

How API Data Generation Works

The OpenAPI specification is the blueprint. Instead of a human reading the spec and hand-writing both the requests and the data to feed them, the generative AI does both from the same source of truth.

The flow

1. **Start from the specification.** The OpenAPI definition describes the endpoints, operations, parameters and schemas of the API under test.
2. **The AI reads the definitions.** Generative AI parses the specification and derives the operations to exercise.
3. **Scripts are generated.** AIQ produces runnable API test scripts aligned with the specification — no hand scripting.
4. **Data is generated to match.** Data sets are created to satisfy the input types, ranges and edge cases defined by the spec, so each request is exercised with realistic, valid and complete data.
5. **Run, or wire it into CI/CD.** The generated tests execute like any other AIQ test; the capability can be integrated into pipelines for continuous API validation.
6. **Scale the coverage.** Because generation is automated, thousands of API flows and data permutations can be produced in minutes rather than assembled by hand.

Why the spec matters: using the OpenAPI definition as the blueprint keeps the generated scripts and the generated data tied to the contract — which is what makes contract testing possible at scale.

What you need

- An **OpenAPI specification** for the API under test.
- An **Appvance IQ** instance with access to the Data Production Library.

Sources

- Appvance press release, October 7, 2025 — feature description and benefits.
 - Appvance documentation — API Test Designer and Data Production Library (DPL) pages.
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