Cloud Analytics Collaboration Environment

Quick Start Guide

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## Revision History

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1. CACE Workspace

CACE is a browser-based collaboration tool, also known as a Rich Internet Application (RIA). CACE allows cross-functional editing of data and deep collaboration through a user-friendly interface. It was designed with a “Plug and Play” architecture that enables the rapid deployment of UI components to support constantly changing requirements.

1.1 Application Store

Once you log in and are authenticated, all apps assigned to you will be available in the Application Store. The Application Store is located at the bottom-left of the screen in CACE Main Menu (which can be opened by the first button on the Quick Launch Bar.

Clicking the Application Store icon will show the available apps. Click on each application you are interested in. A window will appear with a picture of the application, a description of that application, and a button to Load or Unload the application. Pressing the Load App button will enable that application and load it into the Quick Launch Bar.
Only apps that your administrator permits will show up in the menu. One by one, click on every app you want to enable. Once completed your Quick Launch Bar will look similar to this, depending on the apps you have enabled:

![Quick Launch Bar](image)

*Figure 2: Quick Launch Bar*

### 1.2 CACE Main Menu

The CACE Main Menu consists of the following options:

- **System Info**: This is where you can find the exact version of the software and where CACE developers can get debug information.
- **Forums**: Forums makes it easy to communicate and collaborate with people that you work with daily.
  - **Create Forum**: This command allows you to create a new Forum and invite users to it. When you hit OK, the new Forum appears in the Forum Explorer on the left.
  - **Invite to Forum**: This allows you to invite others to an existing Forum you own. You can pick a name from the list or search for users to invite. All invitees will receive invites on their screen with the option to accept. When you invite someone to a Forum, you can
give him or her write permission, which allows full permissions, or only give him or her read-only permission. The default is read-only permission.

- Request Forum Invite: If there is a Forum you wish to join, you can request an invitation and the owner of that Forum can decide if they want to grant you access. You can also specify if you want write permission to the Forum.
- Rename Forum: This allows you to change the name of the Forum.
- Leave the Forum: This allows you to leave the selected Forum.
- User List: This is a list of users currently online in each Forum. If the user owns the selected forum, several more options become available. The user can change the permission level of users in the Forum, kick users out of the Forum, and pass ownership of the Forum to another user.

- **User Status**: Set the status of chat. Options include: “Available”, “Busy”, “Away” and “Appear Offline”. The first three options also provide the option of setting a custom status message when selected.
- **User Settings**: This menu allows you to change personal preferences, set general settings such as chat display, desktop background, coordinate format and locale.
- **Regions**: Opens the Region Manager to create, update and archive regions.
- **<Your Name>**: You can view your profile and update your password here.
- **System Info**: You can view system, browser and server information here.
- **Administration**: If the user has administrator privileges, this option will be available and will load the Admin page of CACE.
- **Help**: The help tab provides access to the Quickstart User Guide (this document).
- **Logout**: This will log out of CACE.

### 1.3 Quick Launch Bar

The Quick Launch Bar is located on the bottom of the workspace. This tool is used to quickly launch all of your loaded apps. Clicking on any one of the application icons will launch that application. Once started, the application’s icon is shaded with a gray background indicating that that application is active. It will look like this:

![Figure 4: Loaded Apps in the Quick Launch Bar](image)

You can reorder the icons by dragging and dropping them. Hovering over the icon will tell you what app that icon launches. Right-clicking on the icon will allow you to launch or remove that application from your Quick Launch Bar.
1.4 **Saving Layouts**

In the bottom right corner of the workspace is the Layout Storing tool. This allows the user to load pre-defined layouts. Each user assigned a Role will have a pre-defined role layout. Users can create as many new layouts as they desire.

To save layouts, you can follow these steps:

1. Open the apps you wish to have stored.
2. Position the apps on the workspace and in the order and size you wish.
3. Press the “New Desktop” icon and name your new layout.

Hover over each layout to see a preview of that layout. The current chosen layout is bolded in the list. You can also delete a layout or update a, existing layout.

1.5 **Search Tool**

The general search tool is located in the CACE Menu in the bottom left. You can enter a word or phrase into this field to search data stores. Data stores include local data and data in the Cloud.
Searches can also be initiated via the Search Icon in the Quick Launch Bar area at the bottom of the workspace.

The right panel contains a tree to help the user quickly find saved and recent searches. Along the top on the right are icons that let you show search history, rename searches, delete searches, or delete all searches and re-order saved searches.

- **Saved Searches:** These panes show you any queries you saved by pressing the disk icon next to the search pane. Clicking on one of the entries will re-run that query.
- **History:** This displays the queries you have run previously. Clicking on one of the entries will re-run that query. Press the toggle button on the bottom left to access the History or Saved Searches panes.

When searching data stores, the wildcard for any field is *. The * wildcard is supported and can be used to match any sequence of characters except for line endings. For example, the search string my*value
would match anything within a single line of text starting with my and ending with value. The user can also filter and search for results that occurred on, before, after, or between a date/time range. Searching by a geographic region can be done by entering the coordinates manually or by using a region picker to select a polygon, point radius or route search. The polygon search allows the user to draw any polygon around the area of interest. Each vertex is made with a mouse click. The shape is completed with a double click of the mouse. Similarly, a point radius and route region selector can be used to generate the coordinates used for the search.

After doing a wild card search, the search window will appear with results.

![Figure 10: Search App Results](image)

Clicking on a result will bring you to that document or record and bring up the application most suited for its display. For instance, clicking on a video or image file will bring up that file in the Media Player.

![Figure 11: Search App’s Back Arrow](image)

The top left button is the Back button. It will take you back to the Advanced Search screen when first entering search.
The top-right buttons allow you switch between different views (e.g. send all geo-referenced results to the map, view in list view, or charted in graphs). Each search tab section (described below) also has send geo-referenced results to the map just for that section.
There are 2 native tabs at the top that have the results from each of the sections, grouped by type, with the count of results next to the name:

- **Tags:** This tab shows any tags that you have created. Tags in CACE are similar to tags you would create in Flickr or YouTube. The more tags you create for a document, video, or image, the easier you make it for someone else to find.
- **Documents:** This tab shows all documents that have been uploaded to CACE on any Forum you have access to.

CACE is extensible and can be connected to other data stores. These other stores will show up under their own heading and section with the count of items. These data stores include Cloud, AVAA, AIRS, CLAWS, and others. If there is an error searching that data source, the tab will be grayed out. While searching, a spinner will display for that data source.
The Advanced Search lets you search any or all of a specific string, a date range, or region. Each data source also has specific items that can be searched. After inputting filters, select “Add” then “Search”. If you wish to modify the search, make the filter changes then select “Update” then “Search”.

1.6 Message Center

The Message Center is one of the five permanent icons in the Quick Launch Bar. Any updates to any Forum that you are a member of will be appear there. When you first log on each day, you can check your Message Center to see what events took place and what updates occurred. If the mailbox icon has a red badge on it, it will show the number of new messages.

Figure 15: Search App’s Advanced Search

Figure 16: Message Center Icon with Updates
Once you click on the Message Center icon it will display the event sources and the count of new messages. Event sources can include apps and system sources like “Forum Files”. A blue Badger on the alert will show the number of unread alerts of that source.

![Message Center App](image)

**Figure 17: Message Center App**

The buttons at the top-left allow you to show unread messages only, mark all as read, delete a message, or search within Message Center. Unread messages are displayed in bold in pages of up to 40 messages. You can view the next set of 40 messages by using the page controls at the bottom of the window. You can click on the order icons at the top to control the ordering of the messages in the list. Clicking on the message will bring you to the tool that can best display that message such as the Media Player for images or videos.

If a new event takes place while you are working, a brief alert will pop up at the lower right of the workspace and send a message to the Message Center. In this way, you will be notified as soon as an update occurs.

### 1.7 Document Viewer

The Document Viewer Tool allows you to view documents (XML, ppt, pptx, doc, docx, txt, xls, xlsx, pdf) internally to CACE in a viewer. The ability to import/export and view MS Office products provides a simple way to work with these products without having an Office license.
Tabs across the top of the viewer will contain different document results. Click the X to close the tab. PDF files will use the browser’s native PDF viewer which allows searching, navigating, printing to a local or network printer, etc.

### 1.8 Region Manager

The Region Manager allows you to create regions that are searchable by geographic region. A region can be a polygon, line segment (route), point radius, or point. Once created, the Search App, Map App, and IRSync App can reference the region. The line segment can be used to trace a route used by convoys and a bounding box around the route you have specified. The Region Manager uses many of the same tools as the Map app.
Note: Regions show up in the Map App under their own Region Layer. Only you will be able to view the regions you create. You can share your regions with others as described in section 3.8 below.

1.9 Drawing and Text Tools
The Drawing Tools can be used across all apps in CACE. They are displayed above the workspace. The Tools are context sensitive to the app you are using and will only appear at appropriate times.

The tools (from left to right) in the image are: hide/show Forum Explorer, find in Forum Explorer, screenshot, map selection, map zoom in, map zoom out, map pan, map measure tool, point radius, route, point, line draw, free draw, rectangle, ellipse, polygon, arrow, highlighter, text style, fill style, outline style, move up one, move down one, move to top, and move to bottom. Hovering over any of the icons will show a tool tip of what that tool is.
The Find in Forum Explorer tool will select the file in the Forum Explorer that is currently open by the active app.

The screenshot tool allows you to define the area of CACE to take a screenshot or to take a window defined screenshot (control-click). Screenshot files are added to a Screenshots folder in your home Forum and are date/time stamped with their original name.

The Style tool allows you to change the attributes of drawn objects, such as line thickness, color, opacity, fill, and stroke. Stroke will put an outline around an object.

The Text editing tools allow you to change the font type, font size, color, bold, italics, underline, strikethrough, justification, and bullet format of text. They are similar to the tools in Word. There is also an Internet hyperlink tool, which will make any link appear as the standard blue link and enable it to be clicked.

![Text Toolbar](image)

**Figure 21: Text Toolbar**

### 1.10 Connection Indicator

The Connection Indicator reflects your connection status and the quality of the connection. The indicator is located in the upper right next to the Search Box. It is similar to the bars on your cell phone - more bars means a better connection. This is most applicable for remote sites that are not co-located with the server and/or going over a satellite connection.

![Connection Indicator](image)

**Figure 22: Connection Indicator**

Hovering over this icon shows you the communication latency. The status is updated every 10 seconds.

### 2. Forum Guide

#### 2.1 Forum Overview

Forums are persistent collaboration sessions created to facilitate cooperative work processes on a specific topic or between a specific set of users. Unlike existing tools such as mIRC chat, Forums enable you to exchange much more than text. You receive invitations to Forums, where you are able to share your respective intelligence through the use of the various collaboration apps. Forums you have joined or created will be persisted between CACE logins. You can be in any number of Forums at one time. On
the left of the workspace is a list of all of the Forums that you are currently in, along with all of the files and products associated with those Forums. To start with when you log into CACE, you are entered into a Home Forum and into any Static Forums created by your admin. Static Forums are permanent forums with a defined folder structure.

This Home Forum is special in the sense that it does not inherently collaborate with other users. This is the area where you will do your personal work. Work done here can be brought into other Forums to be shared with others. You can also share files from the Home Forum by setting the Sharing mode to “Everyone” instead of the default “Forum Only”. The Sharing mode can be “Read-Only” or “Full” which allows reading and writing.

2.2 Creating a Forum

To create a new Forum and invite other users, mouse over the Forums menu in the Main Menu. At the top of the Forum Creation panel is a place to enter the desired name for the new Forum. After naming, users can be added to the list to receive invitations after the Forum is created. When you enter a portion of or the entire name of a user and push enter, a list of names matching your entry will appear in the list below. Double-clicking on a name in this list will add it to the Invited Users list. Double-clicking someone in the Invited Users list will remove him or her.

If you want to give users Write permission, be sure to check the Write box or they will only be able to view contents in that Forum. After naming the Forum and adding the users to the list of people to be invited, clicking OK to create the Forum. At this point a Forum will be added to the Forum Explorer.

![Figure 23: Create Forum Dialog](image-url)
2.3 Forum Communication – Chat

Once you join a Forum, you are able to chat with everyone in that Forum. Along the bottom of the screen in the Quick Launch bar, you will see a blue bubble called Chat. By clicking it, you can open up the Chat window which is a free-floating window and can be positioned anywhere. It can be undocked from the CACE window and moved to a separate monitor. You can thus have one monitor for CACE apps and one monitor for CACE Chat. The Chat App can also be pinned to the right side of the CACE window as well.

![Chat App](image)

*Figure 24: Chat App*

The default view port is a 2X2 window of 4 simultaneous chats. This can be changed in the User Settings menu along with other chat settings. You will get one windowpane for every Forum you belong to. You can change the view port size to one of 1X1, 2X2, 3X3, or 4X4. If you belong to more Forums than fit on the screen, you can navigate to the next page with the buttons on the top left. Each chat windowpane can be pinned, unpinned, maximized, or moved to a different area by dragging. The design gives maximum flexibility to you so as to let you decide on how you want to display chat.

Chat is compatible with OpenFire, mIRC, and other chat servers. These will be set up for you by your admin. This way you can communicate to non-CACE users via this gateway.

![Chat Statuses](image)

*Figure 25: Chat Statuses*
Your chat status is automatically set to online when you log on. You can change it on the User Status selection of the Main Menu.

Messages you send will show up in the other user’s chat, and will cause their Chat bubble to blink and bounce if it is currently closed. For users who have joined a Forum but are currently offline, the number of messages they have missed will begin showing up next to the Forum name when they log back on as well as in a red badger on the chat icon itself. After a user views the messages, that number will be reset.

Messages can also be sent only to a particular user as well. Clicking on the Add button in the top-right of the Chat app will open a dialog to create new chat rooms. These rooms can be for a Forum you are a member of (if that room is not already open) or a User chat. Clicking on the User tab will allow you to search for a user to start a chat with.

Clicking the Search button on the top-right of the Chat app will allow you to search previous sent and received chats for keywords.

2.4 Forum Explorer
Using the Forum Explorer on the left of the workspace, you can upload files from your computer to CACE, or download CACE files to your computer. The status of your availability is displayed right next to your name.

In addition to uploading and downloading files, you can create/delete folders. The Home Forum is for your private files. The files are not shared with others unless specifically marked otherwise.

![Forum Explorer](image)

*Figure 26: Forum Explorer*
You can drag and drop files from one Forum to another and from one folder or another. It is similar to Explorer View in a SharePoint library.

Right clicking on the root of any Forum allows you to create a new file type.

![Forum's Create New Options](image)

**Figure 27: Forum's Create New Options**

Right clicking on any file allows you to perform multiple options on that file.

![Context Menu for a Map File](image)

**Figure 28: Context Menu for a Map File**

- **Open Map:** Opens the map in the appropriate app.
- **Download File:** This option allows you to download the file from CACE to your computer.
- **Copy File:** This option allows you to copy the file to memory and then go to another Forum or folder and paste it there.
- **Add To Presentation:** Adds this file to a presentation as a new slide.
- **Share With:** Set the sharing level of the file
  - **Forum Only:** Only members of the forum containing this file are able to view it.
  - **This Server (Read-only):** All users can view the file but only members of the forum containing the file can edit it.
This Server (Read/Write): All users can view and edit the file.

- **Lock File:** This option allows others to view the file but not delete it or make changes to it. When locked, right clicking will show Unlock File instead. Also, a View File Locker option will be added that will display the name of the person who locked the file.
- **Archive File:** This option hides the file from the Forum listing but still allows searching of the file through Tags created on that file.
- **Rename File:** This option allows you to rename the file.
- **Delete File:** This option allows you to delete the file from CACE. Note: this does not delete it from your original source that you uploaded it from.
- **View Properties:** This option allows you to view or change details about the file, including the sharing mode. Any file can be set to read-only or have full permissions. If you set a file to “shared” in the home directory, other users will be able to view it or find it via a search. Files that are shared will show up with the share icon by their name. You can also create, update and delete tags. Tags are useful to make the file easier to find through searches.

3. **App Guide**

CACE offers an expansive app library, allowing you to pick from available apps and choose which ones you would like to automatically load upon login. This section will provide a detailed overview of each available app. Apps can be loaded using the Quick Launch Bar on the bottom of the workspace.

3.1 **Case File**

A Case File is an internal version of wiki pages, used to gather information prior to creating a brief. You can search items at the top right of the workspace and add them to the Case File. You can click the ‘Edit’ button at top to modify the Case File. You can embed images within the text, or add links to other media or attach files. Clicking on the attached or embedded files brings them up in their native tools. To link to related media, drag and drop them from their source app or the Forum Explorer to the Case File. All of the Text Tools can be used to enhance the display of the Case File. The Case File app can house all information on an item in one place.
The menu at the top left allows you to create a new file, export the current file, attach files, and detach files. The attachment window is viewed at the bottom of the screen and has a scroll bar. The number in parenthesis tells you the total number of attachments. The history of changes is listed on the right of the screen. Use the arrow at the top right next to the Edit button to hide or show the changes pane. You can see who changed what, and when they changed it. Clicking on the date of the history item will bring you to that version of the Case File. To revert to an older version of the file, click the Revert button.

Note: Fully formatted Word files (*.doc/*.docx) can be imported into the Case File App and all formatting will be preserved. Upload a file to your Forum Explorer. Double click the file to invoke the CaseFile app. CaseFile can also export to *.doc/*.docx files as well.

The Case File app uses the COTS editor tinymce. The Tool Bar looks like this:
The tool bar icons are: screen capture, font, font size, color, background color, bold, italics, underline, strikethrough, four justification types, 2 bullet types, 2 indent, block quote, link, unlink, subscript, superscript, special character, horizontal line, remove formatting, undo, and redo.

The image below shows the Properties window where you can modify the Case File’s metadata:

3.2 Presentation
The Presentation app is a briefing tool similar to PowerPoint. You can click the New Presentation button to begin your presentation. The Create Presentation menu below pops up. Choose from the current forums or make a new forum. Choose the level of classification and the aspect ratio. Finally, name the report and click okay to begin.
The blank presentation is illustrated above. In a presentation, the user has the option to add/delete, rename, or reorder slides and preview the slide show. The user can add notes to each slide in the field at the bottom. The toolbar allows you to create a new presentation, play the presentation, and export the presentation to Power Point. Right clicking on a slide in the slide list on the right allows you to add, or
delete a slide. A full presentation can have one or more slides. You can use the Drawing Tools to add content to a slide, as well as drag and drop media on to a slide to enhance your presentation. The illustration below contains slides with screenshots dragged and dropped onto them.

![Presentation App](Figure 34: Presentation App)

The Presentation App allows for dragging of a videos, images, case files, charts and map files to the slide list. The map will then be linked to the actual map and will change in real time. Right clicking on an image file in the Forum Explorer allows you to add the image to a Presentation.

The presentation may be shared in a Forum, similar to WebEx. Anyone with access to the Forum can see the Presentation on his or her screen as led by the Presenter. The Presenter has the use of the Highlight Tool to draw attention to certain areas of the screen during the presentation.

3.3 Media/AVAA

The Media Tool allows you to view, tag, bookmark, or annotate video, images, and audio. An annotation is simply a drawing on the media and is not searchable. It is similar to a note or comment on a piece of paper. To make the item searchable, you must tag the item. This is similar to Flickr, Tumblr, or YouTube. An example of an annotated video is below:
The metadata about the image is in the pane on the left. The buttons in the top-right allow you to toggle between Annotations and Bookmarks, toggle the display of annotations on or off (shift+s), Edit or Add tags (shift+t), use the measure tool, create alert trigger areas, add an annotation (shift+a), merge annotations (shift+m), edit an annotation (shift+e), and remove an annotation (del).

You can annotate media using the following steps:

- Click the add annotation button. Hold down the mouse button to choose from rectangle, polygon and line annotation shapes.
- A blue crosshair will appear on the media. Left click the exact spot you want the annotation to start from. Hold the mouse button down.
- Drag the crosshair to the exact point where you want the annotation to end at. Release the mouse button.
- In the dialog box, fill in the information you want displayed and metadata about the annotation.
- Once created, you can move an annotation by clicking on any point inside the annotation box. The entire annotation will turn blue. Hold down the left mouse button and drag the annotation to where you want it. Release the mouse button. Click outside the blue box.
- Resize an annotation by clicking and dragging on any one of the corners of the annotation.
You can “follow” a moving object with the annotation by simply following it using the mouse cursor. Select the annotation and drag it on the video as the object moves. The tool will automatically create new waypoints for this new area. Set the State to off-screen when the object is no longer visible or occluded when hidden by another object. Add a new time segment for the same object if it comes back on screen and you still want to track it.

**NOTE:** You must add tags to media that you want to find in future searches. You must also add tags to annotations if you want to find them as well.

Video markup also has the ability to “Bookmark” interesting areas of the video. A bookmark is most useful for a real-time video stream when you cannot pause the video feed. After toggling to bookmark mode from annotation mode, you can use the create bookmark button or rapidly create bookmarks with the enter hotkey. Once the bookmark is started you can start typing a description and hit enter when done or just hit enter a second time and a default description of the time segment will be created. The bookmark description will display in the upper left of the video for 10 seconds. The most recently created bookmark will be on top if there are multiple bookmarks. A thin yellow line marker will display on the playbar to indicate a bookmark at that time segment. You can go back later and review that segment of the video. You can select the bookmark in the list or playbar to move to that time interval in the video. A sample screen is shown below.

![Figure 36: Media App Bookmarks](image-url)
On the top of the annotation list is a series of buttons shown below. The fourth button from the left allows the user to measure a distance in the video. The distance is approximate and based on the metadata associated with the image.

![Annotation Actions](image)

**Figure 37: Annotation Actions**

Select the measure distance button and then move the cursor over to the image or video. Left click at a starting point and release at the desired ending point and a measurement will result on the image as shown below.

![Measured Distance on Video](image)

**Figure 38: Measured Distance on Video**

In the lower right corner of the Media app is a set of buttons pictured below. Use the mouse to hover over each item. They are in order left to right: Toggle Annotation Bar Chart (alt+1), Toggle Map (alt+2), Toggle VNIIRS graph (alt+3), Toggle Chat History (alt+4), Toggle Audio Transcript (alt+5) and Toggle Annotations List.

![Media App Toolbar](image)

**Figure 39: Media App Toolbar**
Selecting the Toggle Annotations Bar Chart button produces the following graph underneath the media player. The green bar represents the time the annotation is visible in the video. If the user clicks on the green box, the video will jump to the time when the annotation first appears.

![Annotations Bar Chart](image)

*Figure 40: Annotations Bar Chart*

Selecting the Toggle Map button shows the map view pictured below. The map view will show the path of the sensor which produced the video as well as the geographic location of any annotations in the video. The user can use the +/- buttons or the scroll wheel on the mouse to zoom in or out on the map.

![Map View](image)

*Figure 41: Map View*

Selecting the Toggle VNIIRS graph button produces the graph shown below. The VNIIRS plugin is run on all ingested videos. If sufficient metadata is available, the VNIIRS plugin will produce values for video interpretability and quality. The interpretability is depicted in the graph. A value of 2 is shown when the metadata does not provide sufficient information for an interpretability score to be determined.

![VNIIRS Graph](image)
Selecting the Toggle Annotations List button will open and close the right panel displaying the annotations.

In the lower left corner of the media app screen is a set of buttons for navigating through the video. The buttons are Hide/Show Details, Playback Rate, Play/Pause, and Mute/Unmute.

Selecting the show details button opens up a side panel with details about the video or an annotation (if one is selected) in the video as shown below. The example shows an identified video with a selected annotation.
Selecting the playback rate button will allow the user to select from the following choices 4x (play video at 4 times faster speed), 2x, 1x and .5 (play video at ½ time slower rate).

The toolbar of the Media Playlist contains buttons to Show/Edit Metadata Information, Create a Playlist, and Add and Remove Playlist Item. Clicking the Create Playlist button will create a playlist file of the currently loaded media in the Forum Explorer. Adding a playlist item will allow media to be added in a variety of ways. This includes live streaming a video by utilizing the URL playlist item type. If the stream is MPEG-DASH or HSL file formats, the browser may be able to stream the video natively. If not, a “@” symbol can be prepended to the IP address to use the VLC plugin for Firefox.
3.4 Alert App

3.4.1 Create Alerts
The Alert App allows the user to create, manage, and view alerts based on a set of user defined time and geographic triggers. An alert is created by adding an Alert Trigger and specifying the following in the Alert Manager shown below:

- name of the alert
- alert frequency
- alert priority
- alert date/time trigger
- geographic location trigger

![Create Alerts](image)

Figure 46: Create Alerts

3.4.2 View Alert Messages
Once an Alert Trigger has been created, Alert Messages are generated and displayed in the Alert Section of the Alert App when tracks are within the location/time criteria defined in the Alert Trigger. Alert messages can be sorted and filtered using the following:

- Alert Message
- Source of the Alert
- Name of the Alert Trigger
- Initial Alert Date
- Latest Alert Date
- Number of Hits

![Alerts Table]

*Figure 47: View Alert Messages*

### 3.5 Tactical Report App

The user can open up the tactical report associated with tracks that triggered the alert.
3.6 Coord Converter (Coordinate Conversion)

This app provides a tool for conversion between different types of coordinates. For example, you can enter coordinates in Decimal Degrees (DD) and have them converted to Lat/Lon. Simply type in the points and click Enter. A Red font will indicate invalid formatted points, in which case you will have to re-enter the data correctly and try again. If all points are valid, the font shows in gray color. You can copy and paste from this field. The drop down box allows you to determine the amount of precision in the display. The tool is especially helpful if you who have multiple coordinates sent to you regularly and need to make conversions. The tool can convert from Military Grid Reference System (MGRS), Universal Transverse Mercator (UTM), Decimal Degrees, (DD), Degrees Minutes Seconds (DMS), and Decimal Minutes (DDM).
3.7 Symbology
The Symbology app works together with the Map app to highlight points of interest. This app can render MIL-STD-2525C tactical icons on an interactive map. Hovering over any icon will give you more details about that icon. Any icon can be dragged from the tool onto the Map app. A symbology icon can also be dragged onto an Event Report in the EVR editor and it will populate the appropriate fields.
The Symbology app is comprised of the following menus:

- **Icon Selector**: To select a new symbol, simply type in the symbol code in the box near the top and press enter. The symbol will be shown on the right. The affiliation and and other modifiers can be easily changed via a pull down menu.
- **Place Symbol**: This allows you to place a symbol on an exact coordinate on the map. A dialogue box will prompt you for the coordinates of the symbol and for which map layer to place it on.
• **Favorites**: This is an area where you can save commonly used symbols. After a symbol is selected it can then be dragged into the favorites list, saving it there for future use. The goal of this list is to save you time from repeatedly having to type in symbol codes you often use. Any icons saved to favorites can also be pulled down on the Map app by clicking the Symbology icon on the top left of the Map app. Favorites can only be stored once in the Favorites Bar. The Favorites section will initially be empty. It is up to each user to populate it.

• **Explorer**: This is an easily navigable hierarchical graphical display of all MIL-STD-2525C tactical symbols. You can type in a search string in the filter box and search for the icon. All icons that match the string will be returned. Double-clicking the item will place the symbol in the main symbol selector. The symbol can be modified by using the symbol code text box or the drop downs before using it.

### 3.8 Map

The Map app can use imagery from any WMS server as well as Google Maps. The first step in using this app is to create a new map view. You can do this by right clicking in the Forum Explorer and choosing New Map View. You will be prompted to give a name for the new map. The map view will then appear in your list of map views for that Forum, and the map itself will be displayed on the screen. If the map is currently configured to use Google Map imagery, you can choose between multiple image views at the top of the screen, including road map, satellite, hybrid, and terrain views.
The buttons in the top left corner next to the screenshot icon allow you to select, zoom in, zoom out, pan, and measure distance between two points. To the right of measure distance icon is all of the standard drawing tools described earlier.

Right-clicking on the map will open its context menu as shown in Figure 53. Options can include the ability to search, copy pointer location, pan to the area, copy the symbol, copy the symbol location, copy all track locations, create a region, toggle the visibility, hide/show all other objects, and remove the item.

Selecting any item on the map brings up more detail about that item including: label, lat, lon, description, attachment, and the ability to edit that information.

The tool bar at the top right allows you to type in specific coordinates using multiple coordinate types, including DD, MGRS, UTM, DMS, and DDM. The layer icon under those tools allows you to switch
between different map servers such as Google Maps or Google Enterprise Server and between different views of the server such as terrain, road, satellite, and hybrid.

In the sample below, the new map was named ‘Kabul’ and was zoomed to the Kabul area using the hybrid view.

![Map App](image)

**Figure 57: Map App**

### 3.8.1 View Controls

![Map View Control](image)

**Figure 58: Map View Control**

**Live View**

The view will allow the user to see all changes to the map as other users make them.
**Independent View**
Changes from other users, including new events and icons, will still display if you are in independent view, but the map will no longer display shared pan/zoom. In this mode, you can move to other locations and not affect the shared map.

**Time Bar View**
This view will allow for the viewing of a map over time to see what transpired over a given time frame. This option is only available when multiple items on the current map have a date associated with them.

### 3.8.2 Symbology Icons
The Symbology icon on the top-left of the Map app is a quick way to bring up symbols added to your favorites. Hovering over the icon will allow you to drag and drop symbols onto the map. Symbols can also be dragged/dropped from the Symbology tool onto the map.

### 3.8.3 Layers
Layers allow you to structure your map components in an orderly and controlled fashion. Typically, friendly forces will go on one layer, enemy on another, graphics on a third, routes and waypoints on another, Regions on another, and live layers on their own. You can also send Search Results to the Map to plot events over a geographic area. The controls on the Layer title bar allow you to add, import, remove, or manage layers. The check box next to each layer allows you to show/hide that layer.

![Layers Tree](image)

The Manage Layers window allows you to re-add previously removed layers to any map. Removed layers are only actually deleted if deleted from this dialog window. You can also use this dialog to display a map layer from another map view within the same forum and add it to the current map view. Shared layers from other forums can also be added.
Right-clicking on the layer allows you to zoom to that layer, toggle simple dots mode, merge layers, rename the layer, share the layer, remove the layer, Export layer as KMZ/KML (KMZ is a standard format that can be read in by non-CACE servers), and clear the layer. Right-clicking on an item beneath the layer will provide the same context menu as if it were right-clicked on the map.

Selecting the layer or any of its children sets that layer as the active layer. This means all newly dropped symbols or drawn shapes will be added to this layer. You can toggle features of an active layer, such as labels, trail, direction of movement... etc. The layer is displayed in a tree view with all of its children being objects drawn on that layer. Clicking the checkbox next to the layer or layer object toggles its visibility. Hiding the layer will also hide all of its children in the map. The layer’s opacity can be adjusted effecting all children objects. In this way, graphics and drawings can be toned down if they are too prominent on the map.
3.8.4 Layer Types

**Graphic Layer**
Graphic layers are layers created by the user to add symbols and shapes as they desire. They are fully editable.

**Live Layers**
A live layer is a layer that is updated in real-time from external feeds such as DDS, COT, Events from the Cloud, or from sensors. Once added, any Events that take place will automatically be plotted on the map to this layer. A Map can have multiple Live Layers, typically one for each feed.

**System Layers**
A system layer is a layer created by the system. This includes the Region Layer that is added to all map views. These are generally not editable.

3.8.5 Search Integration
Results from a search can be plotted on the map by using the Search app’s “Send To Map” button. You can thus do trend analysis over a time period or over a geographical location. Search results sent to the map will show up in their own non-editable layer called Search Results.

3.9 Tasks & Workflows
The Task App allows you to assign tasks to other users, providing them deadlines, detailed instructions, and a workflow that gives step-by-step instructions. Once users are assigned a task, they can step through each workflow step. Others can see what step they are on as they progress. The workflow can
open the correct app and app tab at the start of each step. In this way, the workflow can easily lead a user through their tasks. Once completed, users can drag their completed products (such as Map Views, Case Files, and Presentations) into the product section.

Note: Currently, there is no hierarchy; anyone can see everyone else’s workflows. A future release may remedy this.

The above screen shows the Forums and Tasks list on the left. Click on your task to begin working on it. The Task Details are in the center section. This shows the deadline, instructions, and the progress you have made. The section on the right is the Workflow section. You use the arrow keys to progress from step to step. Finished products are dragged onto the Products section in the lower right.

To create a new Task for someone, click on the Create Task button in the upper-left. Name the Task, give a deadline, detailed instructions, assign it to a user or to a Forum, and then choose one or more Workflows that will give the user the steps needed to complete the Task. When finished adding Workflows and instructions, press the Publish Task button so that the Task is assigned to that person or Forum. The Task is private to you until you publish it.
The above screen shows the Workflow Manager screen. The list on the left is steps in a Workflow. The Details section in the center allows you to give a title to the Workflow and any detailed instructions. The section on the right allows for very detailed and programmatic instructions detailed below:

- **Open Action** – This details what happens when the step is initiated.
  - None – Just moves to the next step.
  - App – Opens an app such as Case File or Map. The last loaded file in that app will display.
  - File – Opens a specific file in that file’s native viewer. For instance an image file will be opened in the Media app and a map file in the Map app.

- **Supporting Files** – When the Open Action is File, you can assign a specific file to that Workflow that will be used and opened in the file’s native viewer. For instance, you can assign a specific case file or map view. Leave this blank when creating a Template and fill it in when assigning as a Workflow Task.

- **Progress** – This determines what happens when the next step is invoked.
  - Next – Go to the Next step.
  - Decision – Allows for looping, If/Then/Else, Case Statements, etc. Each Decision Point must be given a specific step. Make the text clear and specific so that a user can figure out which step to pick.
  - Jump To – Allows for breaking out of a loop.
Complete – The final step must be the Complete step to signify the end of the Workflow. Without a Complete step, the Workflow never ends.

- Decision Points – The steps used in a Decision statement.

### 3.10 EVR Tool

The EVR Tool allows you to query/edit/add to the Cloud Database. It will display all of the sections of the data model and show counts of each section that has data. You can open the tool by right clicking on the map and choosing an event at that location. You can also click on the icon in the Quick Launch Bar to open the tool as well.

The tool will dynamically read the structure of the database and create sections with icons for convenient grouping of related data. If a section is populated with data, a red badger will appear on that icon with a count of the number of records. Sections can have sub-sections that will also be displayed with icons and badgers, if applicable. It is best to make all changes to all fields at once and then click on Save. If you click on Save after you update each field or Section, an Alert will be generated to all users connected to this Event after each change. By waiting until the end, only one Alert will be generated.

Where applicable, pull down menus will accompany each field to show the available responses. Fields without pull down menus allow free form responses.

#### 3.10.1 9-Line

Each record has baseline information known as the 9-Line. It contains the OP Graphics symbol, which can be dragged from the OP Graphics tool onto the EVR Tool, the Event Name that can be typed in or come from the OP Graphics symbol, UIC, Event Start/End, Geolocation, Originator, CCIR type, Event Type, Event Status, and Security Classification.

![Figure 65: 9-Line](image)

#### 3.10.2 Security Classification

Each field has a pull down menu next to it that contains a security classification. Security can be increased but never decreased. If your security level is below the level of a field or your PIR is lower, the field will show as a black box so that the information is redacted.
A full example screen is below:

Clicking on the sections with red badgers will bring up a screen of that section. The casualty screen:
3.11 Standing Query App

The Standing Query App allows you to create recurring queries and automatically receive query results from the Cloud when there are matches to the terms of the Standing Query. The Standing Query App also allows the publication of a Tip/Cue to a remote handheld device.

The first step in creating a Standing Query is to create a Specific Information Request (SIR) in your local ISR tool and use the tool to open the Standing Query App. You will be brought to the Standing Query tab. A natural language processor will break down the request into blue search term candidates. You can double click on the search term candidates (or any text) and add them to your query using And, Or, and In (within a defined Region). All of the terms in an And will appear on the same line. When completed, click the Create Query button.
After clicking Create Query, a dialogue will ask you to name the SQ, describe it, prioritize it, create an expiration date, and route it to appropriate people for the creation of Tips/Cues. If COIST is in the distribution list, then the system is in the COIST in the Loop mode; the COIST must manually send the Tip/Cue. Clicking Send is the final step to the creation of the SQ.

To modify or cancel the SQ, click the Query Manager tab. This will show all of the SQ’s, their color-coded priority, and their state (Active/Expired). Click the query to modify it.
Figure 71: Standing Queries Waiting for Results

To view the results of the SQ, click the Results tab. The SQ will appear as below:

Figure 72: Result List for a Standing Query

To view the detailed results in the Document Viewer, double click and a results screen will appear:
Figure 73: A Result from a Standing Query

Click the Map icon in the upper result to send the results to a Map view.

Figure 74: A Map View of the Results

To send a Tip/Cue, click the Tip tab or while a result is selected, click the Light Bulb icon. Alternatively, right clicking on any map icon will reveal a menu from which Tip/Cues can be sent. Set all of the appropriate information and then click the Send Tip button.
Figure 75: Creating a Tip/Cue