

## CASE STUDY

# NOVANT HEALTH

### LOCATION

Winston-Salem, NC

### WEBSITE

[www.novanthealth.org](http://www.novanthealth.org)

### SIZE

15 inpatient medical centers,  
15 outpatient locations, 1 assisted  
living facility

### DEPLOYMENT

2020

### SERVICES EMPLOYED

// Epic Test Automation

## About Novant Health

Novant Health is an integrated network of physician clinics, outpatient facilities and hospitals that delivers a seamless and convenient healthcare experience to communities in Virginia, North and South Carolina, and Georgia.

The Novant Health network consists of more than 1,600 physicians and over 29,000 employees that provide care at nearly 700 locations, including 15 hospitals and hundreds of outpatient facilities and physician clinics.

Novant Health provided more than \$993.2 million in community benefit, including financial assistance and services, in 2019.



# EPIC TEST AUTOMATION

## THE NEED

With a full-time team of 10 quality assurance staff members responsible for all manual testing, Novant Health was looking for a better way to test its Epic system and existing infrastructure. Because the team was not certified or trained in Epic, they relied on Epic application teams to write manual scripts that they then executed.

The health system needed a test automation approach that would reduce resource allocation in this area and increase its testing scope. Novant decided to partner with Santa Rosa Consulting to benefit from their market-leading Test Automation Solutions offering.

## THE SOLUTION

For the initial phase one deployment, to reduce the time to value and increase the initial ROI, Santa Rosa worked with Novant to identify and recommend up to 10 application scripts for each of their implemented modules in Epic. Included were over 200 individual end-user workflows covering their most frequent and impactful testing scenarios to drive the highest value possible on their quarterly release upgrades. We then:

- Converted captured workflows into automated scripts
- Validated automated scripts (workflows) with Novant application teams
- Deployed automation testing software within Novant's infrastructure so they can schedule or run scripts adhoc.

After the initial workflow capture, Novant took on a full version upgrade from Epic that included a major user interface design change. This presented a significant "look and feel" gap between the recorded workflows and the live EHR system that would need to be closed during script development.

Because Santa Rosa's test automation team has deep Epic expertise and experience, they were able to incorporate the changes and close the gap with minimal engagement of Novant staff resources. Santa Rosa accounted for all changes related to the version upgrade during script development, prior to final validation review. Following deployment, Santa Rosa continued maintaining automated scripts to match both Novant's workflows and changes within the EHR, thus helping Novant realize continued benefits over time from Test Automation.

“Through our Epic Test Automation partnership with Santa Rosa, Novant Health reduced the time needed to thoroughly test our EHR application upgrades and future rollouts while minimizing disruption of clinical staff.”

Ryan Neaves,  
VP of Product Development  
Novant Health

## THE RESULTS

By partnering with Santa Rosa for Epic Test Automation, Novant significantly increased the efficiency and reliability of its testing process. This automated approach:

- **Eliminated hours and days** needed to tediously re-create and fully document potential system “bugs”
- **Reduced the cost and time to acceptance of new releases** by cutting back time required from analysts and shortening the Command Center’s duration
- **Minimized disruption and burden on clinicians** by reducing or eliminating time away from regular duties
- **Improved user satisfaction and adoption** by easing testing burden and identifying system issues early on
- **Ensured testing scripts and major workflows remained up to date** and added value not only to the testing process, but training and other areas
- **Decreased testing delays** when analysts were unavailable
- **Reduced time to run test scripts** by an average **91%**
- **Reduced labor to run test scripts** by **100%**

With only about 40% of Novant’s eligible Epic test scripts automated — assuming running 4 release upgrades per year — **Novant experienced a time savings equivalent of approximately 1,110 labor hours.** Using automation, Novant was able to increase its rigor to run core scripts daily, ensuring that all workflows are thoroughly tested well before the upgrade go live event. Under a manual approach, it would require an additional 35,140 hours of testing assuming 4 release upgrades per year. Once the goal of having 80% of Novant’s Epic scripts automated is achieved this year, the expected time savings and testing rigor will be significantly higher.

## KEY TAKEAWAYS & BENEFITS

Santa Rosa’s test automation program allowed Novant to test more, with fewer people, and in a shorter amount of time. Here’s what the Novant team had to say about this streamlined approach:

- *“You mean to tell me we that we never have to manually register a patient again? Awesome!”*
- *“In 10 minutes, a major EHR upgrade core (functional) automated test script was complete. The result: 20+ complex integrated scripts automatically updated in just seconds!”*
- *“One of the best parts about Santa Rosa’s test automation program is that it doesn’t require our manual scripts to be up to date, or our workflows to be well documented. We started quickly and saw benefits in a matter of weeks.”*
- *“A complex automated integrated script now takes 18 minutes or less per day to run, pausing overnight for system processing. It used to take 23 hours of labor across four days!”*

// [santarosaconsulting.com](http://santarosaconsulting.com)

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