.
- Download execution reports per scenario, export to the built-in dashboard, or use the built-in Allure Report.

Maintaining Your Scripts

GENI scripts are built to avoid the usual automation maintenance burden:

- **Minor UI change** (e.g., a renamed button): no action needed — accessors adapt automatically.
- **A flow changed**: edit the English step in the test case and regenerate that script.
- **Major application change**: rewrite the test case and generate a new script.

You edit the English description, not the code.

Access & Security Notes

- GENI Script Generation is a hosted service (on-prem available as an add-on).
- To reach your application under test, whitelist the single outbound IP address provided by Appvance.
- The LLM is used only during generation — execution is pure script playback with no AI inference and no data leaving for model calls.
- Generated scripts are yours: downloadable and editable Playwright (Java/JavaScript).

Getting Started

Bring a sample of your existing manual test cases in the standard Excel format, generate a pilot batch, and run the resulting scripts against your application.