

TSA User Administration Solution



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TSA's WebEOC Environment

- **6,300+ WebEOC user accounts dispersed all across the country**
- **82 Production boards to maintain and develop**
- **5 separate WebEOC systems to maintain**
 - Production – Contains real-world data and Nationwide Exercises
 - Training – Used for Development, BETA Testing, Training
 - ITE – Used for final system testing before implementing in Production
 - ITE Training – Used for initial system testing
 - Azure – Used for external system data ingestion testing (RAPID)

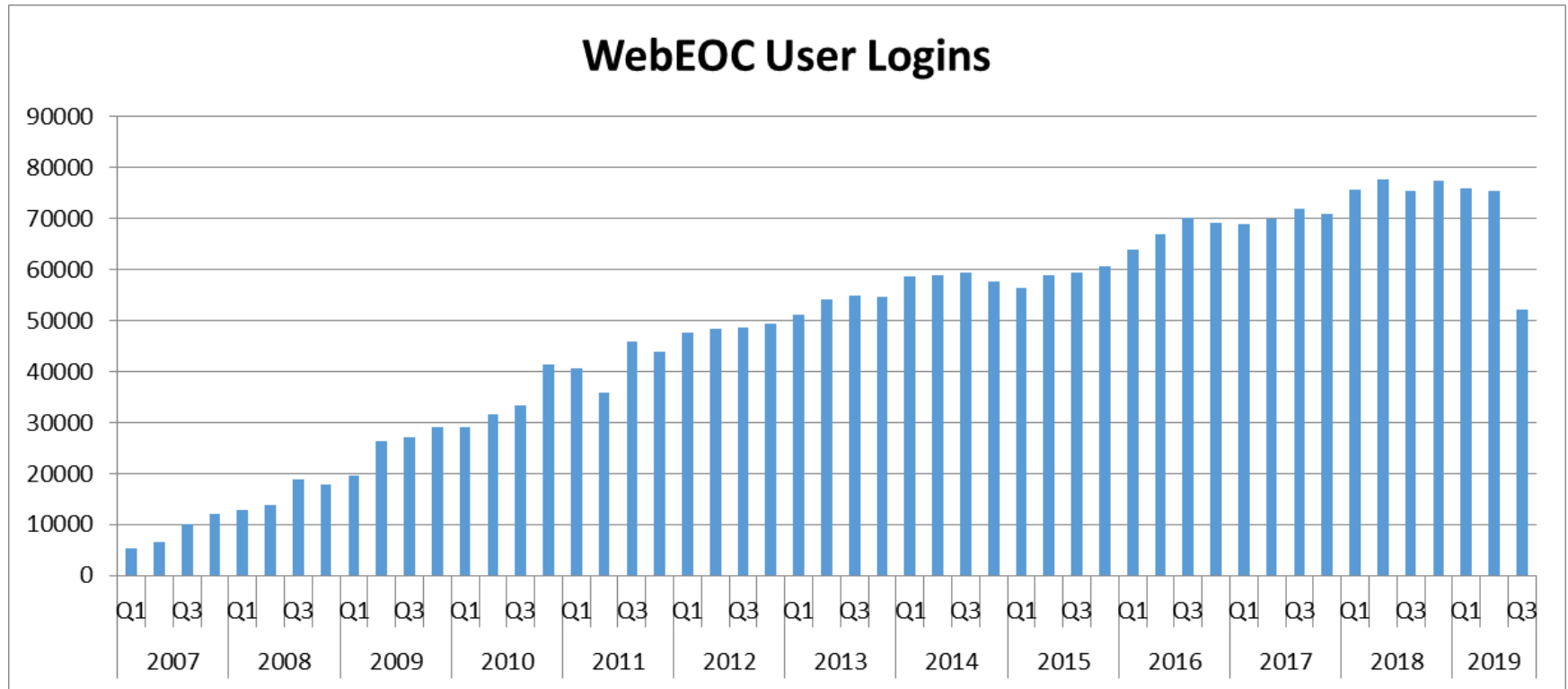
TSA WebEOC Daily Ops and Incident Management

- Our system primarily utilized for as a daily incident management system (Daily Ops)
- Most users have one or many Daily Ops positions to track and provide Situation Awareness 24x7 for daily incident operations
- If our users login to support large scale, multi-day events, then they use Incident Management positions which provides another suite of boards to support large activations.

WebEOC User Administration - Positions

Partition	Position 1	Position 2	POC Name	POC Email
Edit TSOC Watch Floor	TSOC Daily Watch Officer	TSOC Daily Watch Officer		
	TSOC Watch Officer Incident Management			

TSA's WebEOC Growth Over Time



TSA's WebEOC Team

- **John Bogers (System Owner)**
- **Greg Birr (IT Lead)**
- **Joan Koss (Program Analyst)**
- **CACI Development/Support Team**
 - Doug Leech
 - Elyse Schaya
 - Luther Ramsey
 - Michael Hairston
 - Matthew Straub

WebEOC Administration Dilemma

- **6,321 users, utilizing 82 boards (246 including Training), logging into 549 positions (1,098 including Training), between two WebEOC systems**
- **Our team does not have the bandwidth to actively manage user access**
- **All user permissions in the Production system need to be replicated in the Training system**
- **No single individual can effectively know each user's required permissions with users all across the country**

Ideal Solution

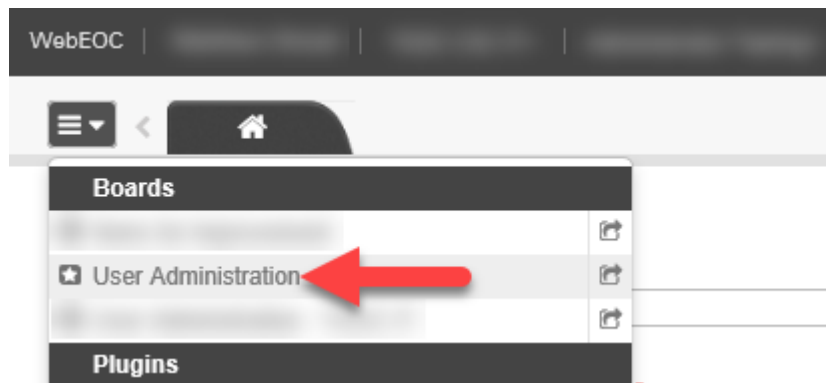
- **Establish points of contacts (POCs) for each Position in WebEOC in order to manage (add/remove) user permissions within WebEOC, without making POCs Partial Administrators**
- **Every permission change in Production needs to replicate to the Training environment as well**
- **All permission changes need to be permanently documented until the end of TSA's data retention period**
- **Required Quarterly User Audits need to be easily initiated, tracked, and reported on**

Current User Administration Board Solution

- **Our previous solution was a Microsoft InfoPath form utilizing the WebEOC API**
- **The InfoPath form was replaced by the User Administration board to provide a more seamless user experience, provide our development team more control, and an enhanced audit trail**
- **User Administration board is broken into five key areas**
 - Positions List
 - Users List
 - Requests List
 - Audits List
 - External Request Form

Positions List

- **Lists all currently active WebEOC Positions**
 - Categorized into Partitions and Groups for easier filtering
 - Contains 1-2 approving POCs
 - Contains 1-2 Positions (Daily Ops and Incident Management)
 - Parent record for subsequent Request and Audit child records
 - Assigned to every Position in WebEOC



Administrator's View

Ability to edit Positions

Access Requests, Add Users, and Audit Users

Ability to add Positions

Access to other views

WebEOC User Administration - Positions

+ Create Position Users Requests Audits Toggle Refiners

	Partition	Group	Position 1 Position 2	POC Name	POC Email	Alt POC Name	Alt POC Email	Requests	Add User	Audit Users	Last Audit
Edit	AFSD FAMS	AFSD	AFSD-LE Daily Ops					View	+ Add	- Audit	08/22/2019 17:25:38
Edit	COOP	ADM (OECs)	COOP ADM					View	+ Add	- Audit	05/08/2019 09:44:56
Edit	COOP	ADM (Team Members)	COOP ADM Member					View	+ Add	- Audit	05/08/2019 09:45:10
Edit	COOP	APM (OECs)	COOP APM					View	+ Add	- Audit	05/08/2019 09:45:26
Edit	COOP	APM (Team Members)	COOP APM Member					View	+ Add	- Audit	05/20/2019 10:08:41
Edit	COOP	CC (OECs)	COOP CC					View	+ Add	- Audit	05/08/2019 09:45:53

POCs View

- Shows only Positions which the user is a POC
- Can view requests, add users, and audit users
- Cannot access any other view (Users, Requests, or Audits)
- Cannot edit/create Positions

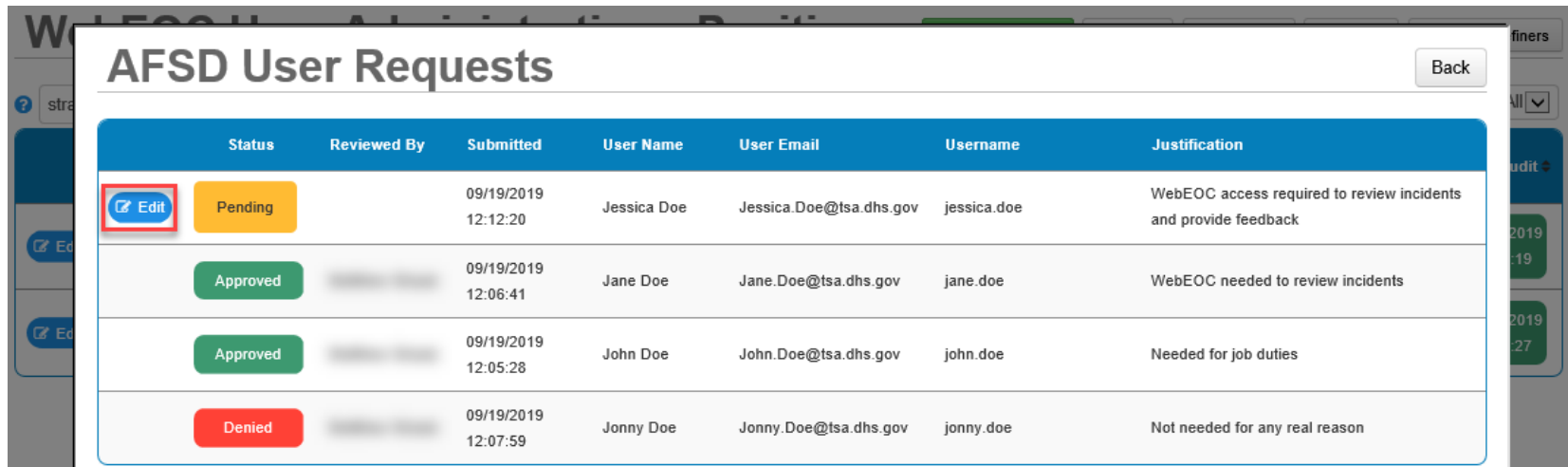
WebEOC User Administration - Positions

Toggle Refiners


Partition	Group	Position 1 Position 2	POC Name	POC Email	Alt POC Name	Alt POC Email	Requests	Add User	Audit Users	Last Audit
AFSD FAMS	AFSD	AFSD-LE Daily Ops					1 Pending	+ Add	- Audit	08/22/2019 17:25:38
OSO	ICE Bulk Cash LNO	ICE Bulk Cash LNO					View	+ Add	- Audit	09/13/2019 07:10:22

POC User Request Review

- Clicking “Requests” button shows a list of all requests for the Position
- Previously Approved/Denied shown as read-only
- Pending Requests can be edited for review



The screenshot displays the 'AFSD User Requests' interface. It features a table with columns for Status, Reviewed By, Submitted, User Name, User Email, Username, and Justification. The first row is highlighted in blue and has a red box around the 'Edit' button. The other rows are in white with green 'Approved' buttons or red 'Denied' buttons. A 'Back' button is visible in the top right corner of the modal.

Status	Reviewed By	Submitted	User Name	User Email	Username	Justification
 Pending		09/19/2019 12:12:20	Jessica Doe	Jessica.Doe@tsa.dhs.gov	jessica.doe	WebEOC access required to review incidents and provide feedback
Approved		09/19/2019 12:06:41	Jane Doe	Jane.Doe@tsa.dhs.gov	jane.doe	WebEOC needed to review incidents
Approved		09/19/2019 12:05:28	John Doe	John.Doe@tsa.dhs.gov	john.doe	Needed for job duties
Denied		09/19/2019 12:07:59	Jonny Doe	Jonny.Doe@tsa.dhs.gov	jonny.doe	Not needed for any real reason

POC User Request Approval/Denial

- Setting “POC Approval” to “Approved” and saving adds the user to the Position in both WebEOC and Training using the API
- User receives an automatic welcome email
- Setting “POC Approval” to “Denied” and saving sends the user a automatic denial email with the POC’s reason

AFSD User Request

Cancel Save

User Request

Please enter/review the information for the user who needs WebEOC access and approve or deny the request. An email will be sent to the user for instructions on how to access WebEOC, or steps to add justification and resubmit if their request is denied.

*User First Name	Jessica	*User Last Name	Doe
*User Email	Jessica.Doe@tsa.dhs.gov	*Username	jessica.doe
Justification			
WebEOC access required to review incidents and provide feedback			
POC Approval			
Approved			

Approval/Denial Automatic Email

WebEOC permissions have been granted for user 'jessica.doe'.

Position Assigned: 'AFSD-LE Daily Ops'.

To access WebEOC, browse to <https://webeoc.tsa.dhs.gov>, and to access WebEOC Training, browse to <https://webeoctraining.tsa.dhs.gov>.

WebEOC utilizes Single Sign-On so a username and password is not needed.

For WebEOC questions and support, please email us at TSOC.WebEOC@tsa.dhs.gov.

Thank you,

WebEOC Support
TSOC.WebEOC@tsa.dhs.gov

The WebEOC permission request for 'AFSD-LE Daily Ops' has been denied by the POC for user 'jonny.doe'.

POC Denial Reason: WebEOC access is only granted if required for job duties

If this request has been denied in error, the requestor may submit another access request with a more detailed 'Justification'.

For WebEOC questions and support, please email us at TSOC.WebEOC@tsa.dhs.gov.

Thank you,

WebEOC Support
TSOC.WebEOC@tsa.dhs.gov

Non-POC View

- Users which are not POCs of any Positions are shown no records
- A link is shown to the External WebEOC Access Request form

WebEOC User Administration - Positions

Please submit a [WebEOC Access Request](#) to request additional access for yourself or somebody else.



Link to External
Request Form

External User Request Form

- .NET Form hosted on the WebEOC server
- Used by non-POC users to submit requests into the User Administration board using the API
- Pulls Position data from WebEOC using the API

WEBEOC USER REQUEST FORM Welcome

New User Information

Please use this form to request access to WebEOC. Enter your user information below. Note that your Username must match your TSA account name. If you are filling out the form for yourself, use the "Insert your username" link. If you are filling out the form for someone else, their username is typically the first part of their TSA email address. The username for "john.doe@tsa.dhs.gov" would be "john.doe".

* First Name: * Last Name:

* Email: * Username: [Insert your username](#)

Justification:

Partition and Group

WebEOC is separated into many groups with different functions. Choose a Partition, then Group for which you are requesting access. The POCs for your selected group will display below.

* Partition: * Group:

Primary POC: Alternative POC:

An email will be sent to the POCs for review. Once approved, the account will be created and an email will be sent to the new user with instructions for accessing WebEOC.

Click "Submit and Close" if this is your only request, or "Submit and Reload" to submit and load an empty form for further requests.

Please contact tsoc.webeoc@tsa.dhs.gov with any questions.

Notification Plugin

- Needed to email POC's to review requests submitted from the External Request form
- Juvare created a Notification Plugin which has a Scheduled Task that runs every minute and sends emails for new requests
- Board field values are included if within brackets “[”]

New User Configuration

New User Board	User Administration - PROD
Email Subject	WebEOC User Request Pending Approval
Email Body	Please log into WebEOC, open the User Administration board, and review the users requesting access to '[position1]'. You may access WebEOC by browsing to https://webeoc.tsa.dhs.gov .

Audits (Permission Removals)

- Lists all users which have access to the Position
- Shows name, last login date, and requesting Justification
- Loops through each user checked for removal and removes access from both WebEOC and Training
- If no more Positions assigned then the user is deleted

AFSD-LE Daily Ops - User Audit

Cancel

Save

The Audit Form allows WebEOC Point-Of-Contacts (POCs) the ability to view and remove user access for the Positions they are responsible for.

Username	Email Address	Last Logged Into WebEOC	Justification	Remove
[REDACTED]	[REDACTED]	9/19/2019 1:45:33 PM	Required for job duties according to manager	<input type="checkbox"/>
[REDACTED]	[REDACTED]	9/19/2018 7:53:58 AM		<input checked="" type="checkbox"/>
[REDACTED]	[REDACTED]	12/14/2015 1:48:12 PM		<input type="checkbox"/>
[REDACTED]	[REDACTED]	9/19/2019 1:46:53 PM	Directed to request access	<input type="checkbox"/>
[REDACTED]	[REDACTED]	9/20/2018 2:32:10 PM		<input checked="" type="checkbox"/>
[REDACTED]	[REDACTED]	9/30/2018 11:38:59 AM		<input type="checkbox"/>
[REDACTED]	[REDACTED]	9/12/2018 9:40:08 PM		<input type="checkbox"/>

Mandatory Quarterly Audits

- Require all POC's to complete an Audit each quarter to ensure appropriate access
- Can review Audit completion from colorization on the Display
- Remove all boards within Positions which fail to complete the Audit until POC's comply
- Report is provided to leadership after the Audit which shows number of users removed and number of current users

Position 1 Position 2	POC Name	POC Email	Alt POC Name	Alt POC Email	Requests	Add User	Audit Users	Last Audit
TSOC FFDO Watch								09/24/2019 11:02:14
Rail Compliance								07/09/2018 12:40:13

Audit Complete (Callout for 09/24/2019)

Audit Pending (Callout for 07/09/2018)

Removed Users

- All Audited users are stored in a “Removed Users” List
- Shows who was removed, from what Position(s), by whom, when, and if the user account was fully deleted
- Useful when users claimed they recently had access, and for auditing purposes
- Can see this in the WebEOC Audit Log, but TSA archives the log quarterly for performance

WebEOC User Administration - Audits

Positions Users Requests Toggle Refiners

Username Audited	User Deleted	Position Audited from 1	Position Audited from 2	Username that Performed Audit	Date Audited
	Yes	SAC NWK Daily Ops	SAC NWK Incident Management		09/23/2019 14:01:55
	Yes	TSA OIT Daily Ops			09/23/2019 13:44:35
	Yes	TSA OIT Daily Ops			09/23/2019 13:44:29
	Yes	TSA OIT Daily Ops			09/23/2019 13:44:19
		TSA OIT OED/GWO			09/23/2019 13:43:19
		TSA OIT OED/GWO			09/23/2019 13:43:16

Users List

- Lists every current non-Administrator user
- Only accessible by Administrators as it grants full control
- Able to add/remove multiple Positions simultaneously from WebEOC and Training
- Automatic email is sent to all Position POC's affected

User Permissions Cancel Save

User Account

*Real Name

*Email Address

*Username

Permissions

Available Positions

- ASO - NCIC
- CBP NTC-P Watch
- CIMG ADM
- CIMG APM
- CIMG CC
- CIMG CoordGroup
- CIMG CP
- CIMG CRLOTE
- CIMG EPS
- CIMG ES
- CIMG ESVP
- CIMG FO

Assigned Positions

- AFSD-LE Daily Ops
- TSOC Daily Watch Officer
- TSOC FAMS ICS

Ensuring Production and Training Match

- API calls can occasionally fail (system outages, network issues etc.)
- Created .NET application to compare various aspects between the Production and Training WebEOC systems
- Users are compared to ensure the identical access for all users

Line	Diff	Source(Production)	Line	Diff	Destination(Training)
00061	01	name=Aircrews API	00061	01	name=Aircrews API
00062		name=	00062		name=
00063		name=	00063		name=

Error Handling

- External user Request Form and User Administration Board populate a User Administration error log
- Custom .NET application which compiles errors with the WebEOC error log to provide visualization, categorization, counts, and trends
- Errors are then able to be viewed to begin troubleshooting

Category ▾	Server	Count	9/24
	218	9	7
User Board	219	6	6
	219	2	2

```
2019-09-24 14:20:07.568:
ERROR: Error occurred while Removing User or Removing User Permission in TRAINING.
System.Net.WebException: The remote server returned an error: (500) Internal Server Error.
  at System.Net.HttpWebRequest.GetResponse()
  at userAdmin.postRemovePosition(String userName, String position, String creds, String apiURL)
  at userAdmin.ProcessRequest(HttpContext context)
```

Planned Future Enhancements

- **Build Active Directory LDAP Queries to automatically populate/verify user data**
- **Make POC's per Position a related list (currently allows 2)**
- **Allow User Requests to submit multiple requests within a single submission, instead of the current single request**
- **Convert current SOAP API call to REST to remove the need for additional server-side Web Handler files (.ashx)**

Questions or Comments



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