



SAS® Criminal Justice Data Integration and Analytics

Delivering consistent insight from consolidated offender information

What does SAS® Criminal Justice Data Integration and Analytics do?

SAS Criminal Justice Data Integration and Analytics brings together disparate offender data from multiple sources and agencies to deliver comprehensive information to a vast array of criminal justice professionals.

Why is SAS® Criminal Justice Data Integration and Analytics important?

The solution makes it easy for people in many different roles – magistrates, clerks, law enforcement and corrections officers – to access a consistent, accurate view of information about offenders. By providing this holistic view, the solution helps prevent criminals from falling through the cracks of disjointed data silos.

For whom is SAS® Criminal Justice Data Integration and Analytics intended?

The solution is intended for a variety of business users who work in different capacities across the criminal justice system.

With mounting data from numerous sources, shrinking budgets and stretched resources, it's increasingly challenging for criminal justice agencies to effectively coordinate information and maintain public safety. One of the biggest challenges involves getting consistent, accurate and complete views of offenders. This information is typically spread across data silos, making it hard for magistrates, clerks, law enforcement and corrections officers to access.

To enhance community and officer safety, reduce crime and victimization, and optimize resource allocation, agencies need access to reliable, timely data. Only then can they work effectively in their efforts to ensure public and officer safety.

SAS Criminal Justice Data Integration and Analytics combines data from all sources across the criminal justice system and beyond to provide a comprehensive view of offenders. It integrates data sources such as court and arrest records, sex offender data, concealed handgun permits, motor vehicle and driver's license data and more. Sharing this data not only benefits the community, it also helps to reduce costs and improve operations. With SAS Criminal Justice Data Integration and Analytics, users get an intuitive interface that makes it easy to search, visualize and analyze offender data. They can even create watch lists to send them automatic notifications whenever there is an event, change of status or query against a monitored offender.

Key Benefits

- Make more informed decisions.** With a holistic view of offender information across disparate systems and databases, criminal justice practitioners can make the right decisions faster.
- Access offender information easily, with an intuitive interface.** Find the information you need quickly, then use match lists, graphical views and drill-down capabilities to reduce time spent investigating offender background.
- Get notifications about important offender updates or status changes.** Rather than manually searching for status changes related to high-risk offenders, users can specify offender watch lists and get immediate updates whenever there's a relevant activity or status change.
- Be more productive and responsive to potential high-risk situations.** Through better coordination among different entities, criminal justice professionals can avoid duplicated efforts and remain focused and ready to respond to high-risk situations.
- Improve public and officer safety.** With shared, timely access to standardized offender data, criminal justice practitioners can respond to public and officer safety threats immediately – in a confident, coordinated manner.



Solution Overview

SAS Criminal Justice Data Integration and Analytics delivers complete, accurate information about offenders that helps the criminal justice system function more effectively. Using this solution, judges and magistrates are better able to determine if an offender should be released, placed on probation or incarcerated. Police officers can make more informed decisions at traffic stops. And public and officer safety can be improved through easy access to information that's shared across jurisdictions.

Offender data integration

The solution creates a holistic view of offender information across disparate systems and databases using advanced data access, matching and

entity resolution capabilities. Based on this comprehensive information, police officers, law enforcement officials, magistrates and judges have immediate access to an offender's complete history – so they can make timely and fact-based decisions.

Intuitive interface for all types of users

An intuitive graphical user interface (GUI) makes it easy for any criminal justice professional – such as law enforcement, judicial or corrections officers – to quickly access offender information and make rapid, informed decisions regarding offender treatment. Use the GUI to easily search for records by entering whatever information is available. View a candidate list of matches sorted by match confidence – and see offender summary information showing graphical risk indicators. You can drill down

on any offender to access more details. The solution's ease of use reduces the amount of time required to thoroughly investigate offenders' backgrounds.

Watch list capability

To reduce manual efforts, criminal justice professionals can set up watch lists so they will receive automatic notification whenever there is an activity or status change for specific offenders. As a result, they can react immediately to important offender updates rather than spending time manually searching for information. This approach also helps coordinate activities between various entities that may be investigating or monitoring the same offender since system queries against an offender are alertable events.

The screenshot displays the advanced search interface of the SAS Criminal Justice Data Integration and Analytics system. The interface is split into two main sections: search criteria and search results.

Search Criteria (Left Panel):

- Name / Address:** Last Name: porter, First Name: john, Middle Name: julian, Street Address: #####, City: City, State: [dropdown], ZIP: 5-9 Digit ZIP Code.
- Personal Identifiers:** Exact Match Only: . Race: [dropdown], Gender: MALE, Age/Range: [input] +/- [input] (years), Birth Date: mm/dd/yyyy, Height/Range: [input] ft [input] in +/- [input] (inches), Weight/Range: [input] +/- [input] (pounds), Hair: [dropdown], Eyes: [dropdown], Phone Number: (###) ###-####.
- Records:** Convictions, Charges, Clear All. Offense Date Range: From (mm/dd/yyyy) To (mm/dd/yyyy). County of Offense: [dropdown].
- Offense Categories:** ABUSE OF ELDERLY/HANDICAPPED, ABUSE/EXPLOITATION, AID/IABET, AID/IABET INMATE, ALCOHOL OFFENSE, ARSON.
- AOC Offense Codes:** [input] [input] [input] [input] [input] [input].
- Limit Return Results:** Exclude deceased offenders, Include only offenders with scars, marks, or tattoos, Include only offenders with an image, Include only offenders with the following gang affiliation.

Search Results (Right Panel):

- Offender (4):** DMV, CHP (4), Wildlife, Recent Warrants (2).
- Search Results (4):** Merge List, 1 - 4 of 4, Export.
- Offender 1:** JOHN JULIAN PORTER, AWC OFA SOR FEL GNG CHP. Address (03/01/2011): 801 N OAK STREET, DURHAM, NC 27707. SSN: XXX-XX-1111, SID: NC9988776A, DOC ID: 0327401, DL: NC-16400000. Birth Date: 01/01/1976, Age: 34, Gender: MALE, Race: WHITE, Eyes: BLACK, Hair: BROWN, Height: 5'7", Weight: 219. Most Recent Update: 03/01/2011.
- Offender 2:** JAMES ANDREW PORTER. Address (02/10/2011): 22 South Main Street, WAYNARD, NC 27544. SSN: XXX-XX-2222, SID: NC11111111, DOC ID: 0504033, DL: [blank]. Birth Date: 01/01/1950, Age: 59, Gender: MALE, Race: BLACK, Eyes: BLUE, Hair: BLACK, Height: 4'7", Weight: 150. Most Recent Update: 02/02/2011.
- Offender 3:** JOHN C PORTER, ASLT WARR WPH. Address (02/15/2011): 443 EAST WASHINGTON ST, DURHAM, NC 27544. SSN: XXX-XX-6789, SID: [blank], DOC ID: 0303030, DL: [blank]. Birth Date: 01/01/1976, Age: 34, Gender: MALE, Race: WHITE, Eyes: BLACK, Hair: BROWN, Height: 5'7", Weight: 209. Most Recent Update: 02/15/2011.
- Offender 4:** MARK ISSAC PORTER, CC DECEASED. Address (02/15/2011): 1200 Southway Drive, Westover Hills, NC 27832-0000. SSN: XXX-XX-4444, SID: NC22222222, DOC ID: 3333333, DL: NC-99999999. Birth Date: 04/25/1954, Age: 55, Gender: MALE, Race: BLACK, Eyes: BROWN, Hair: BLACK, Height: 5'11", Weight: 122. Most Recent Update: 01/01/2011.

Figure 1: The advanced search capability returns a list of direct and close matches, and includes photographs for positive identification.

Underlying analytics

Underlying advanced analytics capabilities from SAS provide strategic insights into criminal information. By better understanding crime trends and offender population projections, you can make more informed public safety and policy decisions. You'll be able to identify gangs and criminal networks through network link analysis. The solution can also help you make better parole or early release decisions by using predictive modeling to identify inmates who have a lower risk of recidivism. And you can optimize incarceration and rehabilitation programs by using analytics to identify which programs will have the best results for individual offenders.

Remote hosting option

Choosing the remote hosting option frees you from IT concerns. SAS can host and maintain the application as well as the entire IT infrastructure. This option provides a neutral third party that is responsible for housing and maintaining appropriate security for your highly sensitive information that originates from many disparate agencies and departments.

Key Features

Data integration

- Lets you access data from any source – regardless of system or format – to give a comprehensive view of each offender.
- Integrates, standardizes and improves the quality of the data used to make critical decisions.
- Creates an offender-centric view through entity resolution.
- Uses fuzzy matching to address intentional and unintentional data quality and obfuscation issues.
- Restricts data access at the record and element level through a robust security model.
- Enables you to automate, manage and control the entire data integration process via an administrative graphical user interface.

Intuitive interface for all types of users

- Lets you search on whatever attributes are known.
- Uses a “fuzzy” search to return matches. The matches are sorted so that the most likely matches appear at the top of the search list.
- Rolls up all records and lets you view them at an individual offender level with a timeline.
- Provides prominent warning indicators for high-risk attributes on any offender.
- Improves the speed and accuracy of decision making through graphical data visualization.
- Provides a user interface for mobile devices for all law enforcement personnel.

Watch list capability

- Allows users to set up watch lists comprising specific individual offenders.
- Lets users select alert criteria.
- Automatically alerts when there is an offender activity or change in status.
- Notifies users when anyone else queries a watch-list offender.
- Includes the ability to manually assign or upload watch lists.

Underlying analytics

- Helps you make better decisions and take faster actions based on underlying analytics capabilities that reveal insights into offender information:
 - Time series analysis allows you to identify and visualize trends and make informed decisions about deployment strategies.
 - Predictive analytics helps you identify an inmate's risk of recidivism so you can make better parole or early release decisions.
 - Text and Web mining enable you to use all available data – both structured and unstructured – to enhance preventative policing efforts.
 - Network link analysis makes it easier for you to identify criminal networks.
 - Geospatial analysis allows you to analyze and visualize information via maps to identify geographic trends and relationships.

Remote hosting option

- Provides highly secure hosting for your sensitive information.
- Enforces a comprehensive and verified disaster-recovery plan.
- Provides a single point of contact and ownership for any system-related issues.
- Ensures that user-level security policies are enforced and administered based on customer requirements.

SAS® Criminal Justice Data Integration and Analytics System Requirements

To learn more about SAS Criminal Justice Data Integration and Analytics system requirements, download white papers, view screenshots and see other related material, please visit sas.com/criminaljustice.

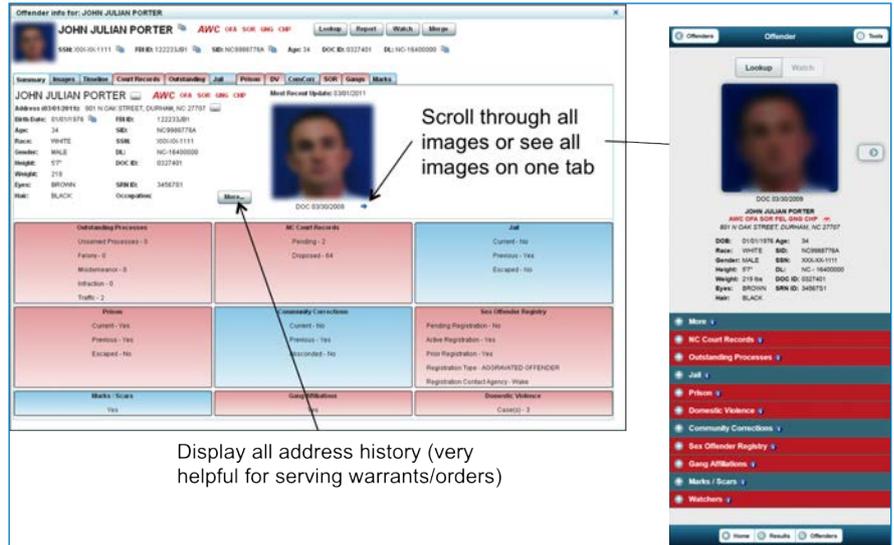


Figure 2: The offender detail screen contains in-depth information along with warning indicators. It also provides drill-through capability so you can view underlying records.

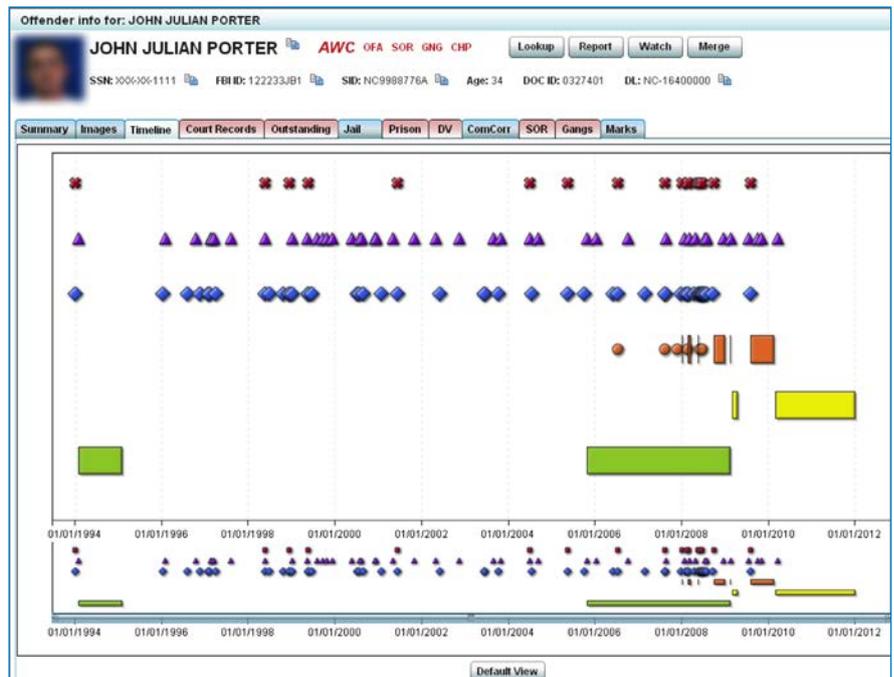


Figure 3: An offender timeline shows the entire offender history in an easy-to-understand graph.