

**FOR HEALTHCARE PRESENTS**  
Digital Automation  
Intelligence for Epic

**eggplant**  
Test Automation Software



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# Continuous care

In the age of digital healthcare, organizations need a new approach to ensure that **Electronic Health Records (EHR)** work properly after every change and integrate seamlessly with other hospital systems. Traditional manual software testing methods simply cannot cover this vast scope, giving rise to a new approach: intelligent, automated testing.

**Eggplant Digital Automation Intelligence Suite (DAI)** ensures the quality of your EHR Platforms.

EHR's are getting more customized, more interfaced and are on quicker upgrade cycles, leading to what Fortune Magazine documents as the growing patient safety risk "tied to software glitches, user errors, or other flaws". [\[1\]](#) How a patient flows through the system, their treatment plans, orders and medications are complex and unique, creating a complex mesh of possible scenarios, often far too many for even an army of manual testers to cover. We can help.

**Eggplant DAI** comprehensively tests your Epic system as if it were an end user to ensure all your providers and clinicians can treat their patients. More than that, Eggplant DAI can use our Automation Intelligence to test all the permutations and variances of orders and workflows to make sure even the unexpected is tested.

Eggplant can comprehensively test the entirety of your extended EHR system including all Epic modules such as, but not limited to, EpicCare, Willow, Beaker, Prelude, Grand Central, Resolute HB & PB and Bridges, and interfaced systems such as Cerner Labs, MEDITECH, Midas, Sunquest, 3M Coding and more.

**Making Continuous Care a reality.**

# How it works

Just as users follow workflows, Eggplant DAI follows workflows to know how to navigate and create test cases. Eggplant uses the workflows, variances in those workflows, and input variables to intelligently auto generate test cases. Eggplant can then prioritize and execute those test cases to ensure full test coverage while reducing cost and risk.

At the heart of Eggplant is a comprehensive automation engine which drives the Epic software the same way a user does, by clicking buttons, typing information and analyzing reports on the screen of any device, platform, or interface; Eggplant Functional accesses and tests Epic the same way your users do. Switching applications and even devices is incredibly easy to do in Eggplant, allowing full end to end testing. Eggplant can even test mobile workflows such as Epic Grand Central EVS bed cleaning on Epic Rover or mobile documentation on Epic Haiku and Canto.

The same Eggplant DAI resource can be used for performance tests to ensure Epic load times meet expectations. Eggplant DAI can execute tests any time of the day or night. Release or implementation quality can be assured through predictive analytics and the result is a high-quality, low-touch automation tool that can do exactly what your users do.

# Get up & going fast

Eggplant DAI is **Health Insurance Portability and Accountability (HIPPA)** compliant and a non-invasive solution which resides 100% inside your own firewall and does not need any software to be installed on your Citrix server. Eggplant can be installed and configured in minutes and can be used by your Epic analysts without the need for a deep automation testing background. Eggplant is also committed to user education and empowerment. We have online training and certification classes for your analysts as well as comprehensive, easy to understand documentation.

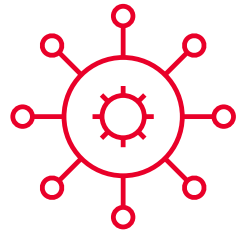


# One solution with many tools for your Epic environment

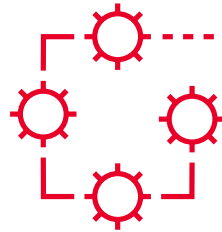
Eggplant is a suite of tools that makes sure Epic works as expected. It does this by connecting automated testing with robust analytics and insights to deliver a holistic experience. It ensures that data is flowing from one system to another without error. Eggplant DAI consists of:



AI



Manager



Functional



Cloud



Performance



Analytics

## Eggplant tests the following Epic modules and more:

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**Epic customers who use Eggplant also take their Eggplant DAI usage beyond testing. With Eggplant DAI, you can also access, test, and stage:**

- Add Patients
- Create a help desk
- Environment Staging
- System Alters
- Timings
- Technical Dress Rehearsal
- Training Environments
- Security Patches
- Testing Employee Credentials
- ERP Software
- PACS
- Blood Bank Software
- Patient Portals on Mobile Devices
- Critix Storefront
- Lab
- Custom Internal Applications

## How we help

The Eggplant testing and automation software is easy to use, tests as much as possible and logs everything in a clear way. Our product helps fill in the gaps in hospitals' current testing practices by allowing hospitals to not only test their current tests more consistently, but to test more than they could with manual testing. Eggplant is also designed to allow Subject Matter Experts to be more involved in the testing process by allowing them to easily create the workflow models and record their actions in Epic for Eggplant to convert to automation.

Eggplant DAI allows easy sharing of resources and promotes modularization of test scripts ensuring easier maintenance and faster implementation. Our healthcare customers are able to ensure quality and user experience through Eggplant's robust analytics capability.

We implemented UFT and Selenium but were unable to automate about half our user journeys. So we selected Eggplant DAI which met all of our requirements because of its universal approach. We have confidence for testing future requirements.





# Case study: One

## The challenge:

### Full integrated end to end tests with multiple systems

Full end to end integrated tests need to track the patient through multiple interfacing systems, not just Epic. Workflow steps need to happen in multiple downstream systems before the workflow can continue in Epic. Patient data is sent to different systems and back through HL7 and FHIR interface messages which need to be validated.

## Our solution:

Since our automation engine can use images and text recognition, we can test any system, not just Epic. This means that we can easily test the entire workflow. For example, for many of our customers, the first part of the test is logging into Epic as an ED Registrar to arrive and register the patient, the next part would then be switching users and logging into Epic as the Nurse and ordering a lab test. The next step involves logging into Cerner Labs and checking to see if the order interfaced correctly and then resulting the lab. Eggplant can automate every step of this process. Eggplant can also change the order of the workflow, and test what happens if the lab order is sent to Cerner Labs before the ED registrar has completed registration. In between steps, Eggplant can load Bridges and validate interface messages.

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# Case study: Two

## The challenge:

### Test/training staging

Customer had a number of one-off tests or training environments which need admitted patients, clean beds, or patients with appointments. Creating hundreds of patients and admitting them manually would take analysts hours and could push testing or training past deadlines.

## Our solution:

Eggplant is used for test or training setup. Eggplant can read data from a spreadsheet, then go through the steps needed to create, register and admit test patients in whichever environment needs them. Once the test patient is created and admitted or an appointment is created, Eggplant can then read the MRN or CSN from the screen and update the spreadsheet. After all patients have been created and prepped, Eggplant can then email the spreadsheet to the correct party(ies) for further manual action. Eggplant can also do time consuming tasks such as logging in as a bed cleaning user and marking all beds as clean.

# Case study: Three

## The challenge:

### Test all billable orders

A customer doing a new Epic install wanted to check that all departments were set up correctly for billing. They wanted to test all billable orders in every new department.

## Our solution:

All orders per provider and department were in an excel spreadsheet. The Eggplant users were able to use our workflow recording functionality to quickly create a test script. Eggplant then pulled the relevant information from the spreadsheet to create a test patient, made and check in a Cadence appointment in the specified department with the correct provider, logged in as that provider, and dropped the charge in EpiCare. If any charge was unorderable or the department or provider was not schedulable, Eggplant made an annotation in the spreadsheet and start on the next line. Finally, Eggplant then logged into Resolute PB and made sure the charges appeared in the backend of Epic; if so, it marked a pass in the excel spreadsheet. All with minimal manual intervention.

changing test environments is as simple as  
telling Eggplant to look for a different icon...

# Case study: Four

## The challenge:

### Multiple test environments

Customer had many different test environments based on geographical regions, version of Epic installed, Epic patches installed, and build migration. Customer did not want to maintain multiple versions of the same test for each test environment.

## Our solution:

Eggplant can use the same test resources for multiple test systems with minimal configurations. Since the Eggplant test engine uses images and text to automate workflows, changing test environments is as simple as telling Eggplant to look for a different icon in the test case.

Learn more at: [www.keysight.com/find/eggplant](http://www.keysight.com/find/eggplant)

For more information on Keysight Eggplant products and solutions, please [contact us](#).

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