SauceLabs

Future Sauce



Future Sauce

What is "Future Sauce"?

"Future Sauce" is the internal term the design and product team are using for the discovery of features and functionality that will complete the DevOps test toolchain.

What is the project scope?

To evaluate all existing capabilities, features and functionalities across all Sauce products for potential integration points and feature improvements to our users workflows. This includes:

- **Product audit** of all current Sauce products to evaluate any notable features that could improve our user experience and product offering
- Persona audit to consider the way we currently evaluate our users and whether any updates need to be made
- Identification of focus areas that would allow for further design exploration and discovery
- **Ideation** of improvements and features around the identified focus areas and notable features. This ideation should drive towards a "north star" user experience across all product verticals.
- Strategize with product partners on how to advance our current Sauce towards the "north star" with the ability to continue to ideation and discovery based on any new data points and feedback.

Product Audit



Sauce Labs' Core Platform

What is it?

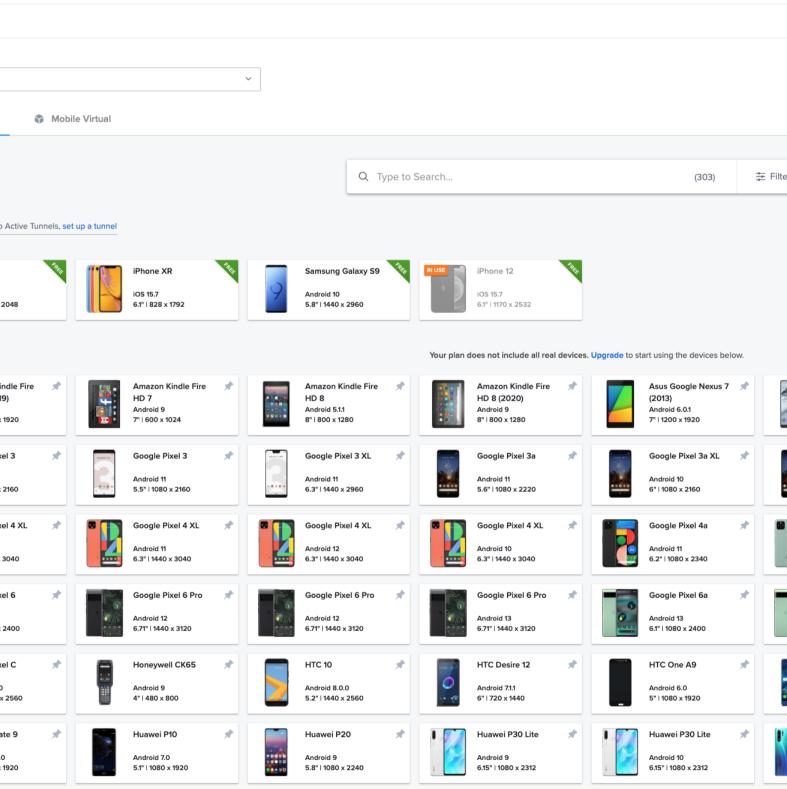
Sauce Labs' primary logged in experience. The platform provides users with automated test results from their CI/CD, virtual & real devices for manual testing and application storage.

Notable Features

- Application storage for all manual testing
- Real device connection all testing
- Virtual device cloud for all testing
- Test results with status
- Insights and analytics for personal and organizational testing

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Sauce Labs's mobile real device selection screen

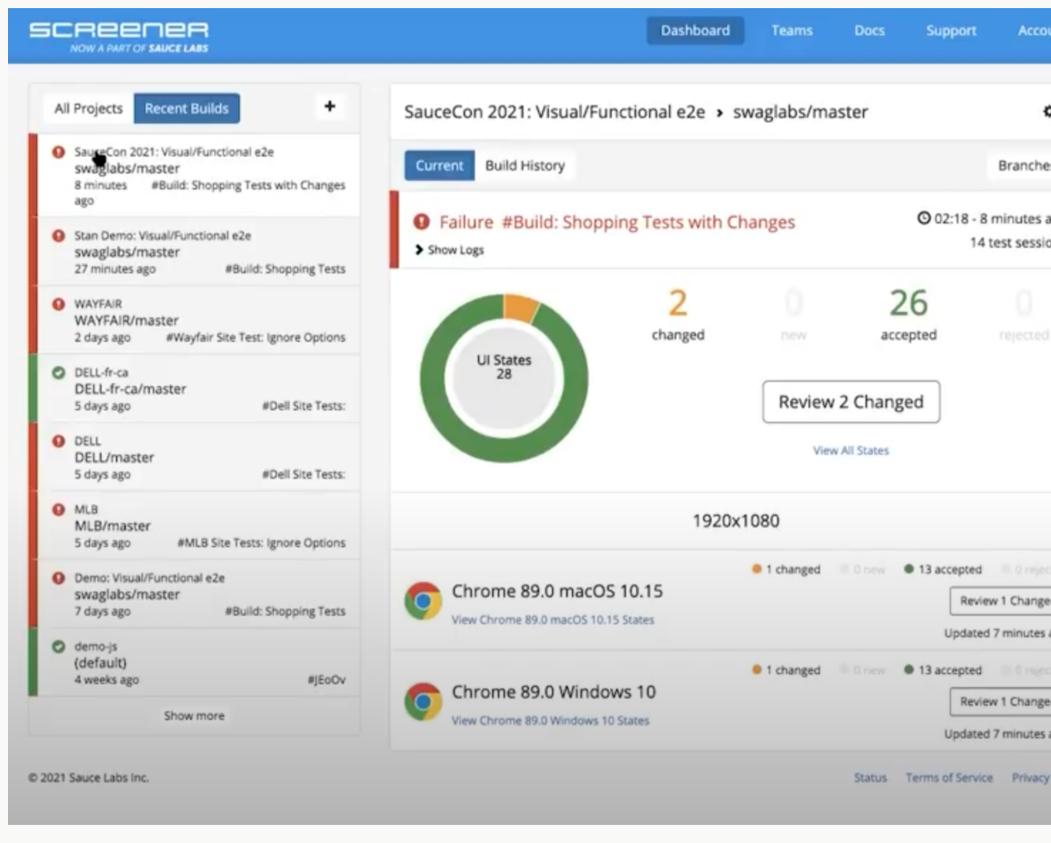
Visual (Screener)

What is it?

Sauce Labs's visual product (formerly Screener) was a Sauce acquisition in April 2019. The company provided automated testing of visual diffs and their previously set benchmarks.

Notable Features

- Project level organization
- End-to-end visual testing during functional tests
- UI component testing through pattern library tools like Storybook
- Results overview with manual input on approving / declining updates to the stored benchmarks



Build overview in former Screener dashboard

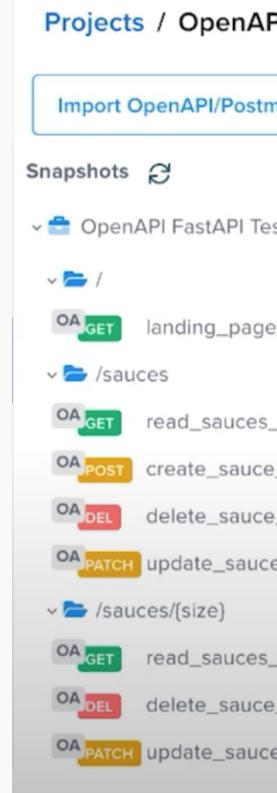
API Fortress

What is it?

API Fortress was a Sauce acquisition in December 2020. The company allows users to quickly, easily, and continuously test the API endpoints that make up the core of modern API-driven applications

Notable Features

- Project level organization
- API test authoring and execution
- API monitoring
- Test scheduling
- Testing results and analysis



API testing interface in API Fortress

Projects / OpenAPI FastAPI Testing / HTTP Client

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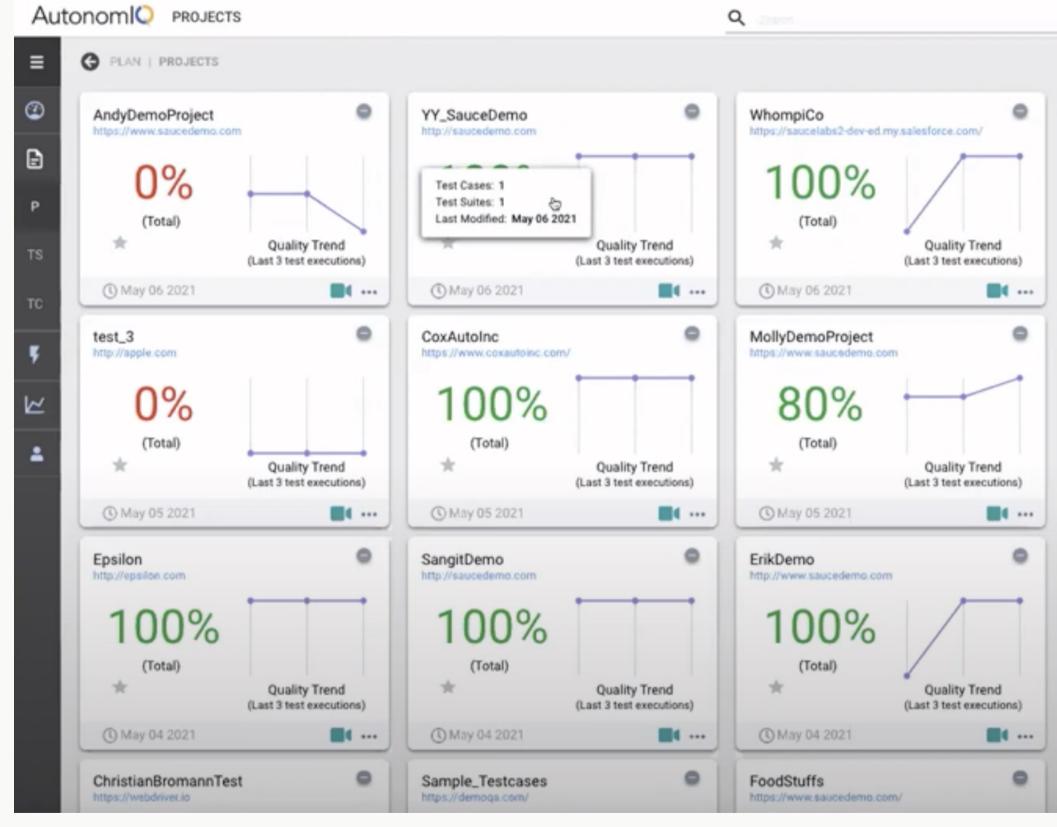
AutonomIQ

What is it?

AutonomIQ was a Sauce acquisition in February 2021. The company provides a scriptless test automation solution service that uses artificial intelligence and machine learning to assist clients.

Notable Features

- Project level organization
- Test script authoring
- Report results of automated testing
- UI recorder, user-friendly plug-in that records test steps in real time
- 3rd party integrations with CI/CD tools



Projects and project analysis in AutonomIQ

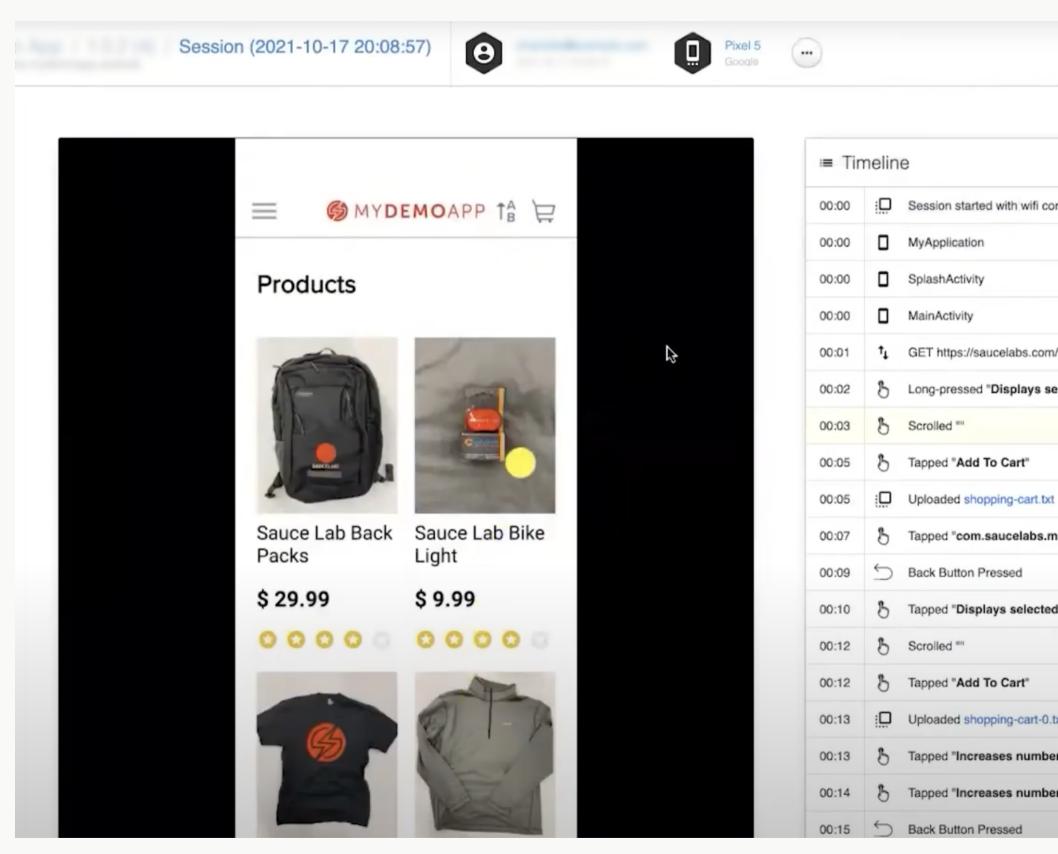
TestFairy

What is it?

TestFairy was a Sauce acquisition in March 2021. The company provides app distribution to internal users and beta testers. It also records app sessions as well as any feedback given by the users and testers.

Notable Features

- App distribution to major app stores
- App distribution to internal and external beta testers and users
- Session recording
- Session overview and analysis
- Beta test / internal user management



Session details screen in TestFairy

Backtrace

What is it?

Backtrace was a Sauce acquisition in June 2021. The company provides error and crash reporting for applications, primarily focusing in the video game industry.

Notable Features

- Production monitoring
- Error & crash deduplication and aggregation (fingerprints)
- Debugging interface
- Error & crash trend analysis
- Third-party integrations (JIRA, Slack, GitHub, etc.)

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	Resolved ~	44659be
	Open 🗸	aa9d1e4
	Resolved	5a22883
	Resolved ~	8d57592
	Open v	0ee5f4b
	Resolved ~	a27f415
	In progress 🗸	d1bb3a4
	In progress 🗠	f4c2d7c
	Open 🗸	2be4f25
	In progress 🔗	1f41f30

Crash / Error triage screen in Backtrace

\Xi Add filters

3rd Dec 2021 05:22 GMT+0800

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	↓ Errors by Appli	Activity	Description		Tags		Assignees
i	1,972 (2,737%)	2021-11-26 05:28 - 2021-12-02 19:01	System.IO.FileStream	8	+		+
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-	252 (0.3762%)	2021-11-26 06:11 - 2021-12-02 17:49	AsteraX.GetGyroscopeDe	i	Android	1	+
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Persona Audit



Current Personas

Developer

Includes

- Mobile app developer
- Web developer (UI / Backend)

Key Characteristics

- Codes new features and enhancements
- Asses technical feasibility of new features
- Deliver bug-free code that adhere to the teams standards and processes
- Writes test code on new features and fixes per internal engineering guidelines



Includes

- Manual / Automated QA
- SDET

Key Characteristics

- Defines testing plan across different devices / OS
- Provide analysis to the devs on production issues and bugs
- Write or update existing test cases
- Write automated test cases for processes that regularly occur

Note: These personas are generalizations of more detailed and user-oriented personas the design team utilizes when discussing scenarios and workflows.



Includes

- QA Manager
- Engineering Lead / Manager

Key Characteristics

٠	Creates, defines and manages	process	for
	engineering teams (QA & Dev)		

- Decision maker on testing architecture
- Wants to ensure fast and consistent releases
- Analyzes issues found by users and evaluates prevention methods to prevent reoccurrence

Update to Personas

Why Update?

Attempting to generalize our users into specific "roles" was challenging. We often found that responsibilities were not siloed. Rather, individuals would take on additional responsibilities based on surrounding factors. Some factors included:

Size of company & team

Roles within teams

Engineering practices

Rather than focus on job roles, we started to focus on the job to be done. Once we looked through this lens, we landed on two key jobs our users constantly perform on our platform: **finding** and **fixing**. These jobs are not mutually exclusive but do help to better frame the types of work our users do on a day-to-day basis.

Finder

Definition

A finder is anyone who is looking to define a user problem that has occurred during testing or on production.

Key Characteristics

- Looks for test failures during any automated testing
- Uses live test offering for manual test case validation. Validates any production bug that has been reported.
- Collects and synthesizes information about any found issues
- Reports found issues and supporting data to fixer



Definition

A fixer is anyone who is looking solve a problem that has occurred during testing or on production.

Key Characteristics

- Receives information from finder regarding any found issues during testing or on production
 - Evaluates artifacts relating to issue
 - Identifies fix based on evaluation
 - Updates automated testing (if applicable) to cover new update or functionality
 - Runs tests to ensure fix is stable before reporting back to finder for validation

Focus Areas



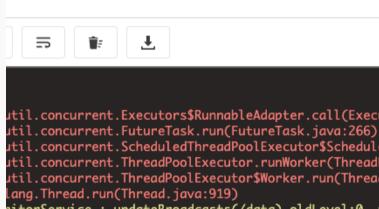
Manual Testing

Why?

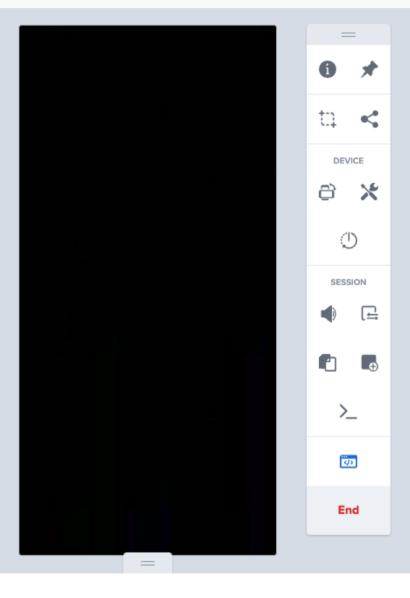
Sauce Labs' live testing capability is often seen as the gateway to the rest of our testing capabilities. By providing a richer experience to our manual product offering, we would hope to guide our users towards more automation practices and functionality.

Potential Explorations

- Improve layout & interface
- Incorporation of visual diff testing
- Error & crash alerting and monitoring
- Device metric analysis
- Real-time feedback marking and explanation
- Improved test results



Sauce Labs's manual testing interface for real devices



concurrent.Executors\$RunnableAdapter.call(Executors.java:462) concurrent.FutureTask.run(FutureTask.java:266) concurrent.ScheduledThreadPoolExecutor\$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:301) concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1167) concurrent.ThreadPoolExecutor\$Worker.run(ThreadPoolExecutor.java:641)

torService : updateBroadcasts(/data) oldLevel:0, newLevel:0, seq:1

Sauce's Object Model

Why?

The current object model does not match a user's current mental model nor does it scale to incorporate other similar pieces of data throughout Sauce's other products. The terms used throughout also have other definitions throughout the industry.

Potential Explorations

- Audit and redefine terminology used through Sauce Labs and its acquisitions
- Design new object model that provides scalability to incorporate new features and functionality
- Redesign parts of the hierarchy to provide more scalability and functionality

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Sauce's automated test results list (i.e. "Jobs)

Projects

Why?

Sauce Labs does not have a way for users to group similar applications together. When a new application gets uploaded or is ran, it gets added to the App Management list. This causes the list to continuously grow without any means organizing, filtering or sorting.

Potential Explorations

- Audit and evaluate product level hierarchies across Sauce products and the dev industry.
- Allow users to group applications together
- Provide insights and analytics across sets of applications
- Project controls for app distribution

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Sauce's App Management. The same application across 2 different Android OS versions and one iOS version are shown.

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Insights & Analytics

Why?

Sauce Labs's Insights are currently confined to one area of the UI (Insights tab). By not providing contextual information on different parts of the UI, it forces users to go into one area to evaluate trends and patterns.

Potential Explorations

- Determine product purpose for Insights
- Reevaluate charts, graphs and trends shown based on user needs
- Redesign graphics on Insights page
- Spread charts and graphs to other parts of the platform for better in-context analysis

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	Edge		108	0.00%	0.93%		
	Safari		170	9.41%	0.00%		
	Firefox		424	4.72%	28.54%		
	Chrome		29668	7.48%	0.14%		
specific versions							

Sauce's Overview of Insights for Tests (Jobs Overview)

Next Steps



Next Steps

Ideation

Based on the identified focus areas, the design and product teams came together to discuss and start the ideation of the Future Sauce "north star". This current design benchmark is continuing to be evaluated and iterated based on feedback from other team members of the organizations (including engineering, marketing and leadership).

Strategy

Certain parts of Future Sauce are becoming more clear with every conversation and discovery session we have. As the product team gains confidence in certain directions, we have begun to set milestones that will allow us to incrementally improve our current platform and UI, with an eye towards the vision that has been created with the "north star".

Curious about these steps?

Ask me personally for more details on this project and any areas that interest you!

Thank You

