

What to Test in an API?

- Verify the Parse of JSON or XML response (i.e. Body and Response)
- HTTP Status Code
- Verify the Headers response with Negative or Invalid headers
- Max/ Min Key values
- Missing Keys
- Response Time
- Cookies
- JSON Schema - Parameters
- Authorization
- CRUD Operations
- Empty Updates or POST call handling
- Chaining request verification
- Verify how the APIs' error codes are handled
- Duplicate entries, Error message
- Testing Tech - Boundary Values

Extra:

- Test nulls and empty strings; these have a habit of causing issues.
- Test with Unicode characters, ensure they are correctly saved to the database.
- Test mandatory and optional parameters, in particular, test with just mandatory values.
- Ensure correct status codes are returned; you will find false positives, e.g. a 500 being returned as a 200.
- Functionality Bugs: The test looks for missing functionality bugs.
- Reliability Bugs: API testing helps identify bugs in integration across different systems.

- Performance Bugs: The tests help determine how much traffic the system can handle before being overloaded, and how to expand infrastructure to meet rising demand at the core, but also are very effective at pinpointing weak points in the API.
- Security Bugs.

Common Bugs in API?

- Missing Keys
- Duplicate Keys
- Incorrect HTTP Code
- HTTP Methods not Handled Properly
- Performance Issues
- Security Issues
- Validation Errors
- API Monitoring Issues