ADVANCE User Manual

Sponsored by:

Alabama Department of Public Safety
Alabama Administrative Office of the Courts
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Center for Advanced Public Safety
Computer Science Department
The University of Alabama
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Logging In

Website: https://advance.alacop.gov
Login: Use your Alacop username and password. You must have an ADVANCE Alacop privilege (see the privilege section for more details).

Support Contacts
Phone: 800-392-8025
Email: caps.support@cs.ua.edu

About ADVANCE
ADVANCE was established by the Alabama Criminal Justice Information Center (ACJIC) in order to provide the criminal justice and public safety communities with the latest advances in analytic and visualization technologies. A dashboard is defined as the output display of summary data analysis that is of particular immediate value to the user. Dashboards present to users metrics that are an essential component of control. Similar to an auto dashboard, information dashboards are set up to display several important operational characteristics of either a single user’s view or an entire system’s key attributes in order to both advise of progress and issue warnings.

ADVANCE was developed for ACJIC by The University of Alabama’s Center for Advanced Public Safety (CAPS). It is supported by several tools that have been developed by CAPS over the years, including the basic data structures and efficient retrieval techniques that are an integral part of the Critical Analysis Reporting Environment (CARE). In fact, the ADVANCE system
can call CARE directly to enable the user to get to any subset of the underlying database, and to generate information directly from the CARE information mining engine (IMPACT). CAPS has also built into ADVANCE the ability to search and display particular records and to generate standardized reports.

Currently ADVANCE produces dashboards for the following databases:

- **eCite** - This electronic citations generation and processing system is an automated method that enables officers to generate citations in a matter of minutes, validate the defendant’s identity, view their previous records, upload the citation and electronically “swear” to the citations at the applicable court.
- **eWeight** – This a program that is used by weight crews that complete inspections for the DOT.
- **eCrash** - An electronic traffic crash reporting and transmission system developed by CAPS while working under the direction and close collaboration of the Alabama Department of Public Safety to assure that it is compliant with federal standards and as user friendly to officers in the field as possible.
- **The UCR Local Template for Reporting and Analysis (ULTRA)** is a system to assist local agencies in creating and submitting their Uniform Crime Reports. ULTRA is a smart-client software application that allows agencies to create and submit Alabama Uniform Incident Offense (IO) and Arrest reports to ACJIC via the Internet.

**Privileges**

**Access to ADVANCE**

One of two privileges can be assigned to an ALACOP user to gain access to ADVANCE.

1) **ADVANCE-User**
   a) A user with this privilege is allowed to view their data on each tab in ADVANCE; that means only the citations and crash reports they entered.
   b) This user can still view all of the UCR data for their agency.
   c) These users will only see tabs in ADVANCE for the MOVE applications they have privileges to see.
   d) AISO’s can assign this privilege.

2) **ADVANCE-Agency**
   a) Gives the user access to view all data for their agency and associated agencies.
   b) These users only see tabs in ADVANCE for the MOVE applications they have privileges to see.
      - Exception: ADAPT CEOs can see all applications even if they do not have the associated MOVE privileges.
   c) AISO’s can assign this privilege.
Access to AVL
ALACOP users must be assigned the ADVANCE-AVL privilege to view vehicles from their agency in ADVANCE using the AVL tool.

Data Sources
Q: Where did the data come from?
A: The data available in ADVANCE is data entered by officers in your agency.

Q: How often is the ADVANCE data updated?
A: The data available within the Dashboards, Drilldowns, and CARE features is updated each morning at approximately 2:00 AM. The Search feature for each dataset provides real time access to data as soon as it is uploaded by the officers.

Dashboard

The first view you see for each data source in advance is the “dashboard.” The dashboard provides a summary view of event counts within a specified date range.

Selection Criteria:
The Selection Criteria panel on the left side of the Dashboard is used to control events that are included in the results panels on the right side of the screen. The first selection criteria, “Date”,

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define an inclusive date range for events to include. For example, if a custom date range is defined from 2/27/2013 - 2/28/2013, events from both of these two dates will be included.

The second selection criteria, “Filters”, narrow the results by predefined subsets of the events that are commonly requested. For example, eCite has a “Citation Type\Warning” filter that the user can select when they only want to view warnings. Two filters can be selected at once; when this happens only events for which both filters are valid will appear in the results. For example, when both the “Citation Type\Warning” and “Commercial Vehicle” filters are selected, only warnings for commercial vehicles will be shown. “All” should be selected when no filtering is desired.

The final way of specifying the events that should be included in result panels is to select items from the “Variables” Criteria. For example, when the variable “Age” is selected on the eCite Dashboard Selection Criteria, counts of citations issued per age are displayed in the grid. When items in the grid, such as ages 16-19 are selected, only the citations issued to individuals of these ages are included. Multiple categories can be selected by holding the control key down while clicking on desired items in the list.

A check box labeled “Hide Null Values” also appears on the Selection Criteria panel. When this box is checked all of the null values on the dash board will be hidden. For example, all of the citations for which an age was not entered will be included in the Null category for the Age variable. These Null ages will not be included when “Hide Null Values” is checked. Other variables such as “Citation Category” will have Null values for citations that have not been included into one of the predefined categories.
Results:

The results of the selection criteria are presented in the four quadrants on the right side of the dashboard. The results are counts of events that fit “categories” defined for each “variable.” Variables are items of interest such as day-of-week, with categories like Sunday through Saturday. The results can be displayed in a variety of formats including tabular, bar chart, column chart and pie chart. To change the chart type click on the chart type button at the top of the chart. This button will change depending on what type of chart you have selected (notice the four different chart types above and the corresponding chart type button).

To view one of the four results panels in a large view click the up arrow at the top right of the chart. Click the down arrow to make it smaller again.
**Result Details:**

When the “Table” view is selected as the results panel, the user can click on the magnifying glass button at the far right of each category. The user can then select to open the category in document view, open it up in a drill down window to further narrow down their research or create a map layer to view the locations of the related occurrences. Click the “Close” button at the top right of the results to get back to the original view. To return to the Dashboard simply close the selected window.

![Category Details](image)

**Saving chart results:**

Chart results can be downloaded as an Excel file by clicking on the button at the top of each chart. Save the data as an Excel file to include the data in your own reports.

**Variable Selection:**

To aid in finding variables that contain the categories for which you are looking, a search button appears each quadrant panel. The search button icon is a pair of binoculars. For example, when a search for “speed” is attempted on the eCite Dashboard several variables are returned that contain the search text at least once. From the variable search screen, the user can select the desired variable and click “OK” to search further.

**Saving Dashboard Layout:**

Click the button at the top of the Selection Criteria on the dashboard and select “Save Current Settings” if you would like to have the dashboard default to the current settings each time it loads. When the layout is saved, all of the selection criteria and the four variables in the results section are stored. The layout is only stored on the current computer. Users can have different layouts saved on different computers. You also have the option to return the Dashboard to its default settings if needed.
To add events to the map from the Dashboard select the categories you would like to view on the map. Then, from the Selection Criteria panel click the Map button at the bottom of the panel. Multiple categories can be selected simply by clicking on desired items in the list. At most 200,000 events can be mapped at one time from the Dashboard.

After clicking on the “Map” button, the user will be prompted to create a name for a map layer.

Once a new layer is added to the map it will be indicated on the map view button . To view the map, just click on the Map View button. eCite data is added to the map as blue points and the layer displays the name given by the user in the Active Map Layers widget to the left of the map. eCrash data is added to the map as red points.

**Map Tools**
The mapping tools are located on the left side of the Map window. Clicking on any of the mapping tools will collapse all other and open the selected tool.
**Active Map Layers**

Active map layers allow you to adjust what you view on the maps. You can modify your view of the map by selecting what event layers you want to view, what type of map you want to view and what details you want displayed on the map. Event layers are the layers you create from the dashboard and add to the map. Base layers are map views such as streets, aerial and topographical. Other Layers add details such as counties, jurisdiction and nodes.

**AVL**

Automatic Vehicle Location (AVL) is available for agencies whose officers are running MOVE or one of the ADVANCE mobile applications on the ANDROID or iPhone. You can also find an officer’s last known location, follow a particular officer on the map and see a list of officers available on the map.
To view officer locations in ADVANCE you must:

1. Have the ADVANCE-AVL privilege along with either the ADVANCE-User or ADVANCE-Agency privilege.
2. Login to ADVANCE.
3. Switch to the Map view.
4. Open the AVL widget by selecting it from the map tools window.
5. Only officers from your agency will appear on the map.

Vehicles will only appear on the map when:

1. ALACOP users are logged into MOVE or one of the mobile applications.
2. The user has a GPS receiver active.
3. The user has an active internet connection. If there is not an active internet connection the user’s points are stored on the local device and uploaded the next time they have an internet connection. In this way, you may be able to see someone in a historical view that was not shown in real-time.

**Heatmaps**

This is a tool for generating Heatmaps on the map in ADVANCE. Heatmaps show a scale from blue to red showing the density of data. Currently, Heatmaps can show AVL, eCite, and eCrash. Heatmaps can be run in either “Live Mode” which gives live data or you can select a specific date.

There are two types of Heatmaps:

1. Frequency Heatmaps show how much time an area has been patrolled during the designated time frame.
2. Recent Activity Heatmaps show how recently an area has been patrolled.

To view Heatmaps in ADVANCE you must:

1. Login to ADVANCE.
2. Switch to the Map view.
3. Open the Heatmap widget by selecting it from the map tools window.
4. Select which type of Heatmap you wish to view.
5. Click the ‘Generate Heatmap’ button to create the Heatmap.

DDACTS
DDACTS stands for Data Driven Approaches to Crime and Traffic Safety. DDACTS allows the shading of areas on the map that have high or low frequencies of a certain event type or a combination of event types (crash, crime, citation). The determination of high or low frequency is controlled by the user by setting high and low thresholds based on the area average.
**Address Lookup**

The address lookup tool will allow you to enter an address and find it on the map.

Once you enter an address the map will zoom into the address you entered and place a marker on it with address entered. You can then click on the marker and get details related to its location.

**Results**

The results widget will display data depending on where you click on the map. It will give your counties and incident data accordingly. You can further view pdf files of incident data like citations and crash reports from selecting it from the list given.

**Search**
The search tool is used to search for individual events or lists of events rather than aggregated counts about events. The search tools for each application are slightly different because the search criterion for each data source is unique. For example, the eCrash search tool allows the user to narrow the search by “Crash Severity”; this is not an appropriate search criterion for eCite.

While the search criteria for each application vary, the following search functionalities are consistent:

1. Searches are only performed when the user clicks the “Search” button. Simply changing the search criteria does NOT automatically run a new search.

2. The total number of events that match the user’s criteria is displayed at the bottom of the search criteria panel.

3. The “Search Parameters” panel can be collapsed by clicking on the minus sign at the top right corner of the panel. This provides more room to view the results.

4. To sort the search results click on the column header for the value you would like to sort by. If the same column header is clicked again, the results will be sorted by the same value but in the opposite order.

5. Click the “Map” button to add all of the search results to the map. Only those events that have GPS coordinates will appear on the map. The layer will appear in the Active Map Layers widget on the left side of the map with the name you give it on the search page. If a layer with the specified name already exists in the ADVANCE Layers, it will be replaced.
Drill Down is available to users with access to any of the dashboards. It is a tool used to apply multiple filters to a data set to obtain very specific results. These filters can be anything from a person’s age to a type of accident.

To get to Drill Down you must:

1. Have access to a Dashboard such as eCite or eCrash.
2. Login to ADVANCE.
3. From the main dashboard click on the Drill Down tab.
4. Select a variable from the variables list.
5. Select a value or values from the list. To select multiple values hold down the control key while clicking.
6. Click ‘Next’ at the bottom to select a new filter or click the magnifying glass on the right hand side of the value to see a list that fits within the selected filters.
7. When the next page appears, you can select a different variable and repeat the process until you have narrowed your search as desired.
Just like the results on the Dashboard:

- The view of the results in the drill down can be changed by clicking on button.
- Variable can be searched by clicking on .
- Results can be saved by clicking on .
- To add events to the map, click the “Map” button. Only the events from the selected rows will be added to the map.

As you work your way through the Drill Down a filter list is created to the left of the output grid. The list contains details about list you are working with and the selection you have made.

If you would like to remove any of the filters you created while in the drilldown process, click the small “x” that appears beside the filter label above the output grid.
Reports

Reports can be generated as PDF files, Excel Spreadsheets, Word documents or Comma separated Value (CSV) files.

Scheduling:

Adding a Scheduled Report

Reports can be run immediately by clicking the “Run Report Now” button or scheduled to be emailed to you on a periodic basis. To schedule a report to be emailed to you; select the report criteria, enter your email address, select a “Run Frequency”, and then click “Schedule Report.” All scheduled reports run at 12:01 AM.

NOTE: Date ranges selected for a scheduled report are relative to the date the report is run. A report that includes the “Last 60 Days” and is run “Weekly-Sunday” will include events from the 60 days prior to each Sunday.

Managing Scheduled Reports

To manage your scheduled reports, click on the Manage Scheduled Reports Tab at the top of the reports page. Remove a scheduled report, click on the icon at the right side of the scheduled report. To run the report immediately, click the icon and the report will be emailed to you.
Cross Tab enables you to visualize (in tabular format) the intersection of up to three variables (Row, Column, and Third Dimension) narrowed by a filter and time.

A key feature of Cross Tab is the presentation of "Over-Represented" and "Critically Over-Represented" events. Cross Tab allows you to specify a time period using the Date range picker, a Filter (a criteria to query by), and up to three variables. With Cross Tab, you can easily appreciate the "severity" of an event, its occurrence, and dependence on other variables.
To Use Cross Tab:

1. First you must select a date range
2. Next a filter can be chosen from the filter drop down list
3. Then you may select a variable for the Row and Column headers
4. The colors used for the Over-Represented and Critically Over-Represented values may be changed by using the associated color pickers in the sidebar.
   When you are satisfied with the query that you have just created, you may click the red Analyze button to create the Cross Tab table!

Timeline

Timeline is a feature in ADVANCE that will allow you to compare different types of data chronologically on a line chart. The data can be display by three variables here (by day, week or month.) You can get more information by clicking the “View Details” button. This opens up a tabular data sheet that will allow you find more specific details related to the variables you entered to create the timeline. You can also view the information on the map by clicking the
“Map Events” button. You can also export the chart as a .PNG, .JPEG, PDF or SVG Vector image by clicking the export chart button located near the top right hand corner of the chart.

Using TimeLine

To access Timeline click on the button at the top right hand corner of the ADVANCE window.

Next, click the “Add Data Series Button and entering a title, choosing a data source and applying filters. You can dig further with your variables by clicking the “Advanced” button and add more filters. When you are finished setting up your data series then click on the “Save” button.

When you have added all the data series you need you can further modify the display by click on the color picker and choosing the colors you desire. You can also go back and modify your selection by clicking on the “Edit” button made making any needed modifications. If you no longer need the data series you can click “X” button under the “Clear” column to remove it from the chart.
Much like the Timeline, Side by Side allows you to compare different sets of data on a graph at one time. You also have the options to choose different chart types by click on one the chart type buttons at the top of the Side by Side chart window. You can get more information by clicking the “View Details” button. This opens up a tabular data sheet that will allow you find more specific details related to the variables you entered to create the side by side chart. You can also view the information on the map by clicking the “Map Events” button. You can also export the chart as a .PNG, .JPEG, PDF or SVG Vector image by clicking the export chart button located near the top right hand corner of the chart. When using a tabular chart this button disappears and you are given the option to select the chart data by clicking this button.
Using Side by Side

To access Timeline click on the button at the top right hand corner of the ADVANCE window.

Next, click the “Add Data Series Button and entering a title, choosing a data source and applying filters. You can dig further with your variables by clicking the “Advanced” button and add more filters. When you are finished setting up your data series then click on the “Save” button.

When you have added all the data series you need you can further modify the display by click on the color picker and choosing the colors you desire. You can also go back and modify your selection by clicking on the “Edit” button made making any needed modifications. If you no longer need the data series you can click “X” button under the “Clear” column to remove it from the chart.
Feedback

By clicking the Feedback button at the top of the ADVANCE window gives you an opportunity to communicate with us and ask questions, comment or request features to make ADVANCE a better product for you. Once you have opened the ADVANCE Feedback page simply click in the window and enter your questions, comments or suggestions. The developers will receive the feedback and follow up as needed.
FAQ

1. Q: To what data do I have access and who can see my agency’s data?
   A: Data access in ADVANCE is limited by the Alacop privileges for each user. An ADVANCE user will see tabs for each application they have the Alacop privilege to use (eCite, eCrash, ULTRA or eWeight). The only exception to this rule is for agency CEO’s: they can see all application tabs, even if they do not have the privileges to use them. Further, each user can only see data for their Alacop agency(s).

2. Q: Who controls access to ADVANCE?
   A: Each agency’s AISO controls access to ADVANCE. They do this by granting the ADVANCE privilege in ADAPT.

3. Q: How often is the Dashboard data updated?
   A: Every morning at 2:00 AM.

4. Q: What are the null values?
   A: A null value is the value given to a data field when, on a particular record, data has not been entered for that field, or the value of that data field is not a value currently recognized by ADVANCE.

5. Q: What is the difference between a DPS Troop/Post filter and choosing an Agency ORI such as DPS-Birmingham Post in the “Selection Criteria”?
   A: The filters for DPS Troops and Posts key off of the county where a crash occurred or where citation was written while the Agency ORI selection works with the ORI of the user who entered the event.
**Reports Available**

**eCite**

*Citation List By Officer* - The 'Citation List by Officer' report lists brief details for the citations issued by officers on behalf of the selected agency. The citations are grouped first by officer then further by Citation or Warning. Details include Date Issued, County, Work Status, and Citation description.

*Citation Summary By Officer* - This report lists a summary of the warnings, citations, and the total of both for each individual officer in the given agency. This report also includes the total number of these for the current agency.

*Monthly Citation Summary by Officer* - This report lists a summary of the warnings, citations, and the total of both for each individual for every month given within the current date range and agency.

*Monthly Citation Summary for Agency* - This report lists a summary of the warnings, citations, and the total of both for each agency within the given date range. This includes an average of each month and also a total for all months.

*49-CFR Citation List By Officer* - This report lists the amount of citations, the issue date, the county in which the citation was written, the work status, a brief description and the adopted code for each citation written by each officer in the given agency and date range.

*49-CFR Monthly Citation Summary for Agency* - This report lists a summary of the warnings, citations, and the total of both for each agency within the given date range limited by the 49-CFR. This includes an average of each month and also a total for all months.

*CMV Monthly Citation Summary for Agency* - This report compares the citations written for CMVs and for non CMVs within the given time period. This report also gives monthly averages and total for all months in the given time period.

*Officer Citation List* - The report lists details about the citations and warnings a particular officer has written in within the given date range.

**eCrash**

*Crash List By Age* - This report lists all of the crashes within a given date range and displays the results sorted by the age group. Also listed are some details such as the Date and Time, the type (Rear end, Single Vehicle Crash, etc.), the event that caused the most damage, and the severity of the crash. There is also a chart displayed sorted by the age group for quickly determining which age groups had a given number of crashes.
Crash List By Date - This report lists all of the crashes within a given date range and displays the results sorted by the date the crash occurred. Also listed are some details such as the time, severity, location (city, county), and the report "Owner"

Crash List By Sex - This report lists all of the crashes within a given date range and displays the results sorted by the date the crash occurred. Also listed are some details such as the time, driver condition, sex, and the location (city, county) of the crash

Crash List Involving Alcohol - This report lists all of the crashes within a given date range and displays the results sorted by the date the crash occurred and only displays crashed in which alcohol was involved. Also listed are some details such as the time, type (Rear end, Single Vehicle Crash, etc.), severity, sex and location (city, county) of the crash

Crash List Per Officer - This report lists all of the crashes worked within a given date range by a single officer and are display by in order by the date of the crash. Also listed are some details such as the time, type (Rear end, Single Vehicle Crash, etc.), the event that caused the most damage, and the name of the investigating officer (this is listed because the investigating officer is not necessarily the officer that "owns" the report)

Crash Summary By Severity - This Summary displays the total number of crashes that occurred in each month sorted by the severity of the crash. For example, one could look at the graph and determine how many "Property Damage Only" crashes occurred within a particular month.

Crash Summary By Officer - This Summary displays the total number of crashes that each officer within a given agency worked within the given date range.

Crash Summary By Contributing Circumstance - This Summary displays the total number of crashes within a given date range, sorted by their primary contributing circumstance. Also listed within this report are the combination of the weather conditions and the severity of the crash.

Crash Chart By Sex - This chart displays how many individuals of a particular sex (male, female or unknown) were involved in a crash within a given date range.

Crash Chart By Date - This chart displays the number of crashes within a given date range and how many occurred on each date. Also, this chart is sorted by the severity of the crash. For example, one could look at the graph and determine how many fatal crashes occurred on a given date.

Chart By Hour - This chart displays how many crashes occurred(Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range.
**Weekday Chart By Hour** - This chart displays how many crashes occurred (Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range. This Chart only includes crashes that occur from Mon to Fri.

**Weekend Chart By Hour** - This chart displays how many crashes occurred (Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range. This Chart only includes crashes that occur during the weekend starting at 6:00PM Fri to 11:59PM Sun.

**CMV Chart By Hour** - This chart displays how many crashes of CMV's occurred (Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range.

**CMV Weekend Chart By Hour** - This chart displays how many crashes of CMV's occurred (Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range. This Chart only includes crashes that occur during the weekend starting at 6:00PM Fri to 11:59PM Sun.

**CMV Weekday Chart By Hour** - This chart displays how many crashes of CMV's occurred (Involving Alcohol or Not Involving Alcohol) for every hour of the day with in a given date range. This Chart only includes crashes that occur from Mon to Fri.

**eWeight**

**Portable Weight Detail Summary** - This report counts the number of eWeight reports per month.

**UCR**

**Report A** - This report allows you to view counts of the following offenses reported by your jurisdiction for the selected date range: Homicide, Rape, Robbery, Assault, Burglary, Theft, Motor Vehicle Theft and Drug Crimes. It also provides a summary of stolen, damaged, recovered, confiscated, burned and forged property reported by your jurisdiction, and it contains agency statistics concerning assaults on law enforcement officers.

**Arrests by Classification** - This report provides a list of all reported arrests involving a selected offense type for the selected date range. (E.g. List of all robbery or burglary arrests made by your agency.)

**Offenses by Classification** - This report provides a list of all reported crimes involving a selected offense type for the selected date range. (E.g. List of reported robberies or burglaries reported to your agency.)

**Age Race Sex** - This report provides a summary of arrestees grouped by age, race and sex for the following offense types: assault, burglary, damage to property, drugs, DUI, forgery, fraud, homicide, kidnapping, motor vehicle theft, obscenity, other, forcible sex offenses, public order offenses, rape, robbery, theft and weapons law violations.