

Sacramento County Sheriff's Department Powers Intelligence-Led Policing With Splunk Solutions



Executive summary

The Sacramento County Sheriff's Department is responsible for law enforcement services for unincorporated areas of Sacramento County, CA, and several incorporated cities within the county. The department implemented Intelligence-Led Policing (ILP), a strategy that depends on high-quality data analysis, and needed a way to harness data that existed in disparate, siloed systems. Since deploying Splunk Enterprise, the Sheriff's Department has seen benefits, including:

- Integrated and visualized crime, management and corrections data
- Enhanced accountability, helping to reduce crime report backlog
- Supported proactive policing based on big data analytics

Why Splunk

Sacramento County encompasses 994 square miles in the northern portion of California's Central Valley. While much of the county is unincorporated, it is surprisingly urban with a population density of more than 1,400 residents per square mile. More than 20,000 crimes are reported each year in the county.

The Sheriff's Department has jurisdiction over many of the facilities operated by Sacramento County, including the Sacramento County Jail and the Rio Consumnes Correctional Center. In 2015, the department announced that it was transitioning to a new law enforcement practice known as Intelligence-Led Policing. ILP provides actionable intelligence that can be used by team-based community patrols to identify and address potential high-risk areas proactively.

"Before Splunk, a member of our team was spending about three hours a day manually preparing ad hoc reports for our command staff and others," notes John Britto, senior IT analyst and application team lead. "There was no integration among our key systems. We had to either write a SQL script or use the SQL Server Reporting Services report generator to produce each report." Splunk Enterprise and Splunk DB Connect enabled the department's applications team to get full visibility into critical crime and management data contained in Microsoft SQL databases at the heart of key applications and provide its top leaders with high-quality analytics.

Industry

- Public sector (law enforcement)

Splunk Use Cases

- Business analytics

Challenges

- Integrate and analyze disparate sources of crime and operational data
- Track and report on correctional institution management for compliance purposes
- Obtain quick, ad hoc reports and information for multiple constituents, including County Board of Supervisors, command staff and the media
- Support Intelligence-Led Policing practices and strategies

Business Impact

- Holistic visualizations and real-time access to crime statistics and operational insight
- Detailed analyses of crime statistics and other information contained in multiple structured databases help identify trends and improve public service
- Saves hundreds of hours per year in ad hoc report generation
- Helped cut reporting backlog by up to 50 percent
- Rapid deployment saved development costs and accelerated time-to-value

Data Sources

- Records Management System (RMS)
- Computer-Aided Dispatching (CAD)
- Jail Information Management System (JIMS)
- Active Directory

Splunk Products

- Splunk Enterprise
- Splunk DB Connect

Staying a step ahead with data integration and analytics

Since the initial Splunk deployment, the department's applications team has created more than two dozen dashboards, many with multiple panels, including map-based views of weapons used by location and crime overviews showing crimes year-to-date, incidents by day of the week, race of victims and more.

Consolidated access to critical crime statistics, corrections information and officer dispatch data is enabling the department to realize the ILP vision. Says Britto, "Splunk is helping us support the ILP initiative by providing a centralized source for high-quality data analytics. We can easily integrate multiple databases and applications and generate any kind of report or dashboard we need."

Meeting the growing demand for business insight

The initial recipients of Splunk-based dashboards and reports are the Sheriff Department's top command, including the sheriff, the undersheriff, chiefs, captains, lieutenants and sergeants. Demand for additional dashboards and reports has grown dramatically. For instance, requests for specific information on budgets and spending practices have come from the County Board of Supervisors, which oversees the Sheriff's Department. In one case, information on the time required by officers to complete crime reports has been used to help reduce the reporting backlog by up to 50 percent.

The department is using a Splunk dashboard to track the amount of outdoor time provided for the more than 5,000 prisoners at the Sacramento County Main Jail and the Rio Cosumnes Correctional Center. This dashboard helps the Sheriff's Department provide proof of compliance to federal regulations for mandated recreation time.

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John Britto
Senior IT Analyst and Application Team Lead
Technical Services Division
Sacramento County Sheriff's Department

The applications team is also developing a Splunk dashboard to assist the department's pre-employment investigation unit in tracking the status of applicants as they progress through the screening process, which includes interviews, computerized voice stress analyses and various background checks.

Mining historical data to fight future crime

Most of the dashboards developed by the applications team rely on current information; however, the team is working to incorporate historical data into new analytical reports. In one case, the county corrections division would like to have an at-a-glance dashboard that provides five-year trends in the age, gender, race, crimes and recidivism rates for all those who have been incarcerated at county facilities. The information could be used in budgeting, staffing and providing other resources required by county corrections.

"The Splunk platform is critical to our Intelligence-Led Policing strategy," Britto concludes. "Our command group is now able to more clearly see trends in our crime statistics and take proactive action to address areas of concern and provide the best possible service to the public."

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