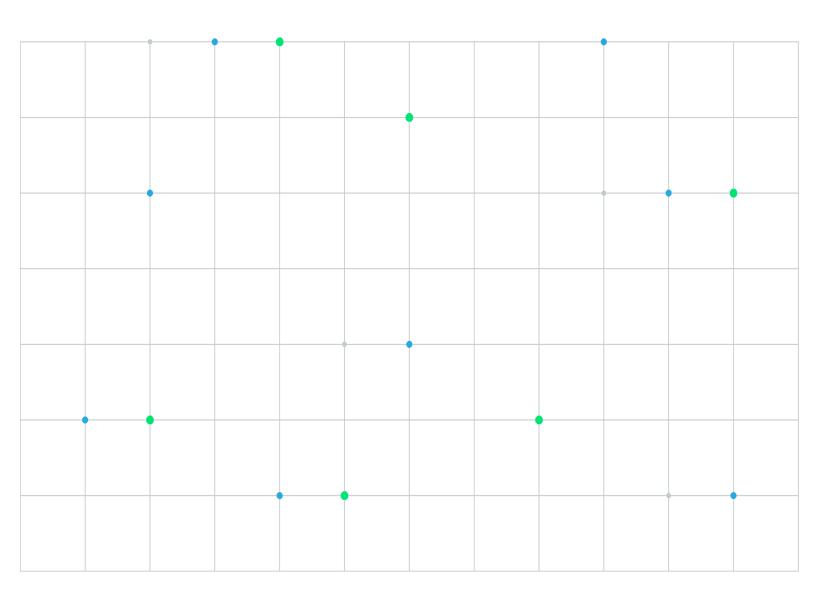


CME Customer Center User Manual

19 November 2025



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Getting Started

The CME Customer Center is used by clearing and execution / trading firm users to create and manage entity and user requests to a variety of CME Group applications and services.

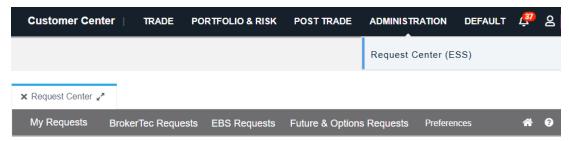
Authorized clearing and execution firm administrators can access the following functions:

• Customer Center menu: Select applications and services from a common navigation menu.



Available selections are based on assigned permissions.

<u>Request Center (ESS)</u>: Self-service functions for managing <u>Futures & Options</u>, <u>BrokerTec</u>, <u>EBS</u> entity requests; including <u>Clearing Firms</u>, <u>Front End Systems</u>, <u>Globex Operator ID</u> / iLink Order Entry Session <u>Permissions</u>.

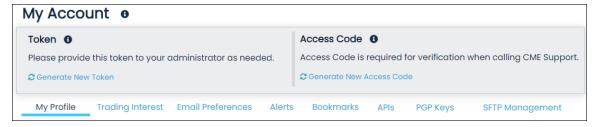


- User and Firm Administration: Assign admin manager / application admin / application user entitlements and manage firm user access to applications and services.
- <u>CME Group Login</u>: Manage CME Group Login Profile and Preferences; including user contact information, <u>API</u>, <u>SFTP</u> and PGP IDs.

CME Group Login is a self-service, centralized user profile service for authenticating access to CME Customer Center services and tools.

My Account

Use the My Account function to access additional services.



- My Profile Manage user contact information and multi-factor or federation authentication
 - Reset forgotten password
 - Generate an access code when contacting CME Group for support.
 - To complete application access, generate a token to provide to your firm administrator
- Trading Interest Receive more educational information for the selected interests.
- Subscription Center -Sign up to receive email communication for topics of interest.

- Bookmarks Save CME Group website content for reference.
- <u>API Management</u>: Create and manage IDs that are used to authenticate system-to-system communication to CME Group applications.
- PGP Key Management: Upload and manage PGP public keys which are used to view encrypted reports, sent by email.
- <u>SFTP Management</u>: Create and manage IDs and secure profiles to authenticate access to view reports over a secure connection.
 - BrokerTec / EBS SFTP Support

For information on additional functions (e.g. User Profile or authentication, Duo, Federation), refer to the CME Group Login User Help.

What's New

The list below illustrates the updates made to the CME Customer Center user manual.

Date	Topic	Description
November19, 2025	Personally Identifiable Information	Instructions for the PII function are added. This function is used to provide required information for MiFID regulatory requirements.
October 31, 2025	EBS - Globex User Signature BrokerTec - Globex User Signature	On the list of GUS identifiers, a header bar displays the currently selected AG/Registered Entity.
October 20, 2025	various	Updated Request Center name to Request Center Enterprise Self Service (ESS); excluding user entitlements.
July 22, 2025	Futures and Options Requests - Tag 50 (Globex Operator ID)	Date of birth is indicated as required and hidden after initial submission.
July 21, 2025	Futures and Options Requests - Cancel on Behalf	Users can enable/disable cancel on behalf functionality for up to 10 sessions.
July 15, 2025	EBS Requests Globex User Signature	Updated Step 3. Order Entry Products to include FX Spot+ product selection/assignment.
July 8, 2025	Drop Copy Groups	Support for MGEX as a partner exchange has ended (last day of trading June 27, 2025) and references to Minneapolis Grain Exchange / MGE / MGEX have been removed.
May 17, 2025	Futures and Options Requests Globex Firm ID Drop Copy Group Order Entry / iLink Sessions Operator ID / Tag 50 Cancel on Behalf	Updated Futures and Options Requests functions and entry fields
October 11, 2024	EBS Requests - Globex Firm IDs	updated transaction reporting information
October 11, 2024	 BrokerTec Requests - Algorithmic Trading EBS Requests - Algorithmic 	Manually entered certification details are required (ATS Team Members, Algo Testing & Procedure Declarations, Key Contacts)

Date	Topic	Description
	Trading	
September 20, 2024	 PGP Key Management Secure File Transfer API IDs 	Updated My Account (Profile) navigational menu
September 11, 2024	Cancel on Behalf	Added instructions for managing cancel on behalf functionality for GFIDs managing futures and options orders / mass quotes
September 9, 2024	SFTP Support - BrokerTec / EBS	added SFTP support topic and frequently asked questions
May 6, 2024	BrokerTec Requests - Globex User Signature	Added instructions for expiring a GUS
May 6, 2024	EBS Requests - Globex User Signature	Added instructions for expiring a GUS
March 22, 2024	EBS - Globex Firm ID	Added required MiFID article 26 compliance question, all UK/EU market participants must specify intended compliance with transaction reporting requirements.
March 22, 2024	BrokerTec - Globex Firm ID	Added required MiFID article 26 compliance question, all UK/EU market participants must specify intended compliance with transaction reporting requirements.
March 22, 2024	BrokerTec - Globex User Signature	UK / EU Market participants must specify the short code and register person identifier information (PII) at the upload facility.
March 22, 2024	BrokerTec - Globex User Signature	UK / EU Market participants must specify the short code and register person identifier information (PII) at the upload facility.
September 25, 2023	BrokerTec - Algorithmic Trading EBS Algorithmic Trading	For system certification, users can upload a pdf file or manually enter required algorithmic system operating details
September 8, 2023	FirmSoft User Administration	Authorized firm admins can perform additional entitlement management functions directly from the Edit Entitlements screen.
August 25, 2023	BrokerTec - Globex User Signature EBS - Globex User Signature	New feature that enables cloning a GUS, including the configuration details
June 20, 2023	User / Firm Administration	New User Administration role for BrokerTec / EBS - Risk Management Tools API
January 23, 2023	Globex Firms	New function: Enable Cancel on Behalf function

Date	Торіс	Description
November 21, 2022	EBS Requests - Globex User Signature	Added note: if GUS will be used by prime client / bank, the email domain must be registered prior to creating the GUS.
August 8, 2022	Secure File Transfer	Additional details for SSH authentication and PGP encryption and its use for sending / receiving encrypted files
July 13, 2022	EBS Requests - Globex User Signature	Making user entitlements pending / active
June 11, 2022	EBS Requests - Globex User Signature	Reviewing submitted requests
May 18, 2022	Algorithmic Trading - EBS	new module to associate algorithmic automated trading systems with a GFID / GUS
March 22, 2022	Secure File Transfer Management	reorder SFTP ID creation: Complete authentication / encryption, multi-factor authentication before generating the password.
March 4, 2022	EBS Application Roles	Added application roles that can be assigned from the User Administration function
January 28, 2022	Secure File Transfer Management	Accessing SFTP Data and Reports: Added EBS connection IP address
January 25, 2022	Secure File Transfer Management	SFTP post trade report registration form link updated
December 28, 2021	Secure File Transfer Management	EREP and SFTP report registration form links added
December 5, 2021	Secure File Transfer Management	Added instructions for EBS report request and setup
October 20, 2021	Algorithmic Trading	Added instructions to update Algo owner information
October 2, 2021	API ID Management, PGP Key Management, SFTP	Additional topics added to assist users to manage My Account functions
September 10, 2021	Algorithmic Trading	BrokerTec EU customers are required to certify algorithmic trading systems annually.
June 20, 2021	BrokerTec Requests - Globex Firm Id	BrokerTec EU customers must provide additional information on the NEX Upload Facility for BrokerTec EU.
April 12, 2021	BrokerTec Requests	Added Globex Firm ID, Globex User Signature video tutorial.
April 9, 2021	BrokerTec Requests	Globex Firm ID, Globex User Signature process updates.
February 19, 2021	various	renamed Tag 50 to Operator (also called Globex Operator ID / CME Globex Operator ID)
December 5, 2020	User / Firm Administration	Consolidated User Administration instructions for simpler navigation.

Date	Topic	Description
		Added BrokerTec User Admin roles
April 3, 2019	Managing Tag 50 Registering Tag 50 ID	Associated entity includes two character Firm ID. Authorized trading firm users can register a Tag 50 ID and submit to clearing firm for approval.
June 14, 2019	Registering Tag 50 IDs	Added required date of birth field.
November 8, 2019	Tag 50 ID / Registering Tag 50 ID	video overview and tutorial guides steps required to create tag 50 IDs.
October 4, 2019	Registering Tag 50 IDs	Adding clearing firm selections
September 5, 2019	User Administration - Positions	Removed. For administrative instructions for Positions, refer to FEC Plus / FEC+.
August 23, 2019	My Profile	Updated links to CME Group Login
June 4, 2019	<u>User Administration -</u> <u>FirmSoft</u>	updated application name, FirmSoft Administration to FirmSoft
May 7, 2019	Request Center - Globex Requests - iLink Sessions	Updated iLink Sessions table: Key ID / Expiration Date with key management options - generate, download, delete
March 4, 2019	Incentive Programs	Removed Request Center - Incentive Program
February 11, 2019	<u>User Administration -</u> <u>FirmSoft</u>	New self-service administration functionality for managing FirmSoft application entitlements.
February 11, 2019	User Administration - All	Revised and reduced instructions for all user administration self-service applications.
November 30, 2018	Registering Tag 50 ID	Clearing member firm administrators can register tag 50 ID for individuals and ATS teams
October 19, 2018	Incentive Programs	Background Attestation - Annual Enrollment
October 1, 2018	Globex Firms	Additional guidance for clearing firm relationship updates.
September 7, 2018	My Preferences	Added user selectable themes and backgrounds and website tiles.
August 14, 2018	iLink Sessions	Submitted iLink sessions are created directly and do not require clearing firm administrator approval.
August 4, 2018	Viewing and Managing Tag 50 IDs	A list of available Tag 50 IDs can be exported.

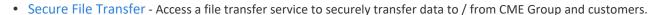
Date	Торіс	Description
July 24, 2018	Drop Copy Groups	Target sessions cannot be directly deleted; Drop Copy Group only. Contact GAM for assistance
June 1, 2018	Viewing and Managing Tag 50 IDs	Authorized users can receive entitlements to view Tag 50 ID details for their firm. Admin Manager users can authorize user entitlements for users to view and / or manage Request Center self-service capabilities.
June 1, 2018	<u>User Administration</u>	Updated available Request Center Roles / Entitlements: Tag 50 View, Tag 50 Permissions.
March 14, 2018	User / Firm Administration	Risk Management Tools: Updated details for Front / Middle / Back office entitlements.
January 16, 2018	Securing <u>iLink Sessions</u> and <u>Drop Copy Groups</u>	Added instructions for securing iLink Sessions and Drop Copy Groups with Hash Message Authentication Codes (HMAC).
January 3, 2018	Tag 50 IDs Preferences	New entitlement enables authorized users to enable execution / trading users to view firm-wide Tag 50 details.
December 8, 2017	 Managing Incentive Programs Viewing / Managing Program Accounts Applying / Renewing Incentive Agreements 	 Updated roles and entitlements for Read, Write, Approver. Updated Program status, and submission options to include: Renew, Apply, Resume, Review and Submit. Terms of Participation updates.
September 30, 2017	Securing iLink Sessions	Added solution for generating and managing HMAC secure key authentication
September 8, 2017	Adding User Entitlements	CME Europe decommission, removed references to registration forms and entitlement administration assignment.
September 5,	• <u>Tag 50</u>	Ability to search for a particular Tag 50 ID.
2017	• FAQ	 Frequently asked questions, which describes reasons for Tag 50 registration, related functionality and references to related content.
August 5, 2017	Viewing Tag 50 IDs	New functionality for Registered Entity users to view Tag 50 / CME Globex Operator IDs.
June 2, 2017	Request Center	Visual menu update
May 20, 2017	Request Center - Incentive Programs	Additional Incentive Program functionality, supporting application creation, renewal, save and resume.
May 20, 2017	Adding User Entitlements	Using the User Administration function, authorized individuals can manage Risk Management Tools, Asset Management, Settlement Firm.
February 12, 2017	Managing Incentive Programs	Enhanced Incentive Program page, with additional search and filter options, including the ability to export the program list.

Date	Торіс	Description
December 2, 2016	Adding User Entitlements Adding Customer Center User	Enhanced user administration process enables adding an application administrator, with entitlements of the admin manager.
December 2, 2106	Managing Incentive Programs	Authorized individuals can manage incentive programs in which they are enrolled, including the ability to: • Filter Program List. • Export Program list to Excel format. • Renew Incentive Programs. • View Performance and Incentive Accounts.
October 29, 2016	Viewing Incentive Programs	Authorized individuals can view incentive programs in which they are enrolled.
August 4, 2016	Adding User Entitlements	Added User Administration - Positions instructions.
July 17, 2016	Adding User Entitlements	Added User Administration - Deliveries instructions.
July 6, 2016	Accessing CME Customer Center Customer Center Menu Managing User Entitlements	References to the SMART Click service has been changed to CME Group Login.
July 6, 2016	User Administration Managing User Entitlements	Added Entitlements by Application, which describes profile and scope by self-service application. Revised Add / Modify / Revoke entitlement procedures.
June 4, 2016	<u>iLink Sessions</u>	new self-service functionality for creating and managing iLink sessions.
April 22, 2016	<u>User Administration</u>	general update for administration topics.
January 23, 2016	All	This is the initial release of the CME Customer Center user manual.

Accessing CME Customer Center

A valid CME Group Login is required to access applications and services. CME Group Login is a self-managed, centralized user profile service that authenticates access to CME Group applications and services.

- CME Group Login webpage
- CME Group Login User Help Instructions for using and managing a login and profile.
- CME Group Login User Profile Login, Contact Information, Password, Security Questions (User icon Profile).





Registering for Self-Service



To register for a CME Group Login:

Prior to logging in and operating application features, ensure the following is completed:

- Futures and Options: A firm officer has signed the CME Customer Center Self Service Agreement (form s).
- BrokerTec / EBS: Customer has a valid CME Customer Center Self-Service Form on file; for existing customers adding services.

The Self-Service agreement / form is available from Global Account Management (GAM).

- CME Group Login user ID and profile has been created.
 - To complete setup, some applications may require generation of multi-factor authentication / token; including admin manager notification to continue application set up.
 - To complete application setup, provide the CME Group Login ID and token to your firm administrator.



Note: CME Group or your application administrator will never ask for your password.

 CME Customer Center accesshas been authorized and entitlements assigned to the Designated Person / Operations Contact (BrokerTec / EBS), Entity Officer / Admin Manager (Futures & Options).

Logging In and Out

CME Group recommends using a recent version of supported browsers to use applications.



To access CME Customer Center:

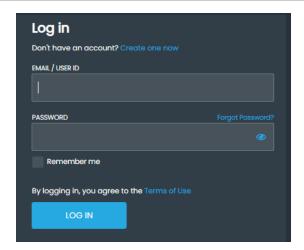
1. Go to https://login.cmegroup.com/sso/ssologin.action.

OR

Go to https://www.cmegroup.com, then click the LOG IN button.



2. On the Log In page, enter your Email and password, then click LOG IN.



3. Authenticate your ID:

Via Duo.

OR

Enter the code that was sent to your mobile device or voice code from an automated call to your primary phone number (US only).

Note: For additional information about creating or managing a CME Group Login, or using multi-factor authentication, please review the CME Group Login User Help System.

A user is logged in for up to one week, until browser cache is cleared or accessing CME Customer Center from a new device.

4. Select the requested application or function from the CME Customer Center menu.



Note: Login can be attempted up to five times before an account is locked. If an account is locked it will be unlocked automatically after three hours. To unlock the password, without requiring a password change, contact <u>EASE</u>.



To Logout:

Select the **User** icon (), select **Logout**.

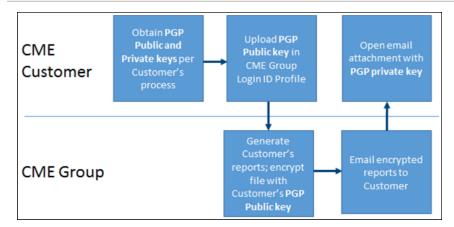
PGP Key Management for Emailed Reports

CME Group's information security policy requires that electronic transmission of trade information or other sensitive data via email attachments must be encrypted. To do this, customers must acquire a PGP (Pretty Good Privacy) key and share the PGP public key via their CME Group Login profile.

The following procedures illustrate the process to upload and manage PGP public keys which are used to view encrypted reports,

To manage PGP keys for SFTP refer to Secure File Transfer - Adding PGP Encryption.

PGP Process:



Uploading PGP Public Key

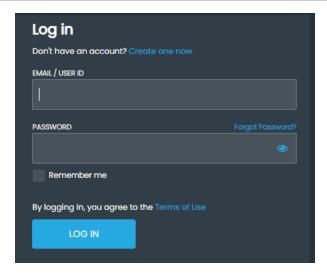
Use either your Information Technology (IT) department guidelines, or another standard process / tool to generate PGP key pairs. The following instructions are for uploading the PGP public key that will be used for CME Group purposes.

To Upload PGP Public Key:

1. View the contents of your PGP public key. Example:



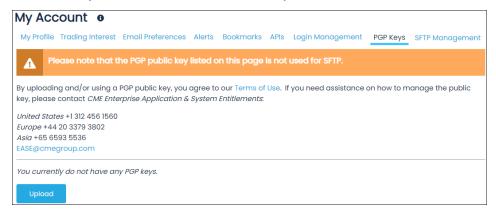
- 2. Use the keyboard combination CTRL+A to select all contents of the file and use CTRL+C to copy.
- 3. Use your CME Group Login to manage your PGP key.
 - a. From a supported browser, go to https://login.cmegroup.com.
 - b. Enter the User ID and password, then select Log In. Use the appropriate links if you have forgotten your credentials.



c. Select the User icon; select My Profile.



d. Select **PGP Keys** tab from the menu, then select **Upload**.

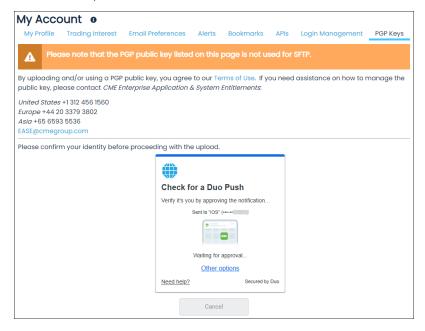


e. Select the Add PGP Public Key field and enter or paste the key; then select **Save**.

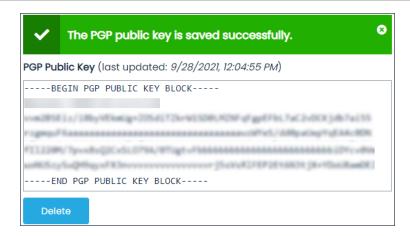


A security code is sent to the mobile phone number (multi-factor registered device) registered to the Profile.

f. Enter the code, then select Submit.



A confirmation page appears and the PGP public key is added to your CME Group Login profile. After system setup with the PGP key, you can receive CME Group encrypted reports.



Note: A matching PGP key pair and associated password decrypt files that used the key pair for encryption. Only one PGP public key can be entered in the CME Group Login ID profile at any time. If you change your CME Group Login ID profile's PGP public key, you will no longer be able to open files that were encrypted with a previous PGP key pair.

Deleting PGP Public Key

For assistance on managing PGP Encryption from CME Group Login, please contact <u>Enterprise Application & System Entitlements</u> (EASE).

To Delete PGP Public Key:

1. From the PGP Keys tab, select the **Delete** icon.



2. A confirmation dialog appear, to delete, select **OK**.



Secure File Transfer Management for BrokerTec and EBS

CME Group offers Secure File Transfer Protocol (SFTP), a file transfer protocol service that uses the SSH protocol and public / private key authentication to securely transfer data to / from CME Group and customers. With this technology offering, data within directories is also secured.

Firm designated Back-Office Admin Managers (AM) are assigned the responsibility for managing SFTP IDs and granting permission to additional individuals to create and manage SFTP IDs; by submitting a registration form or using self-service application functions.

Use the below functions to create / manage IDs and secure profiles to authenticate access to view reports over a secure connection.

Note: This SFTP service is used only for BrokerTec and EBS trade data files. Clearing and <u>SPAN2</u>file downloads are available from the dedicated <u>Clearing SFTP Server</u>.

- Request SFTP Access
- Access SFTP Management
- Assign User Permission
- Creating SFTP ID
- Claiming SFTP ID
- Accessing SFTP Data and Reports
- Inbound Public SFTP Keys

Request SFTP Access

- Futures & Options: To receive a secure SFTP ID and Password or install a public key, contact CME Clearing Services:
 - onboarding@cmegroup.com
 - 1 312 338 7112
- **BrokerTec/ EBS**: See SFTP Process (below). To designate / update AM assignment or resolve access issues, contact Enterprise Application & System Entitlements (EASE).

BrokerTec Report Setup

a. Entity registers for SFTP and designates a Back-Office Admin Manager who:

- Requests Post Trade Reporting access by completing and submitting the SFTP Production Registration form.
- Requests Billing Group report access by completing and submitting the <u>BrokerTec Billing Group SFTP Production</u> Registration Form.
- b. CME Group creates a SFTP account for the entity, then notifies the Back-Office Admin Manager.
 - Prior to entitlement assignment, users must have a valid CME Group Login; and activation token.
- c. The Back-Office Admin Manager, accesses SFTP Management to authorize individuals at their firm to create and manage SFTP IDs.
- d. Authorized users can access SFTP Management to create SFTP IDs.
- e. Authorized users can add a SSH Key to login to SFTP; instead of using a password.
- f. After setup and user entitlement assignment, authorized users can receive / review report details via EREP/SFTP (as applicable).



Note: Receiving and Sending Encrypted Files

- To receive encrypted files from CME Group, an authorized user must create a PGP public key for the SFTP ID.
- To send encrypted files to CME Group, an authorized user can download the CME Group PGP Public Key for encryption.



See also: BrokerTec Reporting guide, which requires BrokerTec Portal access.

EBS Report Setup

To request EBS report access:

a. **CME Group Login:** Users must <u>create</u> or use an <u>existing</u> CME Group Login to register for EBS reporting services and application access to EREP / SFTP / Request Center (ESS).

For application access requests, users (including back-office admin managers) provide their CME Group Login ID and secure token to their entity administrator.



Note: CME Group or entity administrators will never ask for your password.

- b. **Contact Global Account Management (GAM)**: CME Group offers a suite of tools to help customers manage registration and on-boarding to applications and services. To get started with self-service solutions and obtain the CME Customer Center Self-Service form, contact GAM.
 - For an overview of EBS services, including onboarding, reporting services and registration forms, refer to the EBS Operational Readiness Guide and Applications and Services.
- c. Submit Self-Service Form: Submit the completed CME Customer Center Self-Service form to GAM.



See also: CME Customer Center Self-Service Overview

The self-service form is completed by the Entity Officer who identifies back office admin manager(s) that are responsible for:

- System administration
- · Assigning user entitlements
- EREP/SFTP application configuration
- Approving self-service requests submitted by entity users
- Submitting EREP/SFTP report registration forms
- d. Submit EBS EREP and SFTP Report and Billing Registration Form(s):

- <u>EBS Standard Report EREP Registration form</u>: Request access to a standard set of reports, including: EBS EFIX, EBS Operations and EBS Spot & Metals.
- EBS Credit Report EREP Registration form
- EBS Regulatory Report EREP Registration form
- EBS Session Report EREP Registration form
- EBS Billing Report EREP Registration form
- EBS SFTP Production Registration form Institution Report
- EBS Institutional Report EREP Registration Form: Request access to institutional reports for spot and metals, billing and credit
- EBS SFTP Post Trade Registration form Production

For additional setup details, including reports associated with each form, refer to EBS Reporting

Access SFTP Management

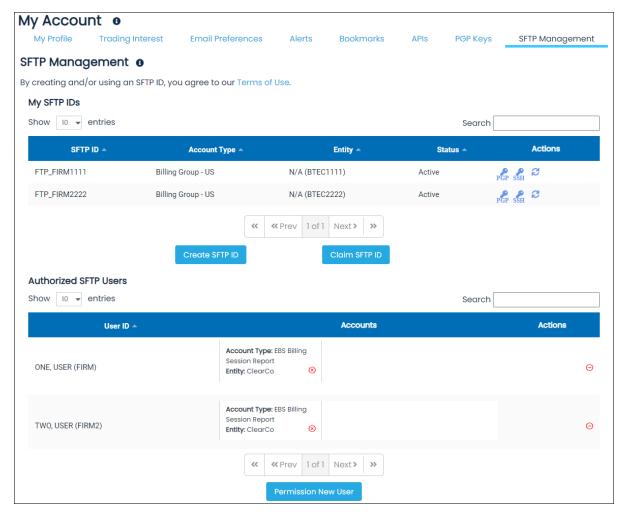
1. Select the **User**icon > **My Profile**.



2. From the My Account menu, select SFTP Management.



Note: The availability of this page is determined by assigned user entitlements.



- a. View Details
- b. Remove Account Access
- c. Remove All Access
- d. Permission New User

Assign User Permission

Before users can manage SFTP functions, a Back Office Admin Manager must assign permissions to create and manage SFTP IDs.

Prior to adding a new user, request their <a>CME Group Login ID and token, which is used to identify the user.

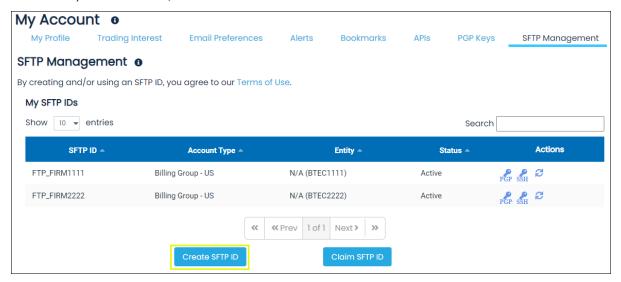
- 1. Navigate to the SFTP Management function.
- 2. From the SFTP Management page, select Permission New User.
- 3. From the **Permissions User for SFTP ID Creation** screen, specify user information.
 - User: Users must have a valid CME Group Login and token
 To obtain a temporary token, users must access CME Group Login > My Profile to generate a token, then provide to the AM.
 - Account Type: Clearing, Regulatory, Trade Repository, Billing Group, etc
 - Entity: Assigns SFTP management permission to the specified entity and account combination.

4. To finalize permission assignment, select **Submit**, then confirm the **password** dialog (to validate your entitlement to assign this permission).

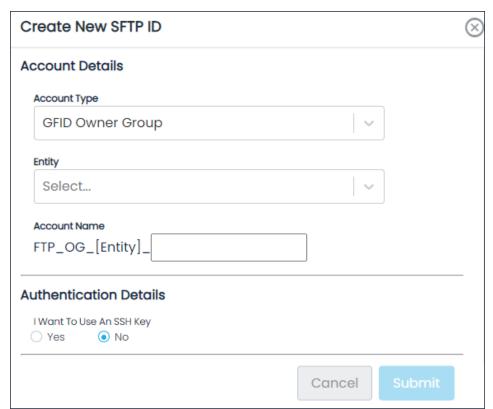
Creating SFTP ID

The following procedures illustrate the process to create a SFTP ID for a given entity, account type and account and appears for users authorized by the firm's back office admin manager to create and manage SFTP IDs.

1. From the My SFTP IDs screen, select Create SFTP ID.



- 2. On the screen that appears, specify SFTP ID Details.
 - Account Details



- Account Type: Select Clearing, Regulatory, Trade Repository, Billing Group, Owner Group, etc
- Entity
- Account Name: Up to 50 alphanumeric (A to Z, and 0 to 9) characters and unique at the entity
- Authentication Details: Yes (specify SSH public key) or No (specify PGP public key)

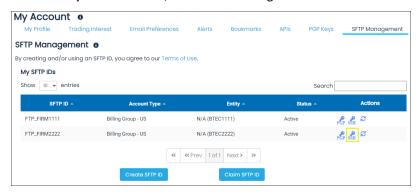
Set up SSH Authentication from My Account page

The following instructions illustrate the process to add Secure Shell Key (SSH) for SFTP ID authentication. SSH authentication provides enhanced security for files transfers that currently use default User ID and Password authentication.

1. Select the **User** icon > **My Profile**.



2. From the My Account menu, select SFTP Management.

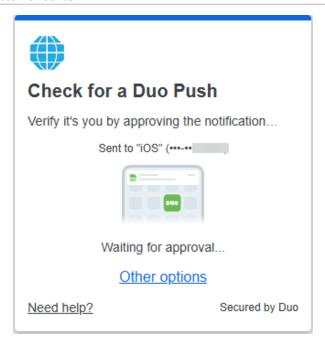


- 3. In the Actions column, select the SSH icon (SSH) for the SFTP ID to manage.
- 4. On the dialog that appears enter a valid (RFC4716 format) SSH Public Key, then select Submit.



A security code is sent to the mobile phone registered to the Profile.

5. Verify the multi-factor push on the mobile device.



Set up PGP Encryption from My Account page

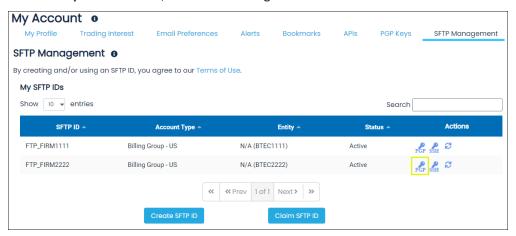
The following instructions illustrate the process to create then enable a PGP Key for encryption. PGP encryption provides enhanced security for file transfers that currently use default User ID and Password authentication.

The key is used to encrypt files prior to sending to CME Group but is not uploaded as the encryption key for the SFTP ID.

1. Select the User icon > My Profile.

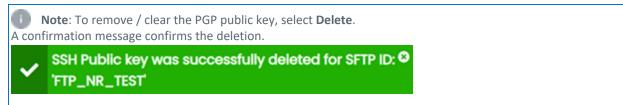


2. From the My Account menu, select SFTP Management.



- 3. In the *Actions* column, select the PGP icon (PGP) for the SFTP ID to manage. This PGP key is used for the user created SFTP ID to enable encryption.
- 4. On the dialog that appears enter a valid **PGP Public Key**, then select **Submit**.





5. Select Submit.

The PGP key is enabled after SFTP ID creation.

Claiming SFTP ID

Use the Claim SFTP ID function when the user that manages a SFTP ID is no longer with a firm but data is sent / received via the ID.

Prior to claiming a SFTP ID, ensure the claiming user is associated with same entity as the ID as the AM or authorized user.

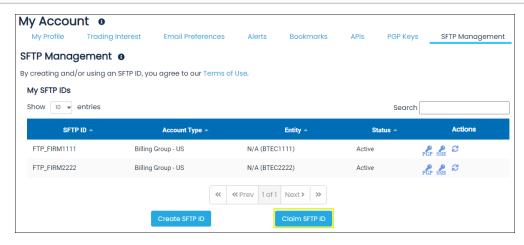


Note: To assign permissions to claim a SFTP ID, view Manage User Permissions.



To Claim a SFTP ID:

1. From the My SFTP IDs screen, select Claim SFTP ID.



2. On the screen that appears enter the SFTP ID to claim and associated Password, then select Submit.



A confirmation dialog appears, indicating success or failure.

Access SFTP Data and Reports

Using SFTP, you can connect to CME Group systems to send and receive files, using an application enabled for ssh encrypted login.

Public / private key authentication is allowed to secure connections, using SSH public key file format (RFC4716).



To establish a connection and access files:

1. Using the password, SSH or PGP key authentication, log in to access CME Group directories (incoming / outgoing):

Futures & Options / BrokerTec / EBS: Production access via internet

• Address: sftp.cmegroup.com

• IP address: 205.209.196.150

• Port: 22

Futures & Options: Production access via leased line WAN

Address: sftp.cmegroup.com

• WAN CDN connection VPN IP address: 167.204.72.96

• WAN Futures & Options: 167.204.41.34

• Port: 22

BrokerTec: Production access via leased line WAN

· Address: sftp.cmegroup.com

• WAN CDN connection VPN IP address: 167.204.72.96

• Port: 22

EBS: Production access via leased line WAN

Address: sftp.cmegroup.comIP address: 167.204.72.206

Port: 22

2. After successful login, the root directory appears with default directories to access files.

Directory paths are case sensitive and must be entered exactly as indicated.

Folders and directory path are available as described below:

- incoming: Confidential data files submitted by firms. Firms upload files as required by CME Group.
- outgoing: Confidential files, from CME Group, for firms to download and review or complete.
- pub: A file folder that can be setup with subdirectories to send and receive files.



Sample report filenames:

BrokerTec

- BTEC111_IDY.[Business_Date].BTEU.[GFID].[master account].csv
- BTEC111_EOD.[Business_Date].BTEU.[GFID].[master account].csv

EBS: End of Day report format

EREP

• CEOD200 EBS (GFID) yyyy-mmm-dd.csv

In this example <u>CEOD200</u> is the EOD Client Order Events - EBS Market - Daily Report, which is available via EREP.

• CEOD200_EBS_(GFID)_yyyy-mmm-dd.csv

SFTP

• CEOD200_(yyyymmmdd).EBS.(GFID).OG_(CID).csv

In this example <u>CEOD200</u> is the EOD Client Order Events - EBS Market - Regulatory - Daily Report, which is available via SFTP.

• CEOD200_(yyyymmmdd).EBS.(GFID).OG_(CID).csv

Reports are updated at:

US

- 9:00 AM CT
- · Intraday: every hour
- 4:30 PM CT



Inbound Public SFTP Keys

This PGP public key is used by the customer to encrypt files before sending to CME Group.

To encrypt your files before uploading to CME SFTP, use the following key:

• Production Environment

https://www.cmegroup.com/content/dam/cmegroup/misc/sftp-key/CMEGroup PROD PGP pubkey.asc

SFTP Support - BrokerTec / EBS

Where can I find reports / I'm not seeing reports?

Reports are available in the outgoing folder of the SFTP instance, which is available after successful login. (see: <u>Accessing SFTP</u> Data and Reports)

If the expected reports are not appearing in the outgoing folder contact the Global Command Center (GCC).

I would like to update PGP settings for my reports, who do I contact?

PGP for your SFTP account are maintained by customers via a self-service function.

If required, please work with your Global Account Manager who can provide further assistance with PGP setup.

Does CME Group Whitelist IP Addresses for SFTP?

No, CME Group does not whitelist IP Addresses for SFTP.

Who creates the SFTP Account / ID?

A firm backoffice admin manager designates SFTP account users (complete SFTP registration)

(See: Request SFTP access / Creating SFTP ID)

How does a firm obtain their SFTP ID and password?

Firm designated SFTP account users maintain their ID and password via the SFTP Management screen; Customer Center menu > My Profile. (See: Access SFTP Management)

Does CME Group provide SFTP IDs and Passwords?

No, account credentials are maintained by firm designated SFTP Account Users.

User profiles are accessible with a CME Group Login that has been assigned permission to access SFTP functions.

We would like to use SSH Keys for authentication, does CME Group allow the SSH Keys for SFTP?

Yes, the SSH Key can be uploaded by the firms designated SFTP Account User via the SFTP Management screen; Customer Center menu > My Profile. (See: Set up SSH Authentication from My Account page).

API ID Management

The API ID Management functionality is used to <u>create</u> and <u>manage</u> IDs that are used to authenticate system-to-system communication to CME Group applications, via API interface.

API authentication options: Basic Auth and OAuth.

To gain access or update permissions, contact Enterprise Application & System Entitlements (EASE).

Creating an API ID

Create API ID

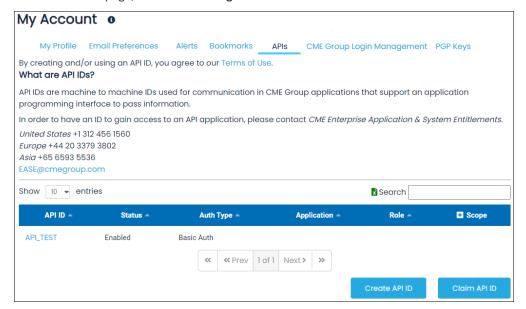


To Create an API ID:

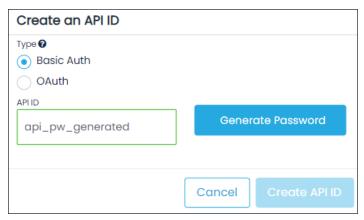
1. From the CME Customer Center menu, select the **User** () icon; select **My Profile**.



2. From the Profile page, select API Management.



3. Select **Create API ID**, then select the **Type**: (*Basic* or *OAuth*).



API IDs must be unique at the firm level.

A. Create a Basic Auth API

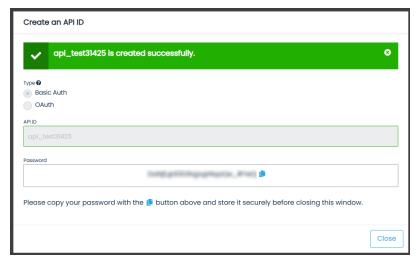
i. Select *Basic Auth* then provide the following information. To confirm the authentication type refer to the applicable API message specification.

API ID: The API ID is required, case sensitive, must begin with the prefix *API*_ and must not already be registered to another customer. It does not need to be the same as the CME Group Login. An API ID that is not used for several months is automatically deleted.



ii. Select Create API ID.

A banner indicates successful creation and system generated password, that complies with CME Group security requirements, appears.



iii. (required) Use the Copy () function to use the password for system setup and copy to a secure location.

B. Create an OAuth API

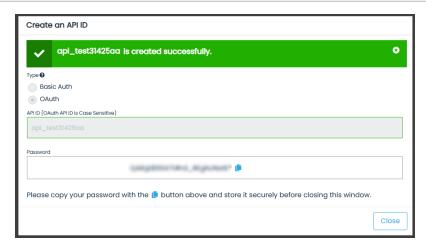
- i. Select OAuth and provide information in the fields. Please refer to the applicable API message specification, on the CME Group Client Systems wiki, to confirm the necessary authentication type.
- API ID: The API ID is required, case sensitive, must begin with the prefix API_ and must not already be registered to another customer. It does not need to be the same as the CME Group Login. An API ID that is not used for several months is automatically deleted.



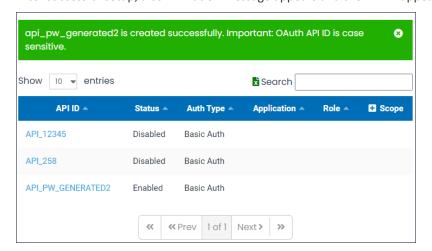
Note: OAuth API IDs are case sensitive.

ii. Select Create API ID.

A banner indicates successful creation and system generated password, that complies with CME Group security requirements, appears.



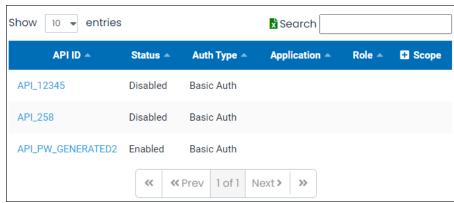
iii. (required) Use the Copy () function to use the password for system setup and copy to a secure location. After successful setup, a confirmation message appears and the API ID appears in the table.



Managing API IDs

On the API Management page, authorized users can view the Scope, generate passwords and convert basic API authentication to OAuth method.

Select the API ID to Claim, convert authentication from Basic to OAuth, generate a new password.

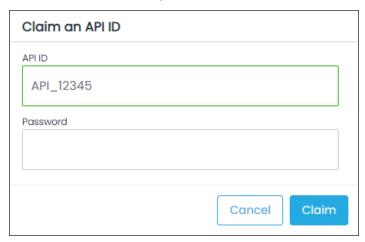


Claim API ID

To Claim an API ID:

Claiming an API ID makes an association with the currently logged in user. An API ID can only be associated with one login profile.

- 1. From the API Management page select Claim API ID.
- 2. On the screen that appears, enter:
 - API ID: The API ID must begin with the prefix API_.
 - Password: Enter the password associated with the API ID being claimed.



3. Select Claim.

The API ID is validated and, if authorized, added to the table.

Convert API ID from Basic to OAuth



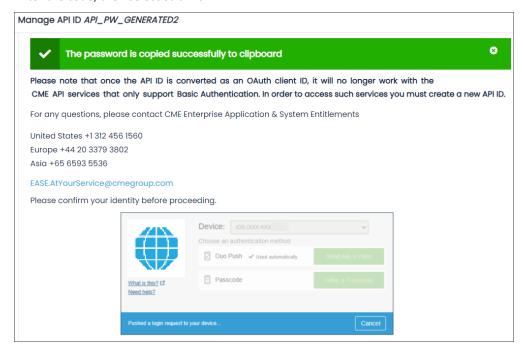
To Convert an API Authentication from Basic to OAuth:

- 1. From the API Management page, select an API ID with Basic authentication.
 - The Manage API ID screen appears.
- 2. Select the tab Convert to OAuth ID.
- 3. Select **Generate Password**, then **Copy** the password to a secure location.
- 4. Select **Submit**. Once the API ID is converted as an OAuth client ID, it will no longer work with the CME API services that only support Basic Authentication.



A security code is sent to the mobile phone number registered to the Profile.

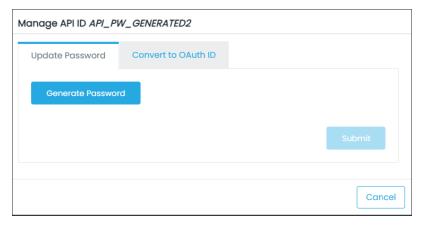
5. Enter the code, then select Submit.



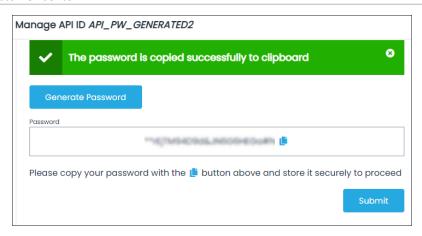
A confirmation message indicates successful conversion to OAuth.

Update API ID Password

- To Update an API ID Password:
 - 1. From the API Management table, select the API ID to manage.
 - 2. Select the **Update Password** tab, then select **Generate Password**.



3. Copy the password and store in a secure location, then select Submit.



4. Confirm your identity by entering the code that was sent to the mobile phone number registered to the Profile, then select **Submit**.



Request Center (ESS)

The Request Center Enterprise Self-Service (ESS) is a suite of self-service functions for managing CME Globex entity requests and configurations.

Prior to using Request Center (ESS) functions, ensure the following is available:

- Create new or use existing <u>CME Group Login ID</u> required to access forms, services, authenticate access application access
- Request <u>BrokerTec Support Portal</u> access required to access technical content for BrokerTec business solutions and services
- Setup a <u>network connection</u> and company details for the CME Globex New Release Environment For testing and certification of API connections and trading systems
- Submit Market Data Order form
- Set up a network connection to the Production Environment for CME Globex Futures & Options, BrokerTec, EBS mar-

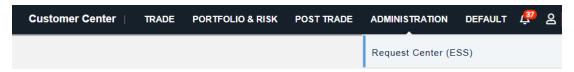
kets

- Submit CME Customer Center Self-Service Agreement / Form; to authorize Admin Managers.
 - To access BrokerTec functions, customer entities must have a signed CME Customer Center self service agreement / form on file.
- For certain BrokerTec and EBS entities, ensure the Legal Entity Identifier (LEI), person / algo trader's Personally Identifiable Information (PII) and Algorithmic system details are registered to the BrokerTec / EBS Upload Facility,

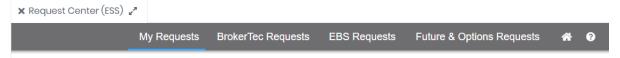


To access the Request Center (ESS):

From the CME Customer Center - Administration menu, select Request Center (ESS).



From the Request Center (ESS) toolbar, select Futures and Options Requests / BrokerTec Requests / EBS Requests.



Help icon: (2) View an instructional user manual.

Features

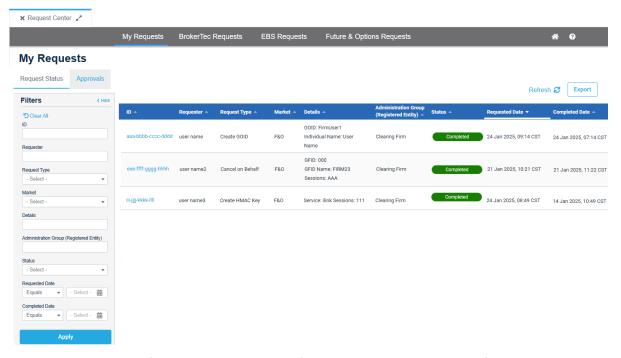
- My Requests
- Preferences
 - Clearing Firms
 - Front-End Systems
 - Permissions
- Futures & Options Requests
- BrokerTec Requests
- EBS Requests

My Requests

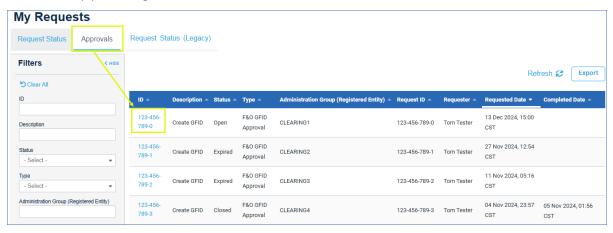
My Requests: Appears after logging in and selecting Request Center (ESS) from the Customer Center menu.



• Request Status: View Submitted / In-Progress requests or approve / reject requests submitted by other entity users. To view additional details, select from the list.



• **Approvals**: Review a list of entity requests submitted for review, requiring a decision before the request is submitted for CME Group processing.



- To Do: A list of all requests requiring review and decision.
- Filter: To narrow requests, enter search criteria in the first row (below column headings).
- Sort: Click to sort requests in ascending / descending order.



- Copy: Copy results to view and analyze in another application.
- Export: CSV, Excel, PDF
- Print: View all requests in a printer friendly format.

Preferences

A self-service function to associate registered entity with <u>Clearing Firms</u>, <u>Front End Systems</u> and manage firm / user permissions for Operator IDs and iLink Order Entry sessions.

Clearing Firms

View and add clearing firms, including exchange identifier, associated with a registered entity.



To set up clearing firm mapping:

Clearing firm mapping updates require <u>coordination</u> with the existing clearing firm and CME Group's <u>Global Account</u> Management team.

1. From the Preferences menu, select Clearing Firms.



2. Select a Registered Entity.

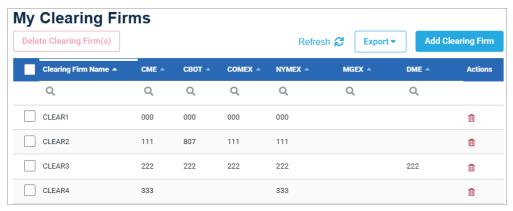
If you have access to just one entity, it is selected by default.

A list of available clearing firms appears.

3. Click Add Clearing Firm.

or

From the list, select () a clearing firm, to add to the Registered Entity, then click Add Selected.



A confirmation message appears, indicating the clearing firm has been added successfully.



Front End Systems

View and set up front end systems to associate with <u>Futures & Options</u>, <u>BrokerTec</u>, <u>EBS</u> Order Entry sessions; also includes iLink, MSGW, CGW, TCP MDP certification status



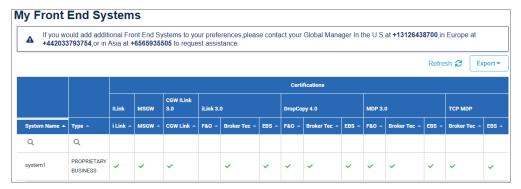
To set up front end system mapping:

1. From the **Preferences** menu, select **Clearing Firms**.



2. Select a Registered Entity.

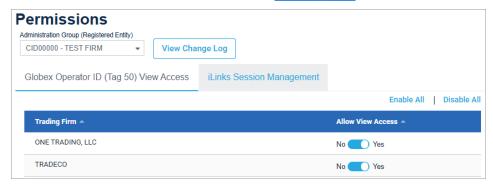
A list of available front end systems, for the selected entity, appears.



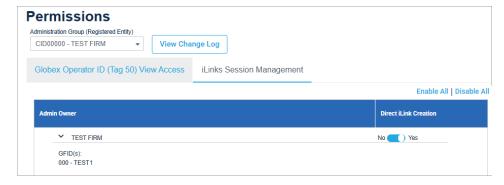
Permissions

Enables Clearing Firm Admin Managers / Application Administrators to manage entitlements for Globex Operator ID and iLink Self-Service.

Globex Operator ID Self-Service Permissions for Trading Firms



• <u>iLink / Order Entry Sessions</u> - lists Admin users that can directly crate iLink order entry sessions without additional approval



• View Change Log: View a list of updates including user, application, date, time and description.

Futures and Options Requests

Futures and Options Requests is available to firm administrators and authorized users to manage Futures & Options market participant entity setup.

Functions are organized by:

- Globex Firm IDs: Create and manage Globex Firm IDs to identify market participants and their relationship with Administration Groups / registered entities).
- <u>Drop Copy Groups</u>: Create and manage drop copy groups to receive trading activity communications via the <u>iLink</u> order entry gateway.
- Order Entry / iLink Sessions: Create and manage order entry sessions, which are used to access CME Globex to send / receive order messages.
- Operator ID (Tag 50): Identifies a trading participant (individual or ATS Group) that accesses and submits messages to CME Globex.
- Cancel on Behalf: An optional function to designate GFID Sessions that can initiate order cancellation.

To get started with self-service solutions and features within the CME Customer Center, obtain the CME Customer Center Self-Service Agreement from Global Account Management.



Note: During market closure, self-service functions are available, but activity is not processed until the market is open.

Globex Firm IDs

A Globex Firm ID (GFID) is a logical instance that identifies market participants; persons or trading system operators and used to segregate and identify customer and business unit activity. The GFID, including associated Session ID(s), is enabled to submit trades for products within its registered entity and clearing firm relationship(s).

Globex Firm details and clearing firm/ registered entity relationship mapping is done via the Globex Schedule 6, Clearing Firm Guarantee and Acknowledgement form, which is submitted to Global Account Management.

Prior to submitting order messages, authorized users must also create associated iLink order entry sessions.

Note: CME Globex iLink session IDs are used to access electronic markets to manage bi-directional messages (enter, modify, cancel orders) and receive confirmations.

See also: CME Globex iLink Session ID Policy and Operational Guidelines

Authorized Users

Prior to accessing GFID functions, ensure users are assigned user <u>permissions/entitlements</u> by the firm admin manager.

- Request Center GFID Full Access: Can create, edit, delete GFIDs.
- Request Center GFID Read Only: View GFIDs and entity / request information.
- Clearing Firm -Admin Manager: Create, edit, delete GFIDs and <u>approve or reject</u> requests submitted by other users, Can add full access / read only <u>entitlements</u> for other users to manage entity self-service requests.

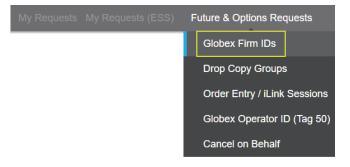
Accessing Globex Firm IDs

The following instructions illustrate the process to access Globex Firm IDs, to view and manage futures and options market participant identifiers and exchange/clearing firm associations.

1. From the CME Customer Center menu select Administration or Default > Request Center (ESS).



2. From the Futures & Options Requests menu, select Globex Firms.

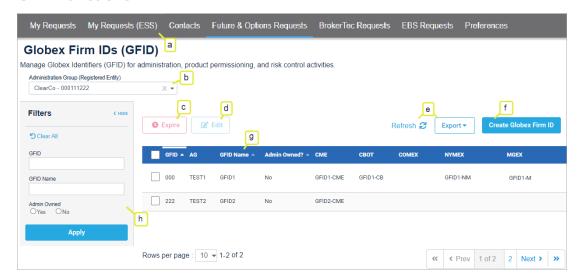


Select an Administration Group (Registered Entity).

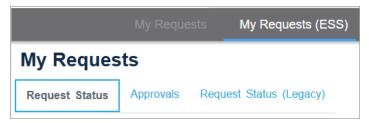
If you have access to just one Administration Group (AG) it is selected automatically.



GFID Functions



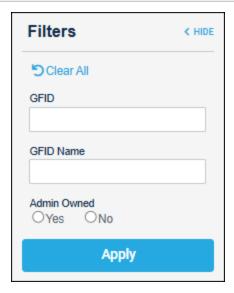
a. <u>Reviewing GFID Requests</u> - Authorized clearing firm <u>admin manager</u> users can use My Requests to <u>review</u> submitted requests (*Request Status* tab) and assign a decision (Approvals tab).



- b. Administration Group (Registered Entity): Select an entity to view / manage.
- c. Expire a Globex Firm ID
- d. Edit a Globex Firm ID
- e. Refresh/Export: Refresh the list to include recently created GFIDs or Export the list of GFIDs to CSV, Excel, PDF format.
- f. Create a Globex Firm ID



- g. **Sort columns**: Select column headings to sort *GFID*, *GFID Name*, *Admin Owned* in ascending (GFID Name) / descending (GFID Name) order.
- h. Filters: Search for GFIDs that match specified search criteria



- GFID: Search by GFID name.
- GFID Name: Search for a particular GFID.
- Admin Owned: Filters the list to GFIDs owned by the selected administration group (registered entity).

 If the registered entity is not the admin owner, Expire or Edit is not available.

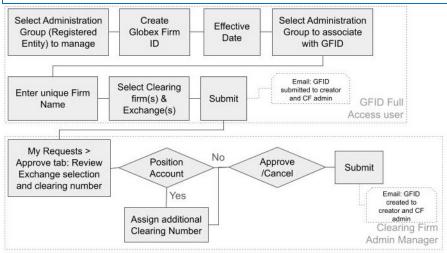
Creating a Globex Firm ID

The following instructions illustrate the process for <u>authorized</u> users to create a Globex futures and options GFID trading entity identifier and associate with a clearing firm at an exchange.

Submitted requests are reviewed by the firm's clearing exchange administrator.



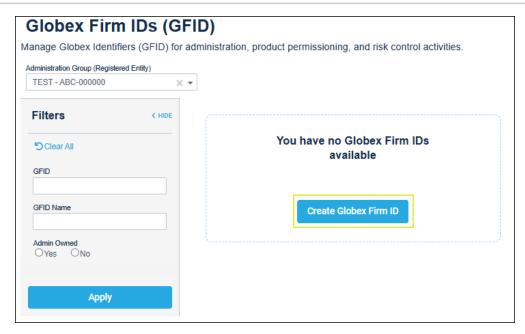
See also: Accessing Futures & Options Globex Firm IDs.





To create a Globex Firm ID:

1. From the Futures & Options Requests - Globex Firm ID page, select Create Globex Firm ID.

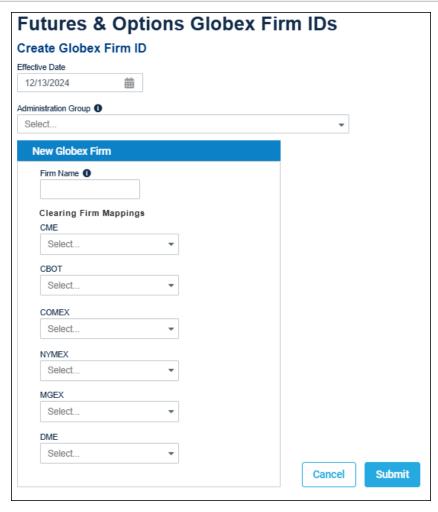


2. On the screen that appears, enter firm details:



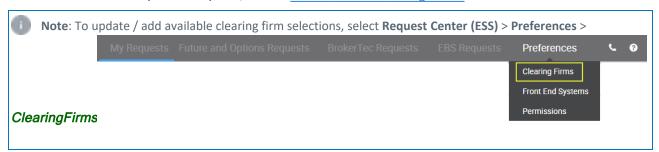
Note: Required fields are indicated by an asterisk (*).

- Effective Date (default: today's date): Upon admin approval, GFIDs are available on the specified date.
- · Administration Group (Registered Entity): The new GFID will be associated with the selected entity.
- Firm Name: Enter a unique (at the Registered Entity level) executing/trading firm name.
- **Clearing Firm Mapping**: For the designated Clearing Exchanges, select at least one Clearing Member to associate with the *executing/trading* firm.



Clearing Firm Mapping - Updates: If a clearing firm mapping update is required, CME Group advises:

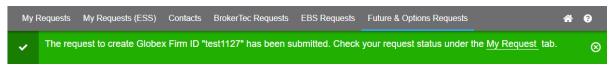
- At least one week prior to the effective date, notify the current clearing firm of the intention to change mapping.
- Coordinate updates to become effective at the close of the business Friday.
- If a mid-week update is required, contact Global Account Management.





3. To complete the request, select **Submit**.

A notification banner appears and email notification is sent to the requestor and clearing firm admin manager.



The request is accessible from My Requests (ESS) - Request Status tab to view status, or clearing firm admin manager decision (via Approvals tab).



Reviewing GFID Requests

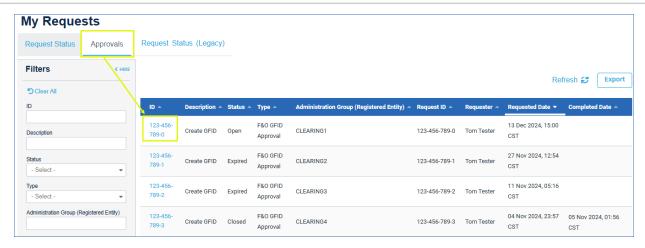
The following instructions illustrate the process for authorized clearing firm <u>Admin Managers</u> to review GFID requests submitted by executing firm users.

To review Globex Firm ID requests:

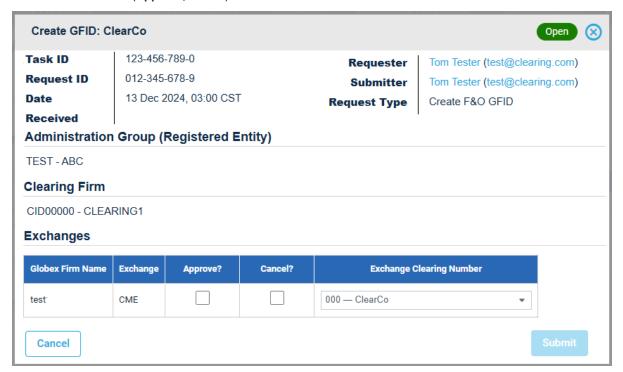
1. From the Request Center (ESS) menu, select *My Requests (ESS)*

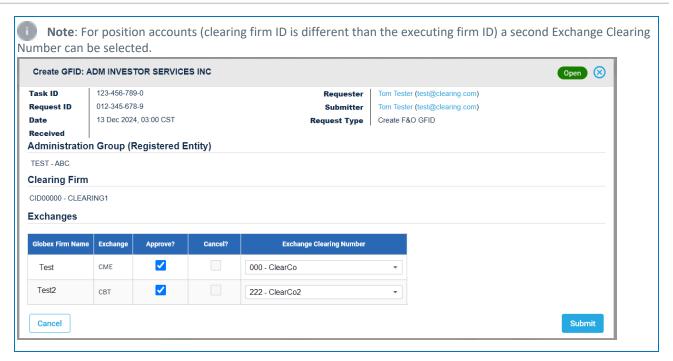


the Approvals tab, then select a linked request that is pending a decision (Status: In Progress).



2. On the request details screen review GFID details, related details (e.g. confirm / update Exchange Clearing Number) then select a decision (**Approve/Cancel**).





3. To finalize review and GFID creation, select Submit.

A notification banner appears and email confirmation sent to the requestor and clearing firm admin manager.

Editing a Globex Firm ID

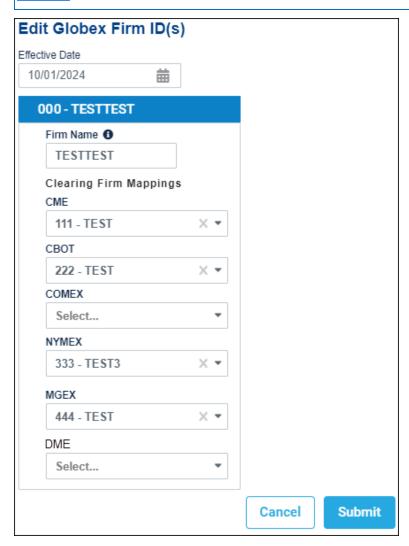
Using the Edit function, authorized firm users can update the Firm Name and/or update exchange / clearing firm mappings.

1. From the Futures & Options Requests - Globex Firm ID page, select a GFID (checkbox), then select **Edit** (



- 2. On the screen that appears, update GFID details, then select Submit.
 - Firm Name
 - Specify additional mappings or update:
 - Select another clearing firm
 - Remove (x)] clearing firm mappings

Note: To enable additional clearing firm selections, see Preferences > Clearing Firms. or Clearing Firm Mapping.



A notification banner appears and email notification is sent to the requestor and admin manager.



Note: When editing GFID details, Exchange > Clearing Firm Mapping deletion does not require review.

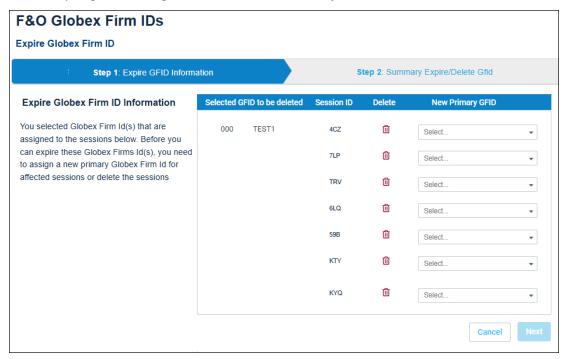
Expiring a Globex Firm ID

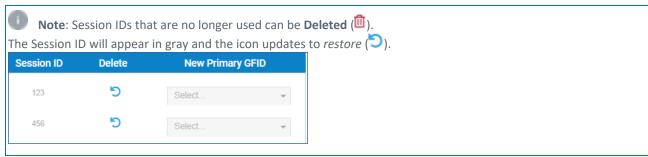
Using the Edit function, authorized firm users can expire unused GFIDs and associate Session IDs with a new GFID.

From the Futures & Options Requests - Globex Firm ID page, select a GFID (checkbox), then select Expire (
).

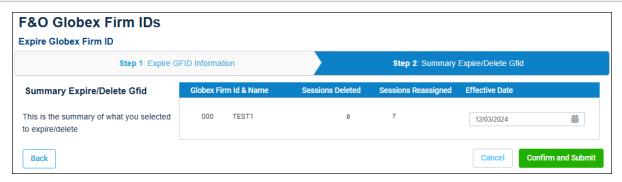


2. Prior to expiring a GFID, assign Session IDs to a New Primary GFID.





3. After updating Primary GFID and/or deleting, select **Next** (Next), then **Confirm and Submit**.



A confirmation banner appears and email is sent to the requestor and clearing firm admin manager. Updates will be effective on Friday at 4 PM CT.



Drop Copy Groups

Using Request Center (ESS) - Drop Copy, authorized users can create <u>Drop Copy</u>groups to receive trading activity communications (Execution, Order, Acknowledgment) via the <u>iLink</u> order entry gateway.

To receive Messages at multiple related entities, configure drop copy groups (target sessions) with one or more source sendercomp sessions.



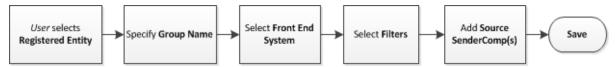
Example: Clearing firms only receive messages related to activity which they clear.

- Accessing the Drop Copy Function
- Creating Drop Copy Group
- Request Status
- · Editing / Deleting
- <u>Securing Drop Copy Groups</u>: Generate private security keys or manage (delete / download) to secure Drop Copy Groups.

Creating a Drop Copy Group

Use the Drop Copy function to configure an entity to receive real-time copies of session and trading activity messages.

The Drop Copy Group creation process consists of the following steps:



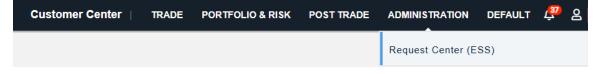
- a. Select Registered Entity
- b. Specify Group Name
- c. Select Front End System
- d. Select Filters
- e. Add Source Sender Comps
- f. Submit

Creating a Drop Copy Group



To create a Drop Copy Group:

1. From the CME Customer Center menu select Administration or Default > Request Center (ESS).



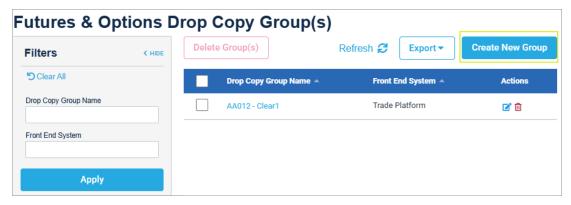
2. From the Futures & Options Requests menu, select, Drop Copy Groups.



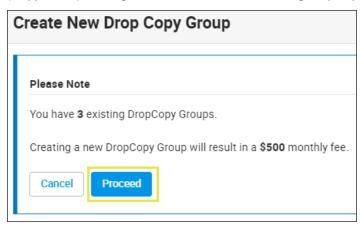
3. Select a Administration Group (Registered Entity) to manage.

If you have access to just one Administration Group (AG) it is selected automatically.

4. Select Create New Group.

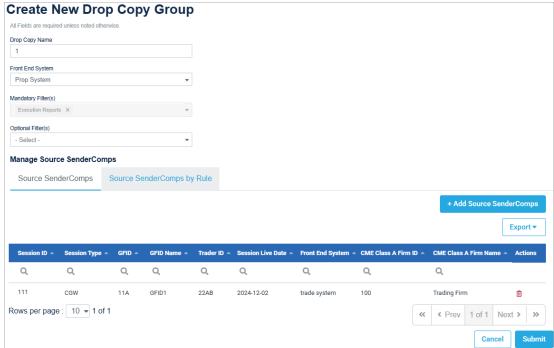


(if applicable) A dialog indicates the number of existing Drop Copy groups and the fee for creating a new group.



Note: Customers receive one free Drop Copy Group, a fee is incurred for each additional instance. A single Drop Copy Convenience Gateway (CGW) target can have up to 1000 CGW sendercomps. A single Drop Copy Market Segment (MSGW) target can have up to 5000 MSGW sendercomps.

- 5. To continue, select Proceed.
- 6. On the page that appears specify the Drop Copy Group Name and Front End System to monitor.



7. For the **Mandatory / Optional Filters** field, select *communication types*.

Available communication types:

- · Acknowledgement (Ack) Messages.
- Execution Reports.
 - Execution Order Entry: New Order Acknowledgement message.
 - Execution Create / Cancel / Modify: Response message.
 - Execution Elimination: Order expiration message.
 - Trade Fill Notice: Complete and partial fills.
 - Trade Trade Cancel: Notifies user of trade cancellation.
- Heartbeats: The response message that confirms connectivity.
- Order Mass Action Filter: Confirms the number of canceled orders.
- Reject Messages: Message indicates a session level error has occurred.
- Trade Busts: Trade cancellation: (see Trade Cancel, above).

Note: Using session configuration information provided, selected communications are routed to the Source SenderComp / Session IDs.

Select Add Source SenderComps:

Filter by Globex Firm or Rules (optional).

Select from the available **Source SenderComps**- click **Add**.

7. To finalize, select Submit.

Submitted requests are available from My Requests and initially assigned an In-Progress status.

After validation and setup, the status changes to **Completed** and the Drop Copy Group appears in the **Drop Copy Group > Registered Entity** list.



Note: For additional assistance, contact Global Account Management.

Editing and Deleting

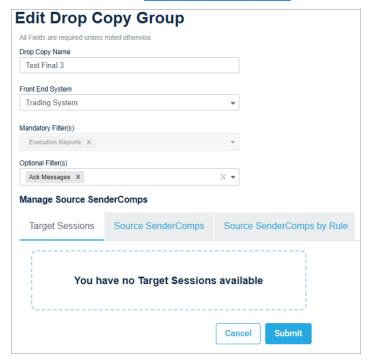
Using the CME Globex Drop Copy Group functionality users can view and manage existing Drop Copy Groups.

To edit Drop Copy group details:

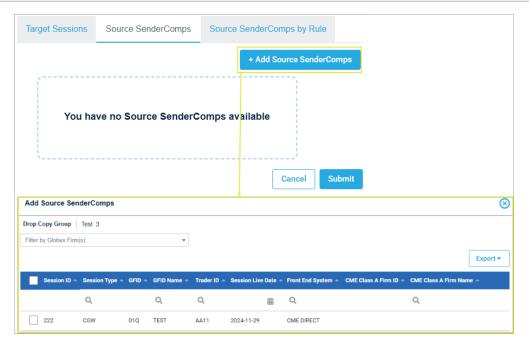
1. From the **Futures & Options Drop Copy Groups** page, select the **Edit** () icon.



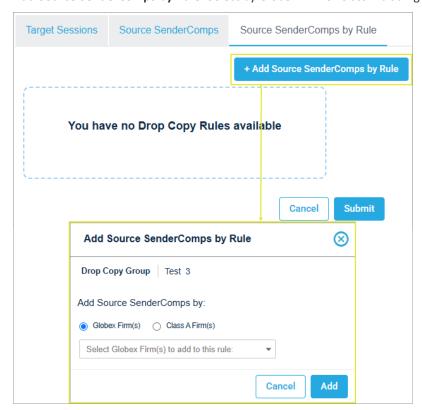
2. Select Edit, then update Drop Copy Group details as required:



- Drop Copy Group Name
- · Front End Systems
- Mandatory / Optional Filters; available to designated entity administrators.
- Target Sessions: View-only session <u>configuration</u> details.
 To view Public Key ID details, select **Show key ID**.
- Source SenderComps: Select additional Source SenderComps that will receive messages.



• Add Source SenderComps by Rule: Select by Globex firm or Class A trading firm.



3. To finalize updates, select Submit.

Additional Option:

• **Deleting Drop Copy Groups** - An additional delete function is available from the Target Sessions tab (select a Drop Copy Group, then click **Delete Group**).



Securing Drop Copy Sessions

CME Group uses a secure login process for Drop Copy and Order Entry API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request* + *Secret KeyUsed to create HMAC signature.*) to secure user login and Drop Copy message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

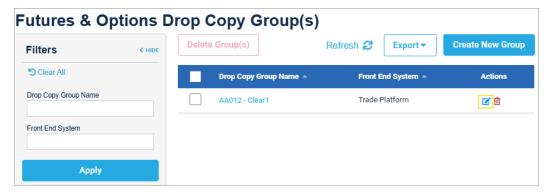
For security reasons, CME Group requires customers to change their security credentials every 12 months.

To secure Drop Copy sessions:

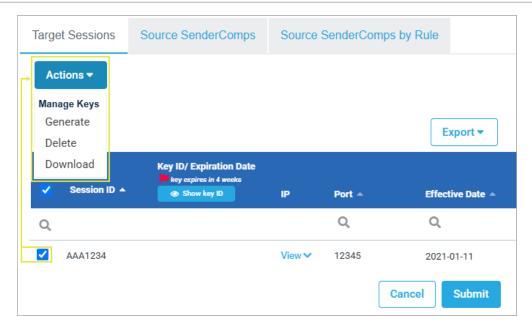
Authorized users can use Drop Copy functions to generate private security keys to secure Drop Copy message activity.

Following is an overview of the secure key management process, including available functions:

1. From the **Drop Copy Groups** page, select **Registered Entity**, then select the edit (**'**) icon for the **Drop Copy Group** to secure.

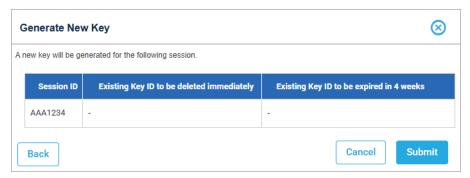


2. Select the Target Session tab, then select the Session ID checkbox, then Manage Keys > Generate Keys.

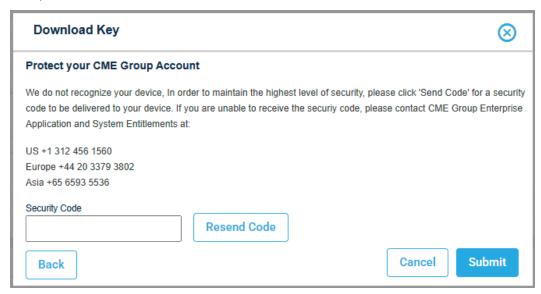


3. On the dialog that appears, then **Generate Key**.

The dialog refreshes with the Key ID, Expiration, Download button.



4. Select **Download**, **confirm** your identity by completing multi-factor identification, then **Download** the key to a file directory.



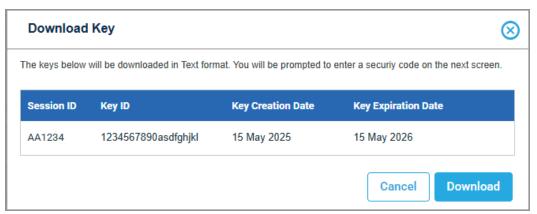
- **SMS code**: Sent to the default CME Group Login mobile phone.
- Contact EASE: Upon user identity verification, receive a one-time use code.
- Duo Security
- 5. From the saved file, view the corresponding **Secure Key**, which is used for securing Drop Copy Sessions. In addition, IP addresses used for connection are available from the Target Sessions tab (IP column).

Additional Options:

• Delete Keys: Select and confirm deletion.



• Download Keys: Download the cryptographic key as a flat text file.



Order Entry / iLink Sessions

iLink Order Entry is the path by which client systems connect to and transact business on the CME Globex platform; sending and receiving session and business layer messages between the client system and CME Group.

A valid iLink session consists of:

- SenderCompID
 - Session ID (characters 1-3)
 - Globex Firm ID (characters 4-6)
 - Fault Tolerance Indicator (character 7)



See also: SenderCompID/ iLink - Fault Tolerance.

Note: Using self-service functions, users can create a **SenderComp** [a concatenation of the Globex Firm ID (GFID), Order Entry Session (Session ID) and a Fault Tolerance Indicator (FTI)], to submit production environment orders. The FTI is not managed in Request Center (ESS), but it can be submitted in messages. See also: Cancel on Behalf - SenderCompID / iLink Order Entry - Fault Tolerance.

Using the Order Entry Sessions function, authorized users can create and manage iLink order entry sessions.

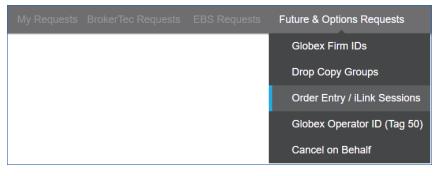
Accessing Order Entry / iLink Sessions

The following instructions illustrate the process to access Futures and Options - Order Entry / iLink Sessions to view and manage market participant identifiers and their exchange / clearing firm associations.

1. From the CME Customer Center menu select Administration or Default > Request Center (ESS).



2. From the Futures & Options Requests menu, select Order Entry / iLink Sessions.



3. Select an Administration Group (Registered Entity).

If you have access to just one Administration Group (AG) it is selected automatically.

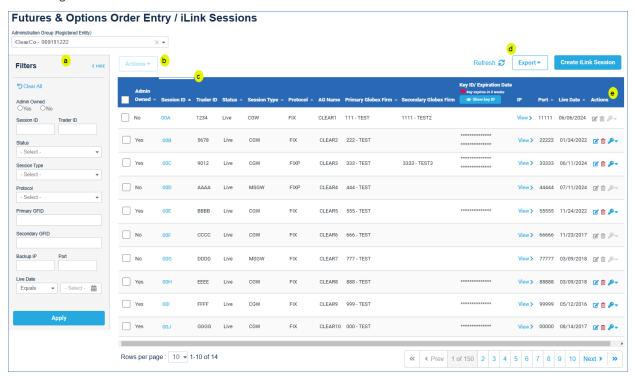


Authorized Users

- Request Center iLink Sessions Full Access: Create and manage Order Entry / iLink sessions.
- Request Center iLink Sessions Read Only: View Order Entry / iLink sessions and status.
- Clearing FirmAdmin Manager: Create and manage Order Entry / iLink sessions.
 Manage user permissions to access order entry / iLink self-service functions.

Order Entry / iLink Session Functions

- Create a Order Entry / iLink Sessions
- View submitted request status View all activity, including requests that require review and decision.
- Edit / delete Order Entry / iLink Sessions
- Secure Order Entry / iLink Sessions: Generate security keys to secure iLink Order Entry sessions.
- Manage Order Entry / iLink Session Permissions: Manage Registered Entity user permissions to create and manage sessions.



- a. Filters: Search by entered criteria
 - Admin Owned: Indicates the order entry session is registered to the administration group (registered entity).

 If the registered entity is not the admin owner, Expire or Edit is not available.
 - Session ID: Select to view session details
 - Trader ID: Individual / ATS operator ID
 - Status
 - Session Type: CGW / MSGW
 - Protocol: default selection Binary (FIXP)
 - Primary GFID

- Secondary GFID
- IP: IP and Port information is unique per order entry session and used to establish connectivity



- · Port: IP and Port information is unique per order entry session and used to establish connectivity
- Live Date
- Key ID/Expiration Date :



- b. Manage Keys/Actions: Generate/Delete/Download keys to secure order entry sessions
- c. Sort columns: Select column headings to sort in ascending (Session ID)/descending (Session ID) order.
- d. Export : Export the list of sessions to CSV / Excel / PDF format
- e. Actions:
 - Edit : Update primary / secondary Globex firm, front end system selection, live date, background, delete session.
 - Delete 🛅
 - Manage Keys : Manage secure login functions; generate, delete, download HMAC codes.

See also: Securing Order Entry Sessions instructions

top

iLink Order Entry Sessions Self-Service Permissions

The Request Center (ESS) includes a function for Clearing Firm Admin Managers to manage Registered Entities' administratively owned GFIDs; allowing authorized users to create order entry sessions without clearing firm review.

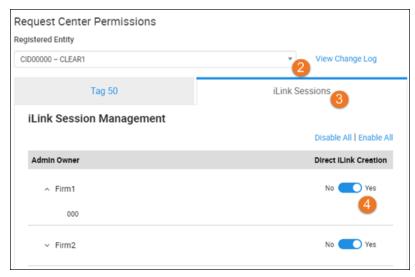
To request CME Globex Firm ID (GFID) ownership transfer and permission to directly create and manage iLink Sessions, contact your Clearing Firm.

To manage iLink Session Self-Service:

1. From the Request Center (ESS) menu, select Preferences.



- 2. If you manage more than one entity, **select** from the **Registered Entity** menu, otherwise the Entity is selected. Appears only for registered entities that represent the clearing firm.
- 3. On the screen that appears, select the **iLink Sessions** tab.



A list of available Admin Owners appears.

To view affected Session IDs, expand a selection.

- 4. For a given Admin Owner, select **Direct iLink Creation**: **Yes**.
 - Yes: Authorized trading firm users can directly <u>create</u>, <u>edit</u> and / or <u>delete</u> iLink Sessions, without clearing firm approval.
 - **No**: Authorized trading firm users can directly <u>create</u>, <u>edit</u> and / or <u>delete</u> iLink Sessions, after clearing firm *Admin Manager* approval.
 - · Admin Manager approval is required, individually, for each Order Entry / iLink Session request.
 - If the iLink session request includes more than one GFID (route-throughs), all affected clearing firms must approve each request.

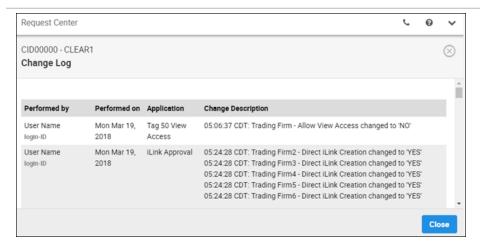
Route-through requests, not approved by all clearing firms, will be rejected.



Note: Permissions updates are effective immediately.

View Change Log

To view detailed updates, select View Change Log.



Available details:

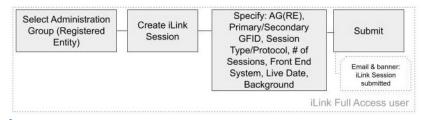
- User
- Date
- · Application / Service
- Time
- Description

top

Creating iLink Order Entry Session

Use the iLink Sessions function to create new order entry sessions that can access the market to enter, modify and cancel orders and receive confirmations.

The creation process consists of the following steps:

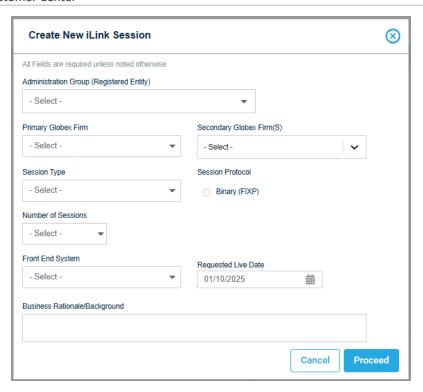


To create a new iLink Session:

1. On the Order Entry / Link Sessions page select, select Create iLink Session



2. On the screen that appears, enter new session details.



- Administration Group (Registered Entity): Determines available Globex Firms
- Primary Globex Firm/Secondary Globex Firm
- Session Type: Convenience or Market Segment Gateway.
- Session Protocol: Binary (FIXP) FIX Performance supports simple session layer management; no session-level information (e.g. headers) required
- **Number of Sessions**: The number of available sessions cannot be more than allocated to an entity (Globex Firm). iLink session creation may incur a fee.

Upon submitting, a fee acknowledgment indicates the amount per session and total.

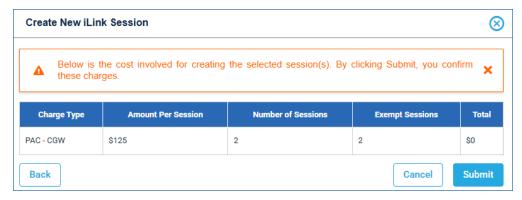
• Front End System: Applications for which the iLink session is authorized.



Note: To manage available system selections, see Request Center (ESS) - Front End System.

- Requested Live Date: See also Request Status
- Business Rationale / Background
- 3. Upon completion of required data, click **Proceed**.

An acknowledgment message appears, indicating Port Activation Charges (PAC, if applicable) for the requested session.



4. If you agree with the setup details and fee, click Submit.

A notification banner appears, indicating successful request submission. An email is sent to the designated clearing firm administrator for a decision.



Sessions will appear in the list, with a CME Group assigned Session ID.

Additional session information provided is used to configure the client trading system(s).

Request Status

Submitted requests appear on the Order Entry / iLink page with **In-Progress** status and *My Requests > Approvals* with **Open** status.

Upon successful setup and validation of session details request status updates to Completed.

- Requests submitted before 12:00 PM CT are processed and will be effective the same day.
- Requests submitted after 12:00 PM CT will be effective the next business day.
- Updates to session protocols are processed at 4:00 PM CT.

An email and communication center message is sent to the requestor at submission and completion.

After processing and validation of request details, session details are available on the Order Entry / iLink sessions page.

Downloading Session Keys

Once generated, secure key information is available for download.

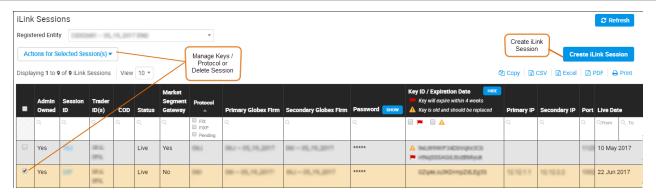


To download an existing HMAC authentication key:

 From the CME Customer Center, navigate to: Request Center (ESS) > Globex Requests > iLink Sessions, then select a Registered Entity.

If you have access to only one entity, a list of iLink Sessions will appear.

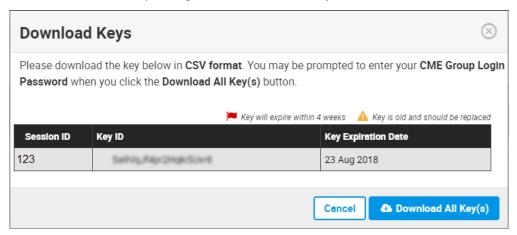
2. Select the iLink session, which activates the Actions for Selected Sessions menu.



3. From the menu, select Download Keys.

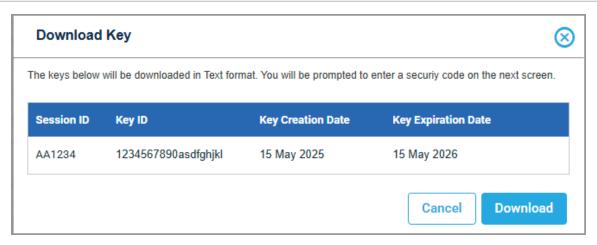


4. On the Generate New Keys dialog, select **Download All Keys**.



The user's multi-factor authenticated credentials are evaluated, to verify the requestor's identity. A cryptographically random key pair is generated; consisting of an Access Key ID and a Secret Keysecure ID.

The screen refreshes to include the *Key ID*, confirmation banner appears, email confirmation is sent to the registered address and the request is added to **My Requests**.



5. If not downloaded (to the default browser directory), select **Download All Keys**, to access a text file, that contains the secure (private) key.

The file is named with the following pattern: iLink Session Access Secure Key Download yyyy-dd-mm.

6. From the saved file, view the corresponding **Secure Key**, which is used for securing Order Entry access and transactions.

Reviewing iLink Order Entry Session Requests

The following instructions illustrate the process for authorized clearing firm <u>Admin Managers</u> to review iLink Order Entry Session requests (create/edit/delete) submitted by executing firm users.

Clearing Firm Admin Managers may designate some firms the ability to create order entry sessions without clearing firm review.

For instructions, see iLink Order Entry Sessions Self-Service Permissions



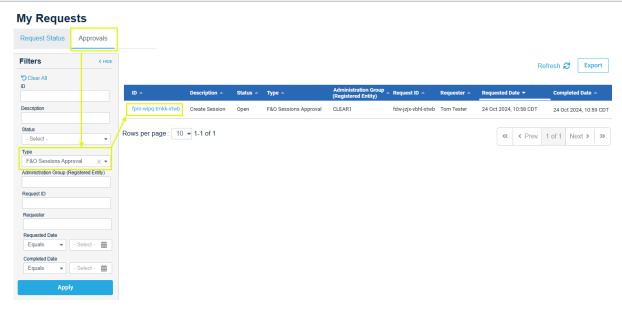
To review Globex Firm ID requests:

1. From the Request Center (ESS) menu, select My Requests,

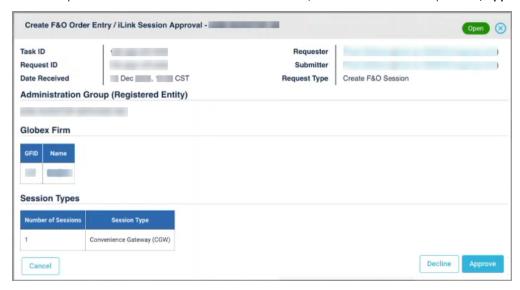


2. On the My Requests page, select the Approvals tab, then select the linked request (Status: Open).

If necessary, use the filters to find a request (e.g. Filters - Type: Futures and Options Sessions Approval > Apply)



3. On the request details screen review submitted details, then select a decision (Decline/Approve).



A notification banner appears and email confirmation sent to the requestor and clearing firm admin manager, indicating the completion of order entry session creation.

Editing / Deleting iLink Order Entry Session (IDs)

From the iLink Session page the following functions can be performed.

- View Session ID and configuration details
- Select and Edit session details
- Delete Sessions

The ability to perform advanced function is determined by a users assigned permissions. Authorized users can delete sessions at the primary or secondary firm at which they are authorized.



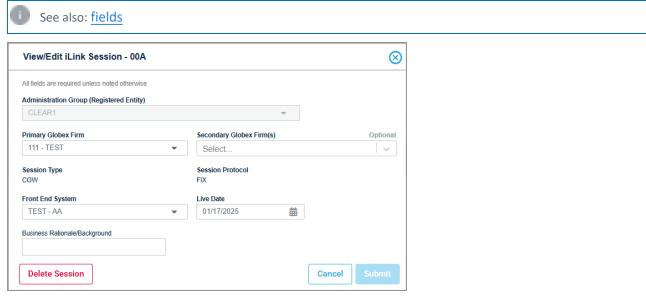
To edit Session details:

1. From the Futures & Options Order Entry / iLink Sessions page, select the blue linked Session ID.



or, select the checkbox for the session, then select **Edit** (

2. On the screen that appears, select **Edit**, then update as necessary.



3. When complete, click Submit.

The update is sent for processing and upon completion an email and communication center message is sent to the requestor.

- Requests submitted before 12:00PM CT are validated, processed and will be effective the same business day.
- Requests submitted after 12:00PM CT will be effective the next business day.

Deleting Order Entry / iLink sessions

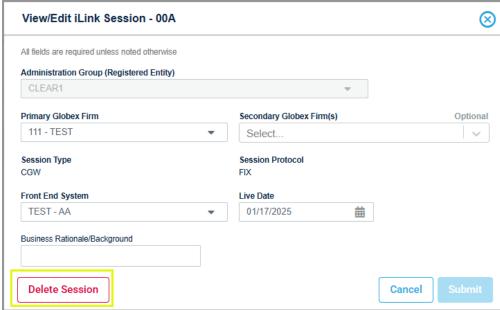


To delete an Order Entry / iLink session:

Authorized users, at the primary or secondary Globex firm, can delete iLink sessions at the same primary or secondary Globex firm.

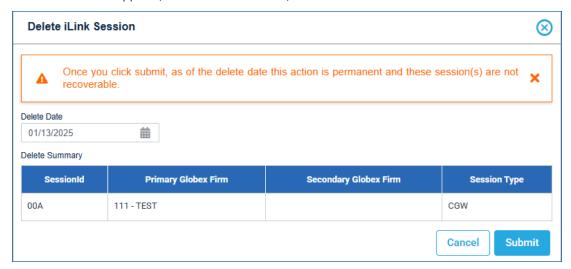
1. From the Futures & Options Order Entry / iLink Sessions page, select the blue linked Session ID.





or, select the checkbox for the session, then select **Delete** (iii).

2. On the screen that appears, select **Delete Sessions**, then confirm the deletion.



Deletions are queued for weekly processing on Friday at 4 PM CT. After submitting, the My Requests (ESS) status indicates *In Progress*. Once finalized the status changes to *Completed*.

If a session is deleted by mistake, contact Global Account Management.

Securing Order Entry / iLink Sessions

The Request Center (ESS) includes function to manage Hash Message Authentication Codes (HMAC) for secure to iLink Order Entry and Drop Copy sessions.

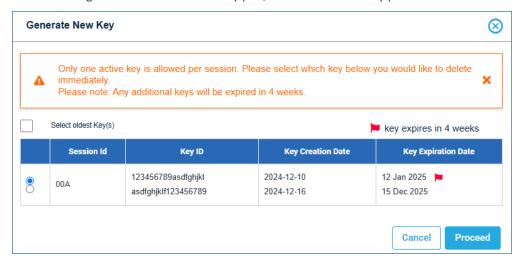
Authorized users can generate private security keys or manage secure iLink Session activity.

- Client identity verification: Login is signed and validated using security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against an order entry login request.
- In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

The oldest secure key pair will expire in four weeks (at market close).

Prior to expiration, an email is sent to registered administrative users.

• If a customer generates a third secure key pair, the oldest secure key pair must be selected to delete immediately.



• **Key Management User**: A user entitlement to create and manage iLink session secure login pairs. Existing Administrative Manager users are assigned this role as part of their administrative responsibilities.

To request this role, contact Global Account Management.

User generated key pairs:

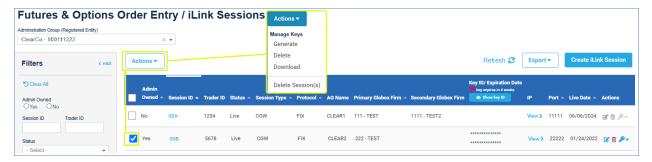
- Access Key ID Secure login request
 - +
- Secret Key Used to create HMAC signature to secure login and order entry message activity.

Note: An additional API ID Management function is available from the <u>CME Group Login > Profile</u> function. The below instructions describe function related to order entry sessions only.

To secure Order Entry Sessions:

Following are instructions for generating authentication keys for Order Entry / iLink Sessions.

1. From the **Futures & Options Order Entry / iLink Sessions page**, select the checkbox for the session to manage, then select **Actions > Generate**.



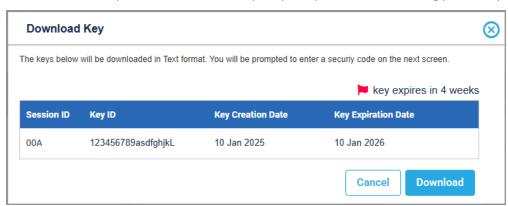
The selected session ID appears in a dialog, including existing key details.

2. To continue, select Submit.



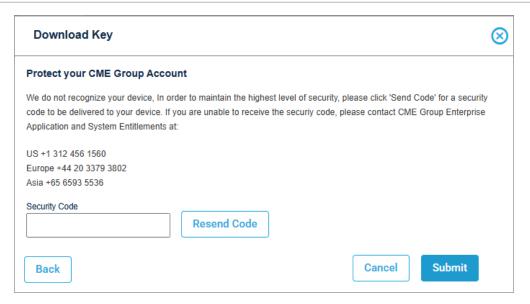
The dialog updates to include Key details.

3. Select **Download** to proceed to a verification prompt; required before accessing private key details.

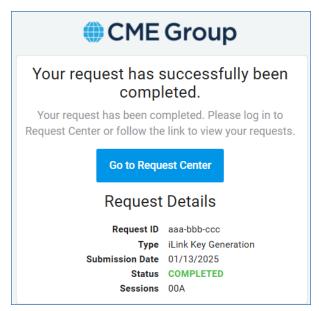


4. Verify the code sent to the mobile device, then **Submit**.

The verification code is sent to the number associated with the CME Group Login of the user that created the Order Entry / iLink session.



The file is downloaded and an email notification is sent to the requestor and admin manager.



A notification appears at the top of the screen, indicating successful key generation and an email notification is sent to the registered user.



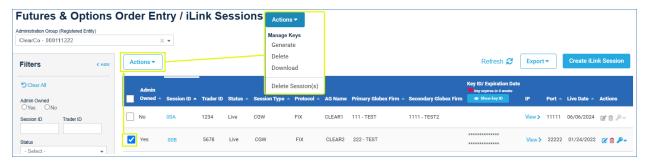
Note: Notification of pending security credential expiration will be sent by email to registered administrators.

top

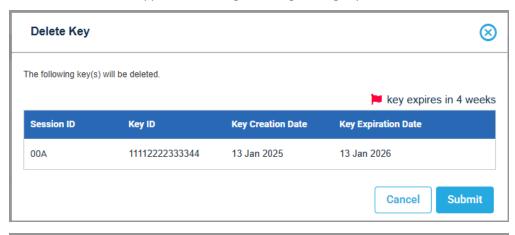
In addition to deleting Order Entry Sessions, authorized users can delete an associated HMAC authentication key.

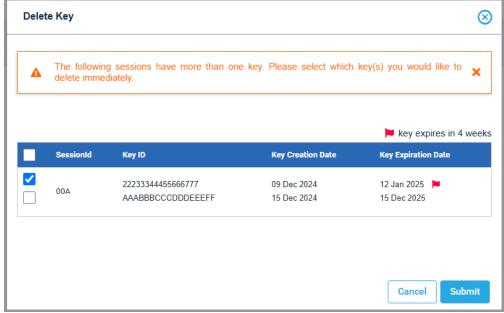


 From the Futures & Options Order Entry / iLink Sessions page, select the checkbox for the session to manage, then select Actions > Delete.



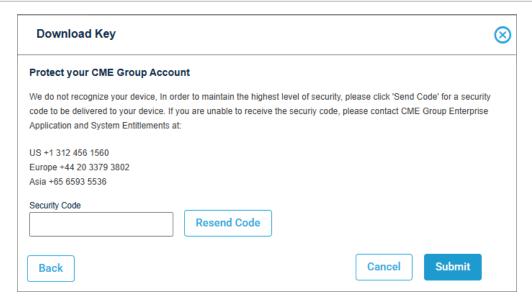
The selected session ID appears in a dialog, including existing key details.





2. On the Delete Key dialog, select **Submit**, then verify the code sent to the mobile device.

The verification code is sent to the number associated with the CME Group Login of the user that created the Order Entry / iLink session.



After verifying, the file is deleted and a notification appears at the top of the screen, indicating successful key deletion and an email notification is sent to the registered user.

top

To download an existing HMAC authentication key:

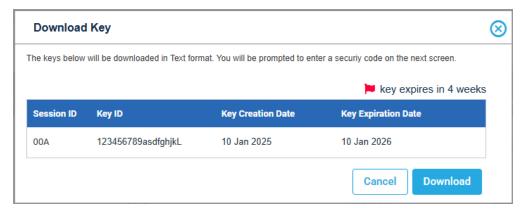
Once generated, secure key information is available for download.

1. From the **Futures & Options Order Entry / iLink Sessions page**, select the checkbox for the session to manage, then select **Actions > Download**.



The selected session ID and Key appears in a dialog.

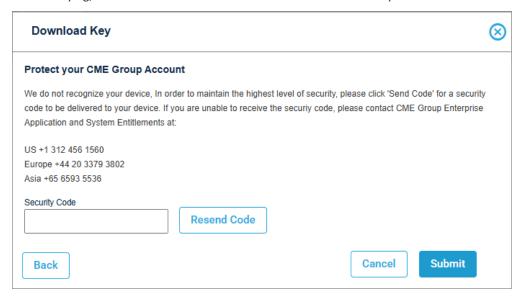
2. To continue, select Download.



3. Verify the code sent to the mobile device, then **Submit**.

The verification code is sent to the number associated with the CME Group Login of the user that created the Order Entry / iLink session.

After verifying, the file is downloaded to the default browser directory.



Registering and Managing Globex Operator IDs (Tag 50)

Operator IDs, previously known as Tag 50 IDs, identify authorized trading participants (individual or ATS operator group) that transmit messages to / from CME Globex and operate trading systems.

Registration of Globex Operator IDs are required for individual members, employees of a member, employees or contractors of a clearing or corporate member. CME Group reserves the right to require the registration of all market participants.

Globex Operator IDs must be unique at the Clearing Member (Registered Entity) and Trading firm level. Clearing member firms must ensure Globex Operator IDs are registered and correct information is maintained in the Exchange Fee System (EFS).



See also: - Exchange Fees for Clearing and Trading
- Exchange Fee System User Help

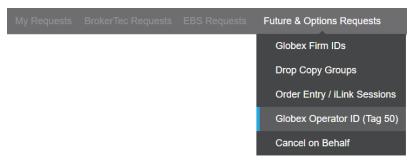
Accessing Globex Operator ID / Tag 50 Self-Service

The following instructions illustrate the process to access Futures and Options - Globex Operator ID / Tag 50 IDs to view and manage market participant identifiers.

1. From the CME Customer Center menu select Administration or Default > Request Center (ESS).



2. From the Futures & Options Requests menu, select Globex Operator ID (Tag 50).



Authorized Users

The Request Center (ESS) includes functions for authorized Clearing Member and Trading firm users to register and manage Globex Operator IDs (previously known as Tag 50 ID).



See also: CME Globex Operator ID Requirements

Before accessing Operator ID self-service functions, ensure the following is completed:

- **Self-Service Agreement**: Clearing and Trading firms must have an active <u>Self-Service agreement / form</u> with CME Group.
- Entity Officers / Admin Managers are <u>administrative users</u> for their entities and related firms and assign entitlements to additional users to manage Globex Operator IDs.

Prior to viewing Globex Operator ID data and authorizing firm access, Admin Managers must also authorize themselves with application entitlements.

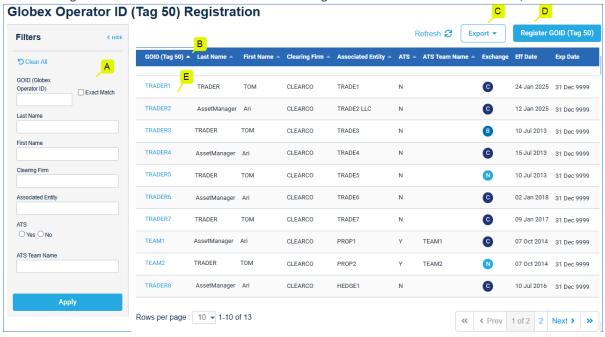
• **Application Administrators**: Can authorize clearing firm users for Request Center - Globex Operator ID / Tag 50 user entitlements.

- Clearing / Trading firm users: Users with Globex Operator ID / Tag 50 Full Access entitlements can manage Globex Operator IDs and ATS team members.
 - Authorized trading firm users can submit Globex Operator ID and ATS team members for clearing firm administrator review.
- Trading Firm Access: Execution / Trading firm users that want to view Operator ID details must contact their registered entity Admin Manager for entitlements to view Operator ID data. Users must also have Globex Operator ID / Tag 50 View Only access.

Globex Operator ID (Tag 50) Functions

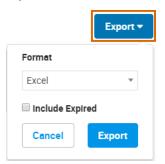
- Access Operator ID Self-Service
- View Operator ID details
- Register Operator IDs
 - Add Clearing Firm selections
- · Manage trading firms access
- Manage user access to register new Operator IDs and view details of existing IDs

The following function is available to users that have been granted firm-level self-service access,



- A. Filter: Search by entered criteria
 - Globex Operator ID (GOID)
 - Exact Match
 - Last / First Name
 - Clearing Firm
 - Associated Entity
 - · ATS team Filter results to ATS teams only
 - · ATS Team Name Search for ATS team names that contain entered criteria
- B. Sort: Sort by ascending or descending order by selecting column headings:

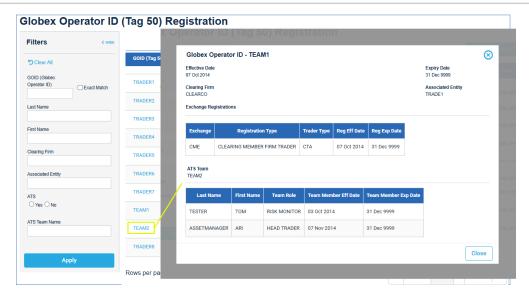
- Name
- · Clearing firm
- · Associated entity
- Registration type: ATS team, registered exchange(s)
- · ATS team name
- · Effective periods
- C. Export: Default results include active IDs only. To view expired IDs, select Export and filter options.



- Type: Excel / CSV
- Expired: View expired IDs (only) in a CSV or MS Excel file.
- Active / Expired: View active and expired IDs in a single exported CSV or MS Excel file.
- D. Register Globex Operator ID (GOID): Available to clearing and trading firm administrators.
- E. **Select Operator ID / Tag 50**: To view additional individual or ATS team details, select the **blue** linked Operator ID. **Individual**



ATS Team



Operator ID Video Tutorial

View an overview video and instructions to create Operator IDs

- Granting Operator ID entitlements [Clearing Firm (C) User Administration].
- Managing Trading Firm permissions to view a Operator ID C Request Center (ESS).
- Selecting Clearing Firms to manage Trading Firm (T) Request Center (ESS).
- Registering new Operator IDs C/T Request Center (ESS).
- Reviewing, editing, approving Operator ID registration requests C Request Center (ESS).

Globex Registration on the Exchange Fee System

Additional Globex Operator ID registration and management functions are available from the CME Exchange Fee System - Globex Registration (example: editing Globex Operator ID details).

Contact Information

- To inquire about Operator ID (Tag 50) access or details, contact your clearing firm.
- For questions about access or entitlements, contact Global Account Management (GAM).
- For login / access issues, contact Enterprise Access and System Entitlements (EASE).

Registering Operator ID / Tag 50

<u>Authorized</u> clearing and trading firm administrators can use Request Center (ESS) functions to register new Globex Operator IDs to identify *individuals* or *Automated Trading System (ATS)* teams.

Clearing Member Firms / Registered Entities must ensure that registration details are current and accurate at all times.

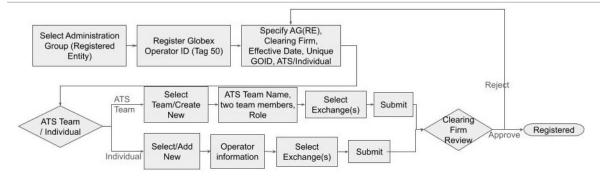


See also: CME Group Market Regulation - Rulebook Harmonization (Rule 576)

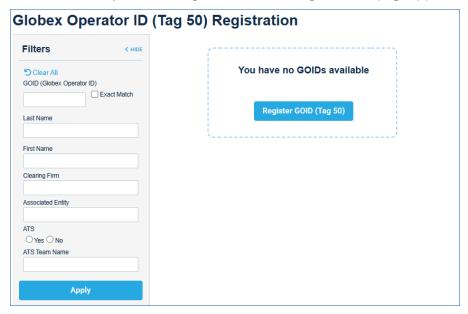


To Register a Operator ID / Tag 50:

The following diagram and instructions illustrate the Globex Operator ID registration process.



1. From the Globex Operator ID / Tag 50 screen, select Register GOID (Tag 50) (Register GOID (Tag 50))

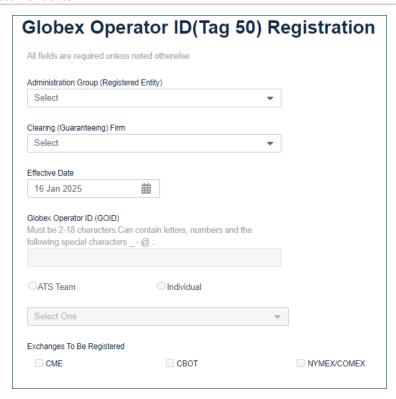


- 2. On the screen that appears, specify the following:
 - Registered Entity: The registered entity associated with the new Operator ID.
 - Clearing (Guaranteeing) Firm: The owner or firm responsible for the Operator ID.

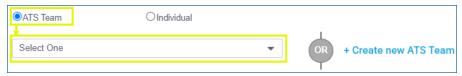


Note: To populate the list with additional selections, see Adding Clearing Firms.

- Effective Date: The date the ID will be available; default is today.
- Operator ID / Tag 50: A string of 2-18 characters; letters, numbers and symbols: _ : @.



- 3. Select ATS Team or Individual, then specify an exchange.
 - a. **ATS Team**: Select a previously registered ATS Team.



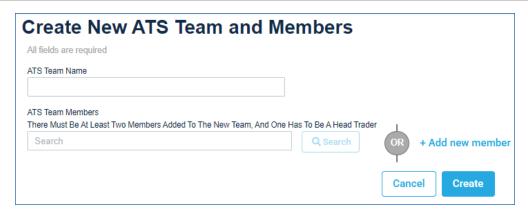
A list of team members, including team role, appears.

b. or, Create new ATS Team:



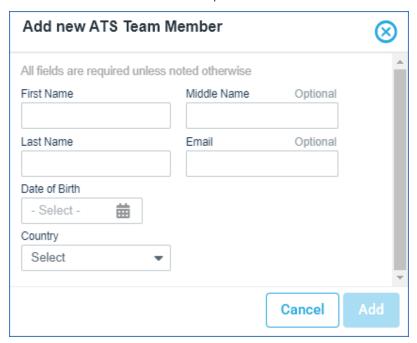
- i. Specify a unique (at the trading firm) ATS Team Name.
- ii. Add at least two team members by **searching** the membership system for registered individuals, then assign a team role.

At least one member must be head trader.



iii. or, **Add new member**: Enter required information (name, date of birth, country), then select **Add**, then assign an ATS team role.

Middle name and email address are optional.

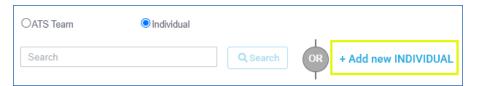


Note: Date of birth is required for registration but not shown after Tag 50 (operator ID) creation and it not viewable by ATS team members.

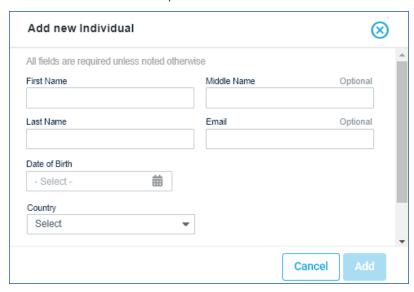
c. <u>Individual</u>: Search for an existing individual previously registered at an entity, including users that may be previously registered on the CME Group <u>membership</u> system.



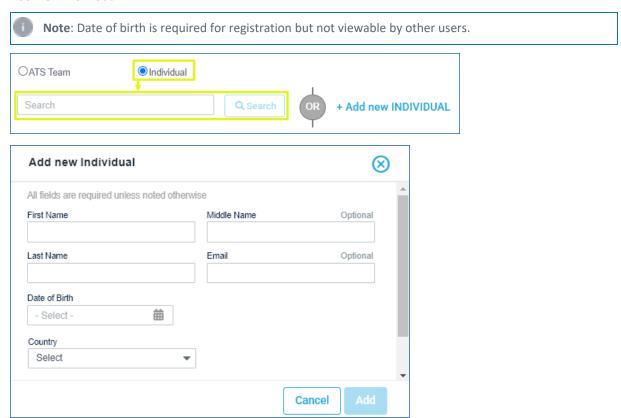
d. or, Add new INDIVIDUAL



i. Enter required fields (name, date of birth, country), then select Add.
 Middle name and email are optional.



• Add New Individual:

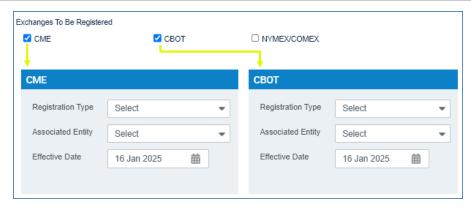


4. Select one (or more) **Exchange(s)** including the following additional information:

• Registration Type

Туре	Description
106.H	An individual trading for a firm that is an approved 106.H entity.
CBIP Participant	An individual trading for a firm that is a registered participant in the Central Bank Incentive Program (CBIP).
CTA/ Hedge Fund IP Participant	A CME (only) individual trading for a firm that is a registered participant in the CTA Hedge Fund Incentive Program.
Clearing Member Firm Trader	An individual trading on behalf of an Exchange Member Firm. When the User selects this user type, a Trader Type sub-category will also need to be chosen. The trader types that an individual may be classified under are as follows: Registered Commodity Trading Advisor (CTA) Independent Contractor receiving a 1099-MISC Owner of the firm with at least \$250,000 invested in the firm W-2 employee of that clearing firm
EMBIP Participant	An individual trading for a firm that is a registered participant in the Emerging Markets Bank Incentive Program.
Electronic Corp Member (106R)	An individual trading for a firm that is registered as an Electronic Corporate Member (ECM-Holding/ECM-Waiver).
FMIP Participant	An individual trading for a firm that is a registered participant in the Latin American Fund Manager Incentive Program (FMIP).
IIP Participant	An individual trading for a firm that is a registered participant in the International Incentive Program (IIP).
IVIP Participant	An individual trading for a firm that is a registered participant in the International Cross-Asset Volume Incentive Program (IVIP).
Member	The individual is a CME Group member whom is currently holding a membership.
Non- Member/ Customer	The individual does not qualify for any of the other registration categories and therefore, receives non-member rates.

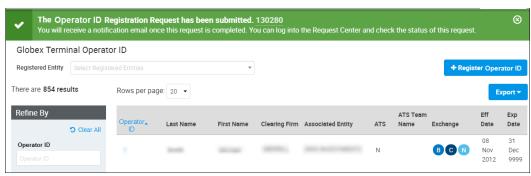
- Associated Entity: The associated clearing entity. This field is available for clearing firm users with assigned entitlements.
- Effective Date Select the date when the Operator ID should be effective on this exchange, default date is the current business day.
 - CME
 - CBOT
 - NYMEX / COMEX

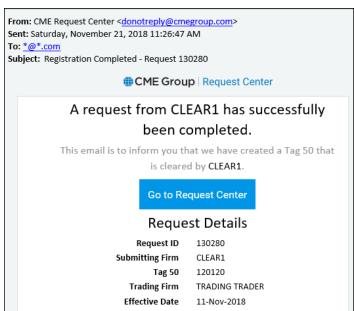


5. To finalize, select Submit.

Submitted information is validated, a confirmation or error message indicates status of the submitted registration and an email confirms registration details.

Note: *Trading Firm* requests for Operator IDs are submitted to the *clearing firm* administrator for review and decision, except for operator ID requests where the creator and approver are at the same firm. Submitted requests indicated on **My Requests** - **Approvals** tab; with *Open* status.





If the Operator ID already exists at the registered entity, an error message will appear.

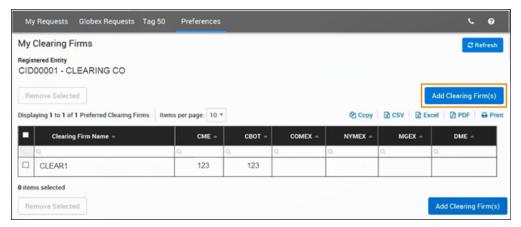
Adding Clearing Firms

The following instructions describes the process to add clearing firms as selections for Operator IDs that you wish to register.

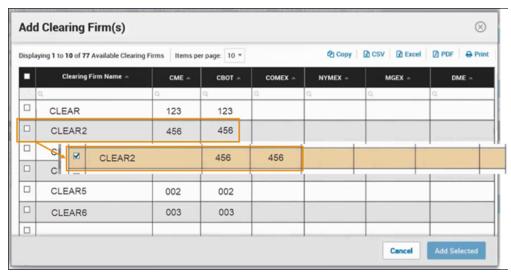
1. From the Request Center (ESS) menu, select Preferences > Clearing Firms.



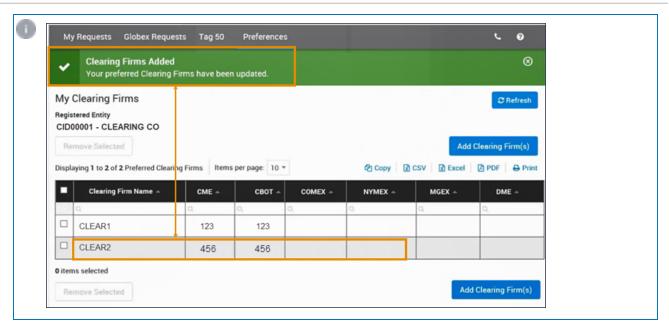
2. From the My Clearing Firms page that appears, select **Add Clearing Firms**.



3. From the list of clearing firms appears, **select** (checkbox) from the list of clearing firms, to associate with a Operator ID registration, then **Add Selected**.



A confirmation message appears, to indicate addition of the clearing firm(s).



Related Functions

Additional Operator ID registration and management functions are available from the CME Exchange Fee System - Globex Registration, including Editing Operator ID details manage individual user details, effective periods, expire IDs, copy individual or ATS team.

Managing Firm Permissions

The Request Center (ESS) includes self-service capability for Clearing Firm Admin Managers to grant permission to view Operator IDs / Tag 50, associated with their Registered Entity. To request access to view registered Operator ID / Tag 50 details contact your Clearing Firm.

Prior to accessing, users must have a CME Group Login and Request Center (ESS) entitlements.

Operator ID / Tag 50 management is also available in the CME Exchange Fee (EFS) System.



To enable Registered Entity users to view Operator ID / Tag 50 details:

1. From the Request Center (ESS) menu, select Preferences > Permissions.

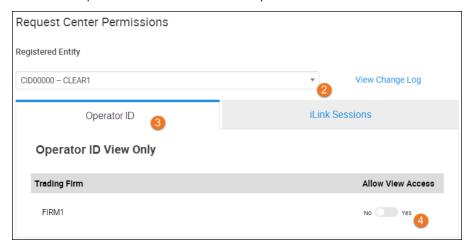


- 2. If you manage more than one entity, select from the Registered Entity menu; otherwise the Entity is selected. Appears only for registered entities that represent the clearing firm.
- 3. On the screen that appears, select the **Operator ID / Tag 50** tab.
- 4. For a given Trading Firm, select an Allow View Access option.
 - Yes: The Registered Entity / Trading Firm can view Operator IDs / Tag 50, associated with the selected clearing
 - No(default): The Registered Entity / Trading Firm cannot view Operator IDs / Tag 50, associated with the selected clearing firm.

Note: To enable trading firms to register Operator IDs, <u>assign user entitlements</u> (Request Center - Operator ID Full Access).

Allows authorized trading firm users to view their details.

Permissions updates are effective immediately.



Managing Operator ID User Entitlements

The CME Customer Center includes a self-service capability for Admin Managers / Application Admins, at Registered Entities, to create and manage Globex Operator ID / Tag 50 application user access, via the following roles:

- Request Center Operator ID / Tag 50 Read Only: View Operator ID details, including: firm, associated entity, registration type, ATS team and effective periods.
- Request Center Operator ID / Tag 50 Permissions: View Operator ID details and manage trading firm access.
- Request Center Operator ID / Tag 50 Full Access: Register new Operator IDs, create ATS teams and manage team members.

Using the **User Administration** function, Admin Managers must assign Operator ID permissions to themselves and additional users that want to view Operator ID / Tag 50 details, create a new Operator ID / Tag 50 or manage ATS teams.

Assigning user entitlements and permissions begins with the firm's Entity Officer who entitles their company's Front / Back Office Admin Manager (or designated Application Administrator) who adds and manages Operator ID / Tag 50 front office user entitlements, permissions and restrictions.

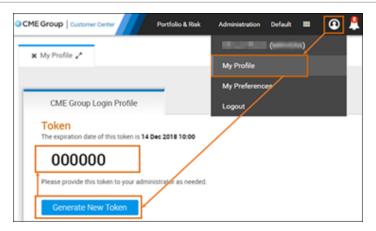
Managing Firm Access

Designated Clearing Firm Application Administrators can use the Self-Service permissions function to Manage <u>trading / execution firm access</u> to view details; firm, associated entity, registration type, ATS team and effective periods.

Prior to adding a new user entitlement the user must:

- Have a valid <u>CME Group Login ID</u>.
 Existing users with an active CME Group Login ID can be assigned entitlements directly.
- New users (including users with a recently <u>created CME Group Login ID</u>) may be required to generate and provide a <u>temporary token</u> to the firm's admin manager.

To obtain a token, select My Profile > Generate New Token. The token is valid for seven days.



Before using application functions, Admin Managers and Application Admins must initially add individual application roles to themselves (example: FirmSoft) via User Administration process.

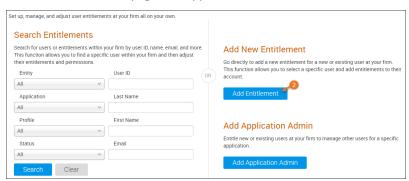


To Add User Entitlements:

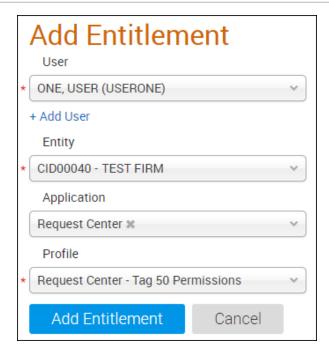
1. From the CME Customer Center - Administration Menu, select User Administration.



2. From the entitlements page that appears, select Add Entitlement.



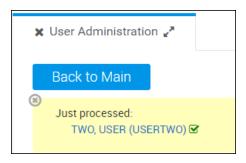
- 3. One the Add Entitlement screen that appears, specify the following:
 - User: Select a valid CME Group Login.
 - + Add User: Add the same entitlements for additional users.
 - Entity: Select from available entities, for which you are the authorized Admin Manager / Application Admin.
 - Application: Request Center (ESS)
 - Profile: Select from available entitlements:
 - Request Center Operator ID / Tag 50 Read Only: View Operator ID details, including: firm, associated entity, registration type, ATS team and effective periods.
 - Request Center Operator ID / Tag 50 Permissions: View Operator ID details and manage trading firm access.
 - Request Center Operator ID / Tag 50 Full Access: Register new Operator IDs, create ATS teams and manage team members.



4. Click Add Entitlement.

If prompted, enter your password.

The request is processed, a message appears and an email confirmation is sent to all Admin Managers / Application Administrators.



Cancel on Behalf

The Cancel on Behalf (COB) function allows authorized firm users to specify Globex Firm ID (GFID) Sessions that can cancel resting futures and options orders and mass quotes for their Order Entry / iLink sessions.

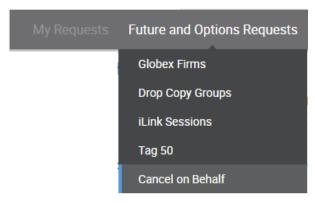


See also: iLink Trading on Behalf of a Client - Cancel on Behalf (COB)



To access Cancel on Behalf:

1. From the CME Customer Center menu, select Request Center (ESS) > Futures & Options Requests > Cancel on Behalf.

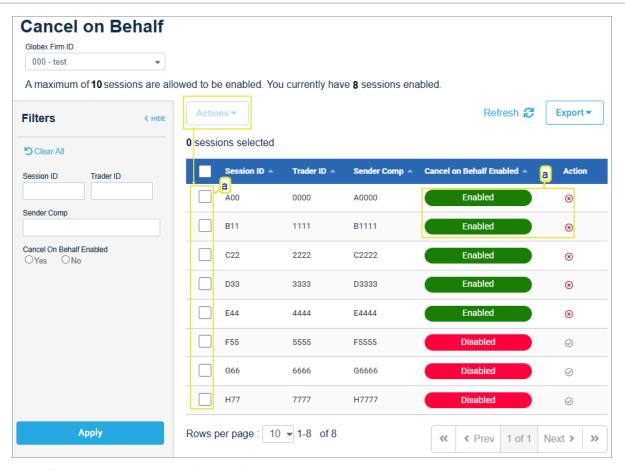


2. Select a Registered Entity and Globex Firm ID to manage.

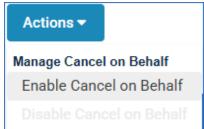


iLink Sessions associated with the selected AG and GFID will appear.

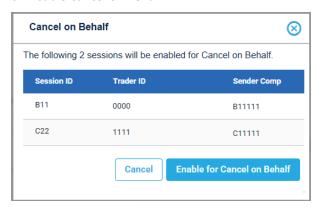
The current status of the session is shown on the Cancel on Behalf Enabled column.



3. Select from available Session IDs (up to ten).



a. Select up to ten sessions, then select Actions > Enable Cancel on Behalf or Disable Cancel on Behalf.

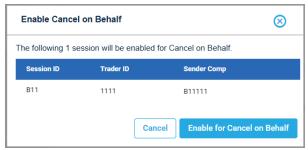


or

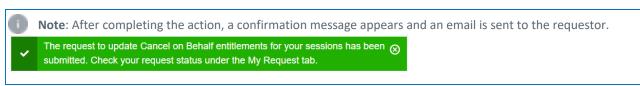
b. Enable / Disable COB: From the sessions list, on the Action column select Enable or Disable.



On the dialog that appears, confirm the selection.







BrokerTec Requests

Request Center (ESS) - BrokerTec Requests is a self-service function used to create and manage entity information for CME Globex - BrokerTec entities.

For additional details, refer to the <u>New BrokerTec customer onboarding to CME Globex - Operational Readiness Guide</u> on the BrokerTec portal.

BrokerTec Request Functions:

- Globex Firm IDs: Create and manage CME Globex Firm ID that identifies market participants and is used to segregate
 customer or business unit activity.
- Globex User Signature: Create and manage Globex User Signatures (GUS) that Identifies BrokerTec participants (persons or algo operators) authorized to manage a group of market participants and submit orders for a given GFID.
- <u>Algorithmic Trading</u>: Identify algorithmic trading systems used by the GFID and GUS and submit an Algorithmic Trading Certification Form.
- <u>Drop Copy Groups</u>: Create and manage sessions that can receive trading activity communications via the iLink order entry gateway.
- Order Entry Sessions: Create and manage Order Entry sessions that are used to send and receive orders and confirmation messages between the client and host.

Note: Using self-service functions, users can create a **SenderComp** [a concatenation of the Globex Firm ID (GFID), Order Entry Session (Session ID) and a Fault Tolerance Indicator (FTI)], to submit production environment orders. The FTI is not managed in Request Center (ESS), but it can be submitted in messages. See also: Cancel on Behalf - SenderCompID / iLink Order Entry - Fault Tolerance.

• Market Data Session: Create and manage sessions that can access TCP market data via an API connection.

BrokerTec Globex Firm ID

Using the BrokerTec Requests - Globex Firm ID self-service function, authorized users can create and manage Globex Firm IDs (GFID), which identifies market participants and is used to segregate customer or business unit activity. A GFID is the Globex equivalent of the legacy BrokerTec firm signature.

- An entity can have more than one GFID for each venue / market.
- A GFID and associated GUS can only be assigned to one company but multiple GFIDs can be created for a Registered Entity / Administration Group.

The following instructions describe the process how to set up a Globex Firm ID (GFID).



Watch a short video that describes and illustrates the process to view and create Globex Firm IDs (GFID).



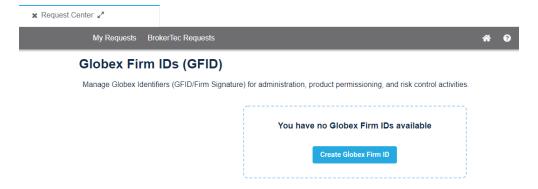
To create a Globex Firm ID:

1. From the Request Center (ESS) menu, select BrokerTec Requests >Globex Firm IDs.



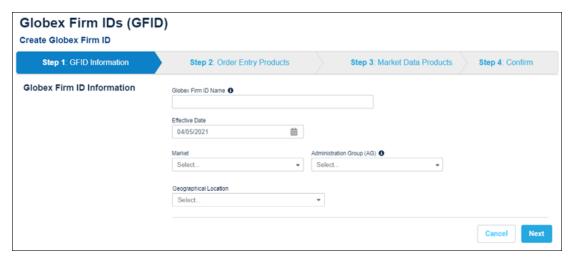
The Globex Firm IDs page opens in a new tab.

2. On Globex Firm ID page, select Create Globex Firm ID.



Enter GFID information in four steps: 1. GFID Information, 2. Venue Information, 3. Order Entry, 4. Market Data,
 Confirm / Submit.

Step 1: GFID Information



- **GFID**: Enter a five character alphanumeric identifier that is unique at the entity.
- Globex Firm ID Name: Specify a unique (at the entity) market participant name.
- Effective Date: Defaults to today.

The time is represented in U.S. Central Time. As applicable, adjust for your own time zone.

- Market: BrokerTec U.S. or BrokerTec EU*
 - *BrokerTec EU / UK GFID creation requires a response to Transaction Reporting questions.
- Geographical Location: system specified based on AG location
- Transaction Reporting(Required for BrokerTec EU also applicable for UK based firms): The following questions are intended to determine if your firm is under the scope of MiFIR or UK MiFIR, and has an obligation to report transactions to the relevant competent authority.
 - Applicable for participants of the BrokerTec EU MTF (UK trading venue)

Please confirm if the participant is a UK MIFID Investment Firm or is trading on the trading venue through a UK branch or is otherwise required to comply with the transaction reporting requirements of Article 26 of UK MIFIR.

Applicable for participants of the BrokerTec EU Regulated Market (EU trading venue)

Please confirm if the participant is an EEA MIFID Investment Firm or is trading on the trading venue through an EEA branch or is otherwise required to comply with the transaction reporting requirements of Article 26 of MIFIR.

- By selecting **Yes**, the participant is deemed to report all transactions in financial instruments executed by the participant on the trading venue.
- By selecting **No**, the operator of the trading venue shall report the details of transactions in financial instruments executed by the participant on the trading venue.



Note:

Pursuant to Article 26(5) of Regulation (EU) 600/2014 (MiFIR) and as onshored (UK MiFIR), trading venue operators are required to report details of transactions which are executed through their systems by a firm which is not itself subject to the MiFiR transaction reporting regime. Transactions executed by participants which are required to transaction report under MiFIR (e.g. MiFID firms or UK MiFID firms) should be reported by the participant and not the trading venue operator. The following question is intended to determine if your firm falls under the scope of UK MiFIR, and has an obligation to report transactions to the relevant competent authority.



If you are uncertain how to respond to these questions, or your firm's regulatory status and require guidance, please consult with your firm's legal or compliance team.

Pursuant to Article 26(5) of Regulation (EU) 600/2014 (MiFIR) and as onshored (UK MiFIR), trading venue operators are required to report details of transactions which are executed through their systems by a firm which is not itself subject to the MiFiR transaction reporting regime. Transactions executed by participants which are required to transaction report under MiFIR (e.g. MiFID firms or UK MiFID firms) should be reported by the participant and not the trading venue operator The following questions are intended to determine if your firm falls under the scope of MiFIR or UK MiFIR, and has an obligation to report transactions to the releva competent authority 🚺 If you are uncertain about how to respond to these questions, or your firm's regulatory status, please consult with your legal or compliance team for guidance. Applicable for participants of the BrokerTec MTF (UK trading venue) Please confirm if the participant is a UK MiFID Investment Firm or is trading on the trading venue through a UK branch or is otherwise required to comply with the transaction reporting requirements of Article 26 UK MiFIR. O Yes ○ No Applicable for participants of the BrokerTec Regulated Market (EU trading venue) Please confirm if the participant is an EEA MiFID Investment Firm or is trading on the trading venue through a EEA branch or is otherwise required to comply with the transaction reporting requirements of Article 26 MiFIR. O No Note: If Yes is selected, the participant is deemed to report all transactions in financial instruments executed by the participant on the trading venue If No is selected, the operator of the trading venue shall report the details of transactions in financial instruments executed by the participant on the trading venue

Administration Group (AG): A logical grouping of GFIDs that identifies the client entity, with a designated
individual that is assigned entitlements to manage GFIDs, details and the ability to create groups of GFIDs
for administrative / service management and transaction separation.

Step 2: Venue Information

Select the trading **Venue**: <u>BrokerTec Globex</u> / <u>BrokerTec Stream</u>

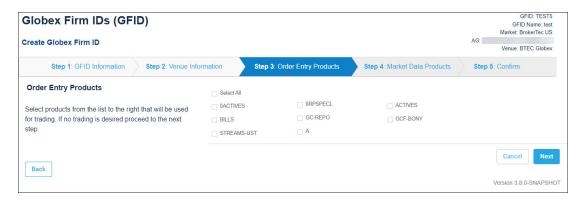
If *BrokerTec Stream* is selected, specify the default <u>GUS</u> to enable and whether they are a **liquidity provider** or **consumer**.



Step 3: Order Entry Products

Select product(s) that can be traded or none; to continue creating a GFID without trading privileges.

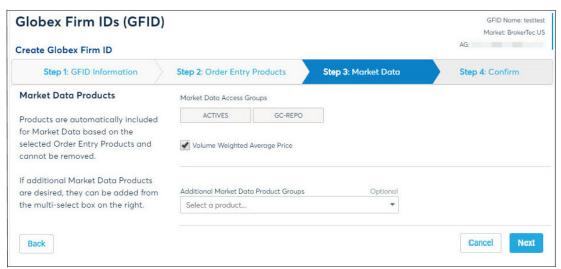
REPO product requests require CME Group review and approval prior to completion.



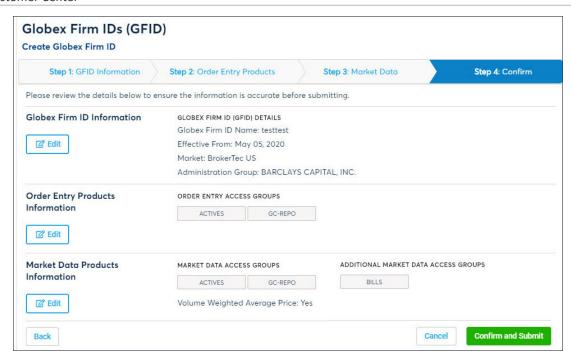
• Order Entry Access Groups:

Step 4: Market Data

- Market Data Access Groups: based on order entry product selections.
- Volume Weighted Average Price: This option (applicable for some products) may incur extra fees.
 For additional details, refer to Market Data service license types and costs on the BrokerTec Portal.
- Additional Market Data Product Groups: Select additional products to view market data; these may be products not selected in the order entry screen.



4. Step 5. Confirm entered information, Edit GFID details (if necessary), then select Confirm and Submit.



Successful submission is indicated by a confirmation banner and the new GFID appears on **My Requests** and the GFID page.



In addition to the GFID, <u>Globex User Signature (GUS)</u> setup is required. A GUS identifies a person authorized to manage the GFID and submit orders.

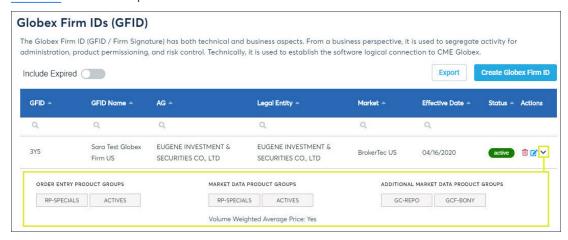
After GFID creation (and approval), set up <u>Order Entry</u> sessions and required APIs - iLink Order Entry, Market Data, Drop Copy, CME STP, Reference Data, GC Allocator API.

BrokerTec GFID Functions

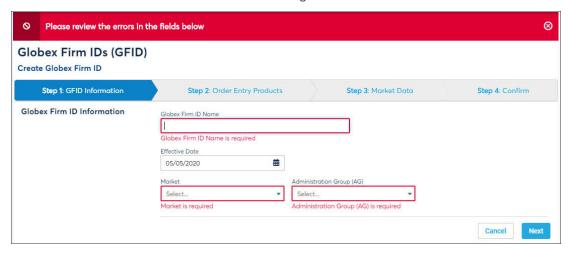
- Include Expired: by default only active GFIDs appear.
- Refresh Include recently added GFIDs.
- Export: Download the list of GFID as a .csv file.
- **Sort / Filter**: Enter search criteria in the top row, matching results appear as you type / select heading to sort ascending or descending.



• View Details: On the main Globex Firm ID page, expand a listed GFID to view additional details; Order Entry and Market Data Product Groups.



- **Delete** (): Select delete and the confirmation dialog.
- Edit (): Select, then update GFID fields as necessary.
- Field Validation: Fields are validated before advancing to the next screen.



BrokerTec Globex User Signature

Using the Globex User Signature self-service function, authorized users can create and manage Globex User Signatures (GUS), which identify the person or algo operator authorized to submit orders for a specific GFID for the entity. A GUS is the Globex equivalent of the legacy BrokerTec user signature and is associated with just one GFID. An individual person can be assigned the responsibility for the GUS; to manage multiple GFIDs.



Watch a short video that describes and illustrates the process to view and create Globex User Signatures (GUS).

Accessing BrokerTec Globex User Signature

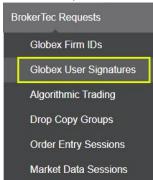
The following instructions illustrate the process to access the BrokerTec Globex User Signatures (GUS) function.



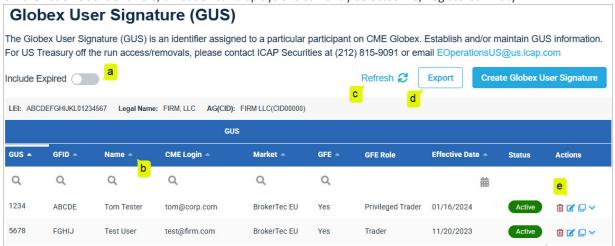
To access BrokerTec Globex User Signature:

From the Request Center (ESS) menu, select **BrokerTec Requests** > **Globex User Signatures**.

If you have administrator entitlements to for than one entity, select the **Administration Group (Registered Entity)** to manage from the drop-down menu.



On the list of GUS identifiers, a header bar displays the currently selected AG/Registered Entity.



BrokerTec GUS features

- a. Include Expired: View all GUSs, including expired.
- b. **Search / Filter**: Enter search criteria in the top row, results update as you type, or select the column heading to sort by ascending / descending order.
- c. Refresh: Reload the page to view added, updated, deleted GUSs.

- d. **Export**: Export the list of GUSs to a .csv format file for review offline. To export specific records, first enter search criteria in column headings.
- e. Actions:
 - D: Expire the selected GUS, including associated registered algorithms.
 - **I**: Edit GUS details (step 1 GUS Details, step 2 Order Entry Products, step 3 Market Data Products).
 - **!**: Clone an existing user's configuration for a new user.
 - V: View summary GUS details, without accessing edit mode.
- f. Page Navigation: Below the list are page appearance features to change the number of GUS identifier *rows*



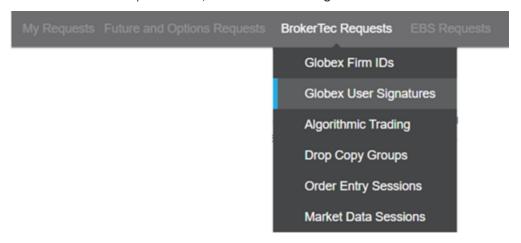
Additional Functions

- Accessing BrokerTec Globex User Signature
- Creating a BrokerTec Globex User Signature
- Cloning BrokerTec Globex User Signature
- Expiring a BrokerTec Globex User Signature

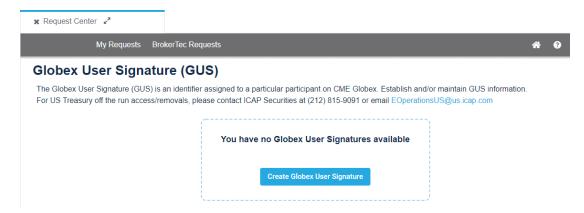
Creating a BrokerTec Globex User Signature



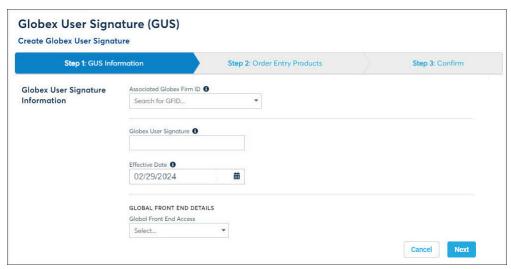
1. From the BrokerTec Requests menu, select Globex User Signature.



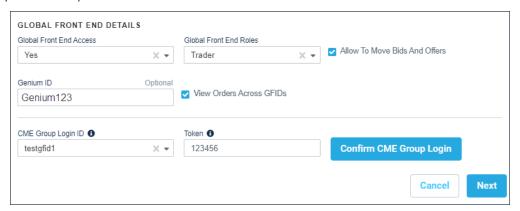
- 2. On Globex User Signature page, select Create Globex User Signature then enter GUS Details:
 - Step 1: GUS Information
 - Step 2: Order Entry Products
 - Step 3: Market Data Products



3. **GUS information** (Step 1):



- a. **Associated Globex Firm ID**: Select the Associated Globex Firm ID that this Globex User Signature will manage. This GFID must be <u>created</u> prior to creating / assigning a GUS.
 - Select the Globex Firm ID (GFID) to which this Globex User Signature (GUS) will be entitled.
 - Globex User Signature: Specify a unique name for the GUS, unique at the firm and up to five characters.
 - **Effective Date**: Defaults to today's date. The effective date defaults to today's date as represented in U.S. Central Time; adjust for your own time zone.
- b. **Global Front End (GFE) Details (Yes)**: Select to enable Global Front End application access (Yes / No) then specify additional options:



- Global Front End Roles:
 - Read Only Trader Can access GFE and view orders,
 - Trader Can create and submit orders and cancel their own orders,
 - **Privileged Trader** Can create and submit orders and cancel orders for the entire firm. This user also receives FirmSoft access, which allows the user to view and cancel orders for the firm.
 - Repo Trader When requesting Repo Trader access, ensure that the selected role is External Privileged Trader or similar
- Allow to Move Bids and Offers: Assign entitlement for bulk order management in the GFE Bulk Order Management (BOM) function, which enable users to select orders to modify bid and offer prices then adjust the prices up or down.
- **Genium ID**: (for *Traders* and *Privileged Traders*) Specify the legacy Genium ID (if applicable) that will be assigned GFE access.
- View Orders across GFID: If the user is assigned to manage multiple GFIDs, selecting this option enables the user to view all orders (in GFE) for multiple GFIDs.
- Self Match Prevention ID (applicable for GFE front end traders): Specify the default self-match prevention ID to add to orders submitted by the GFID.
- **SMP instructions** (applicable for GFE front end traders): Specify default order handling (1) Keep the first order and cancel the second order *or* (2) Cancel the first order and keep the second order.
- c. **CME Group Login**: Select one of the following:
 - i. Select an existing CME Group Login associated with the firm.

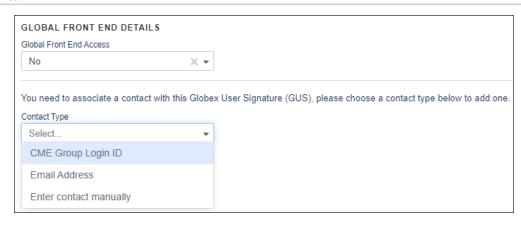


ii. Add a CME Group Login (not available to an Admin user), including the <u>token</u>, then select the **Confirm** button.



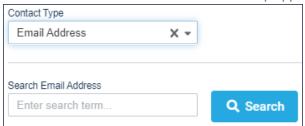
Note: The Email address associated with the CME Group Login must match the firm's domain or its related affiliates.

iii. Global Front End Access (No): Select if Global Front End application access is not required.



Also specify user contact info: CME Group Login ID (see above <u>instructions</u>), Email address or User Contact info.

- Email AddressLookup email addresses associated with other CME Group applications and copy the

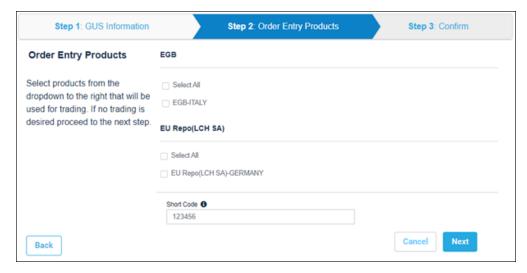


information to contact fields.

- Enter contact manually



4. Step 2 Order Entry Products



- a. Select products that will be used by the GFID/GUS for trading.
 GFIDs, and associated products, registered in the EU, require a Short Code.
- Selected Repo products require CME Group approval before the GUS is activated.
- To request off-the-run access, contact ICAP securities at the phone number / email on the page.
- b. **Short Code**: The short code identifies the person or ATS operator responsible as the financial / executing decision maker, on each order and associates a GUS with Personally Identifiable Information (PII) which is required for regulatory purposes.

Short Codes are mapped to the person's national ID and must be unique within the GFID. Each GFID can be associated with multiple GUS, and each GUS will have a unique associated short code.

Only one individual / natural person short code may be associated with a given Operator ID and GUS; additional person short codes may be registered using a separate GUS for each. One or more short codes may be associated with an Operator ID which represents an individual overseeing the administration and operation of an ATS.

- A natural person GUS with access to the order book may only be used by the identified person and may not be used by any other natural person entity user and may not be used for orders entered by an ATS. It is used on order messages in lieu of a personal identifier.
- For *algorithmic systems*, register one or more short codes for a GFID and GUS. The short code must meet the following conditions:
 - unique for each set of code or trading strategy that constitutes the algorithm.
 - used consistently when referring to the algorithm or version of the algorithm once assigned.
 - unique over time.

Note: As part of the product entitlement process for a GUS / Trader to be allowed to trade MiFID regulated products, Participants must also submit PII information. Failure to submit PII data will result in the GUS / Trader not being allowed to trade. For details see the following:

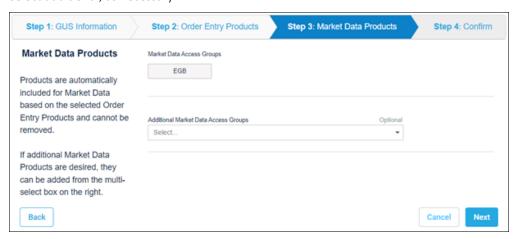
- PII Data Submission User Guide
- Personally Identifiable Information (PII) instructions
- 5. Specify Market Data Products (Step 3).



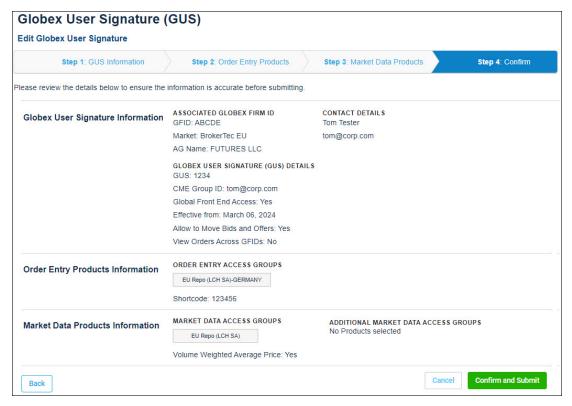
Applicable if Global Front End access is selected.

For selected Order Entry Product(s) selection(s), Market Data products are automatically selected.

Select additional, as necessary.



6. Select Next then Confirm and Submit.



Successful submission is indicated by a confirmation banner, confirmation email and the GUS will appear on **My Requests**.



Note: After creating a GFID and GUS, create <u>order entry sessions</u> to transmit orders and handle order related messages.

Cloning a BrokerTec Globex User Signature

The following instructions illustrate the process to clone an existing GUS as the basis for a new GUS.



Example: A new user joins a team that manages BrokerTec trades for a given GFID.



To Clone a BrokerTec GUS:

- 1. From the Globex User Signature page, select the **clone** () icon (in the Actions column) for an existing GUS to copy. Use the above fields for additional details on specifying GUS details.
 - Step 1: GUS Information

The Associated GFID is copied from the source as the basis for the new GUS.

Globex User Signature: Specify a new and unique Globex User Signature name.

Note: To complete setup, the administrative user cloning a GUS must obtain the person's CME
Group Login ID and Token.

CME Group or the admin user will never ask for the associated password.

- Step 2: Order Entry Products.
- Step 3: Market Data Products.
- 2. Review, then Confirm and Submit.

Expiring a BrokerTec Globex User Signature

BrokerTec Globex User Signature includes a function to expire previously registered identifiers that are no longer needed / not-used.



To expire a BrokerTec GUS:

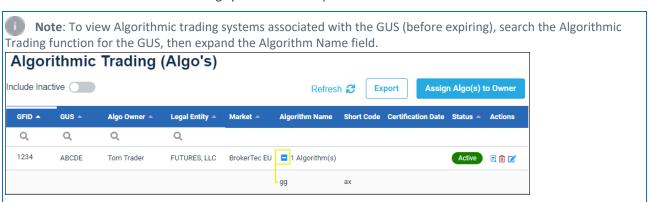
1. From the BrokerTec Requests > Globex User Signature page, select the Expire ($^{\textcircled{1}}$) icon (Actions column).



2. On the dialog that appears, confirm the expiration request.



The selected GUS and associated trading systems will be expired.



3. If necessary, assign a new GUS for the associated GFID.



Algorithmic Trading

Use the BrokerTec Algorithmic Trading function to view trading systems used by the GFID and GUS and submit an Algorithmic Trading Certification information.

Note: Pursuant to rule 23.4 of the BrokerTec EU RM Rulebook and BrokerTec EU MTF Rulebook, Algorithmic trading participants shall certify in advance of deployment that the algorithms they deploy have been tested to avoid contributing to or creating disorderly trading conditions prior to the deployment or substantial update of a trading algorithm or strategy and explain the means used for that testing.

Prior to registering Algorithmic Trading systems, ensure the GFID and Globex User Signature (GUS) is created.

To enable access to Request Center (ESS) - Algorithmic Trading functions, authorized Front Office Admin Managers must use the User Administration function to authorize users to view and/or manage this function via the user role: Request Center -ALGO Read-Only / Full.

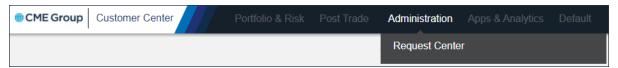
From BrokerTec Requests - Algorithmic Trading the following functions are available:

- Access Algorithmic Trading function
- Assign Algo to GFID Owner: Associate an Algorithmic trading system with a GFID and GUS.
 - Attach Certification documents / Enter information
- Annual Algorithmic System Certification
- Update Algorithmic Trading System Owner (GUS) Information

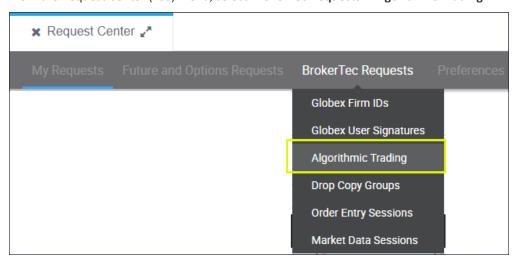


To access Algorithmic Trading:

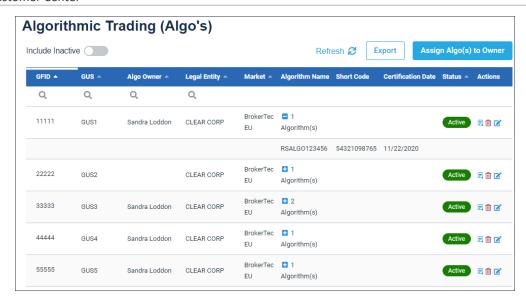
1. From the CME Customer Center Menu, select Administration > Request Center (ESS).



2. From the Request Center (ESS) menu, select BrokerTec Requests > Algorithmic Trading.

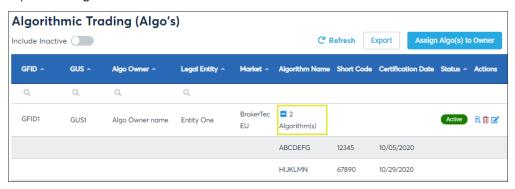


For the Administrative Group you are authorized to view, a list of associated Algorithmic Trading systems appears.



Available information includes the associated GFID, GUS, Algo Owner, Legal Entity and Market and certification document

Expand the Algorithm Name to view additional details.



Algorithmic Trading System Actions

• Export (): Opens a screen to download and view previously submitted certification documents.



- **Delete** (): Remove and expire all registered Algos for the selected Owner
- Edit (): Select the Algo to update:
 - Step 1: Algo Information: Algorithm Name, Algo Short Code, Certification Date, including an option to add additional.
 - Step 2: Algo Certification Selection:

- Upload Certification PDF
- Manually Enter Algo Information

Assigning Algorithmic Trading Systems to Owner (GFID/GUS)

Use the **Assign Algo to Owner** function to and associate algorithmic trading systems with a GFID (Firm) / GUS (Owner) and submit an Algorithmic Trading Annual Certification Form, which certifies conformance to CME Group requirements.

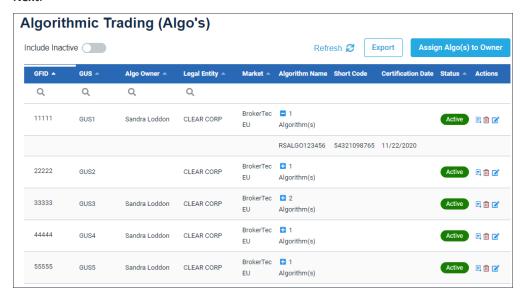
Note: When registering / assigning multiple (including new Algos) Algorithmic Trading Systems to an owner, all certification dates must be identical.

- When uploading a completed certificate form file, the date in the form is applied to all Algos.
- When manually entering details, the certification date defaults to today. Update previously certified Algos to today's date.



To Assign Algos to Owner:

 From the list of associated Algorithmic Trading systems, select Assign Algo(s) to Owner, enter Algodetails, then select Next.



Algo Owner

- Associated Globex Firm ID
- Globex User Signature: Available selections are based on user entitlements and the associated GFID.

Algo Information

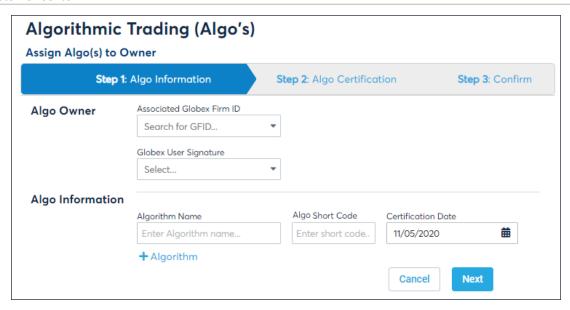
- Algorithm Name: Up to six alphanumeric characters.
- Algo Short Code: The short code is required to trade products and is associated with the GUS.

The short code associates the Algorithmic Trading System with a user's Personally Identifiable Information (PII) and GFID/GUS registered with the BrokerTec Upload Facility,



See also: BrokerTec Upload Facility User Guide on cmegroup.com (BrokerTec EU RM section).

• **Certification Date**: The certification date defaults to today's date as represented in U.S. Central Time; update for your own time zone.

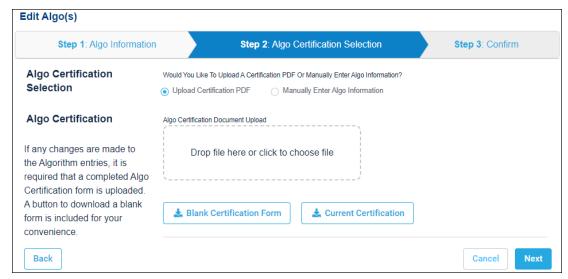


2. Select to (a) **Upload** the Algo Certification form or (b) **manually enter** information.

The file name of the attachment must have alphanumeric characters (A-Z, 0-9), underscore (_), hyphen (-) only.

A blank certification form and/or the current certification is available to reference required information.

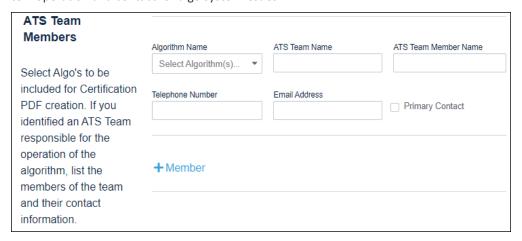
a. **Upload**: Upload (drop file / click to choose file) a completed certification form, a fillable template is available for download from the page.



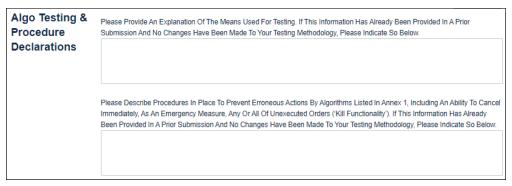
- b. Manually Enter: Specify required information:
 - ATS Team Members
 - Algo testing and procedure declarations
 - Key Contacts



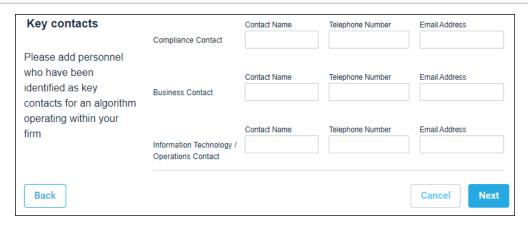
i. **ATS Team Members** (required): Select the Algorithm (System) Name, team information and contact information for at least one team member (indicate primary contact) responsible for algorithm system operation and contact for algo system issues.



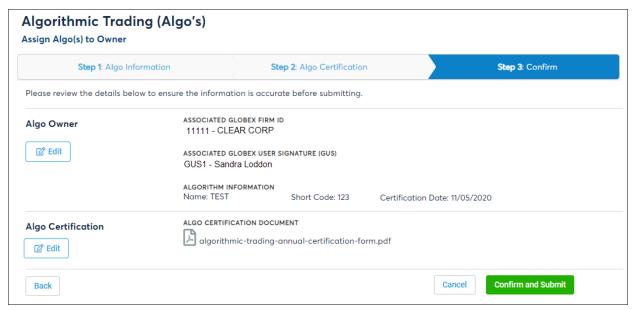
ii. **Algo Testing & Procedure Declarations** (required): Describe the testing procedure used to ensure compliance with CME Group <u>development requirements</u>.



iii. **Key Contacts** (required): Personnel identified as key contacts for an algorithm operations within a firm. If necessary, CME Group will contact these individuals for questions or issues.



3. Review Algo Information and certification details, then select Confirm and Submit.

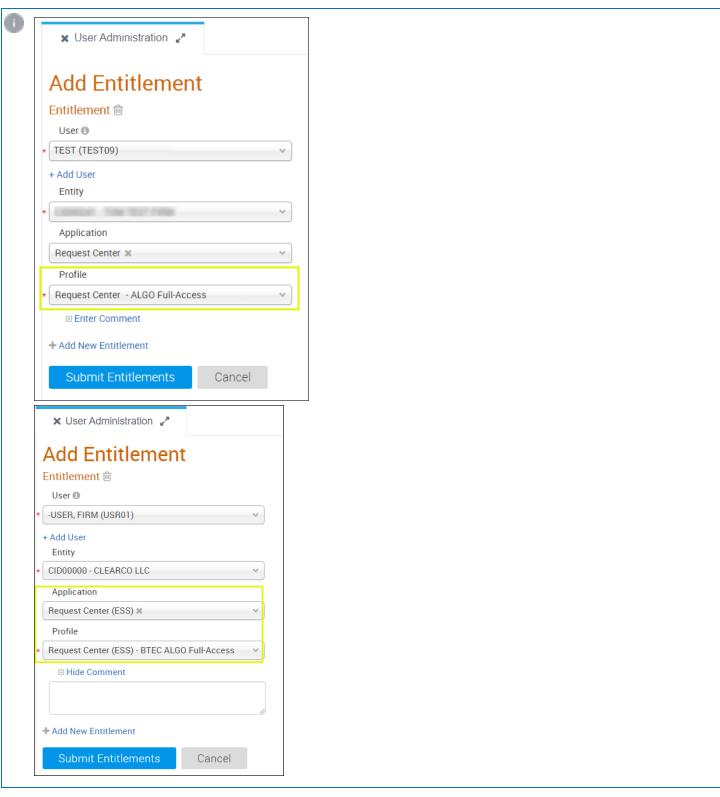


Annual Algorithmic System Certification

The Markets in Financial Instruments Directive - MiFID II CDR EU 2017/584 (RTS 7) requires that BrokerTec EU customers must review and annually certify algorithmic trading system details.

Users authorized by registered owners must access the BrokerTec Request Center (ESS) to review the existing Algo information, update the Certification Date and upload a certification form or manually enter information for all registered Algos. You can also add / delete Algos or update the Owner if necessary.

Note: To authorize users to Edit Algorithmic Trading system information, an Admin Manager or Application Admin must use the User Administration function to add *Request Center - BrokerTec ALGO Full Access* entitlements.

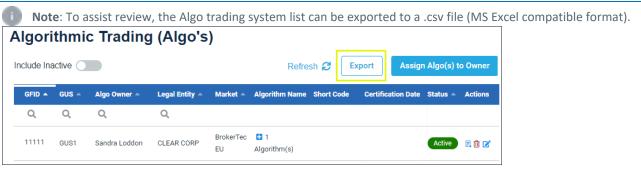


1. Go to Request Center (ESS) > BrokerTec Requests - Algorithmic Trading.

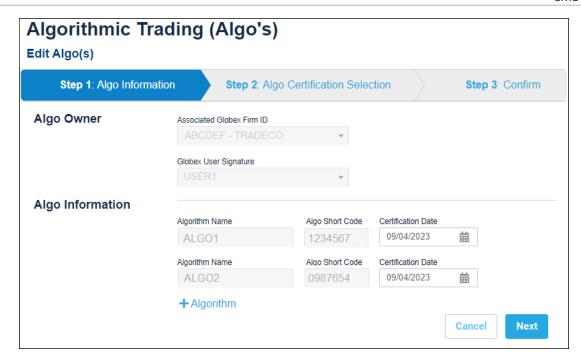


2. Expand the Algorithms as necessary, then review the list of Algo trading systems.

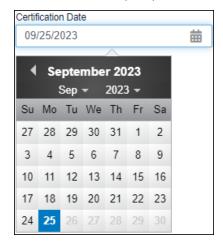




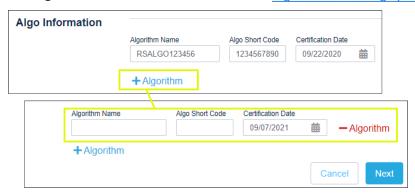
3. Select **Edit** (), review / update the *Step 1: Algo Owner / Information* (if necessary).



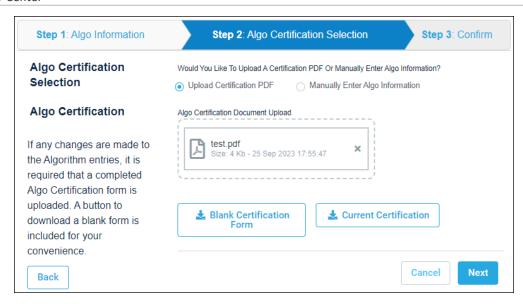
• Certification Date: Specify the new certification date, select Next.



• Add Algorithm: Enter information for additional Algorithmic trading systems.



- 4. For Step 2: Algo certification selection, provide required information via upload or by manually entering.
 - Upload



Manually enter: See instructions (above):



5. Select Next, then Confirm and Submitto complete.

Note: For additional information or assistance with the annual certification process, contact Global Account Management.

Update Algorithmic Trading System Owner Information

The following instructions illustrate the process to update GUS (Algo owner) information or associated products via the BrokerTec Requests - Globex User Signature function.



To update the Algo Owner:

1. Search and select the Algo system to update (e.g. filter the list by entering search criteria in the top row).



2. Review the Algo Name and Short Code, then copy the **GUS** to update.



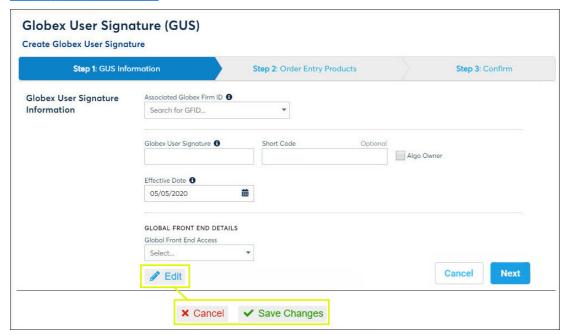
3. From the BrokerTec Requests menu, go to the Globex User Signature function.



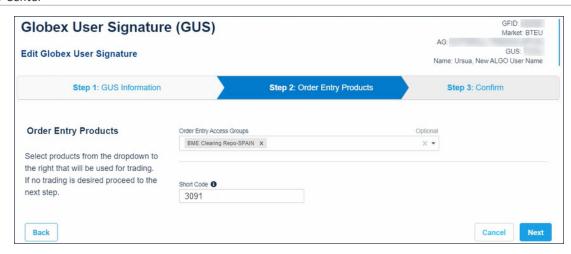
4. Select or search for the GUS (from the Algo screen) to update, then select the Actions - Edit ().



- 5. Update GUS details, as necessary:
 - Step 1 GUS Information: Select Edit > update GUS Information > Save Changes, then select Next.



• Step 2 - Order Entry Products: Review / Edit Products (if applicable), then select Next.



6. To save updates, select Confirm and Submit.



To view updated *Algo information*, select the request from the list.

BrokerTec Drop Copy Groups

Using *BrokerTec Requests - Drop Copy Groups* function, <u>authorized users</u> can create and manage sessions that can receive trading activity communications via the <u>iLink</u> order entry gateway.

To receive messages at multiple related entities, configure drop copy groups (target sessions) with additional source sendercomp sessions.



Example: Clearing firms only receive messages related to activity which they clear.

From the BrokerTec Requests menu the following Drop Copy functions are available:

- Creating a Drop Copy Group: Create a new Drop Copy Group.
- Editing and Deleting: Edit and delete existing Drop Copy Groups, including associated target session IDs.
- <u>Securing Drop Copy Sessions</u>: To secure the login for Drop Copy sessions, use Hash Message Authentication Codes (HMAC) to create a secure key-pair login.
- My Requests: View Submitted requests and approve, as necessary.

Creating a Drop Copy Group

Use the Drop Copy function to configure an entity to receive business and session activity messages.

The creation process consists of the following steps:

- Select Registered Entity
- · Specify Group Name
- Select Front End System
- Select Filters
- Add Source Sender Comps
- Submit



To create a Drop Copy Group:

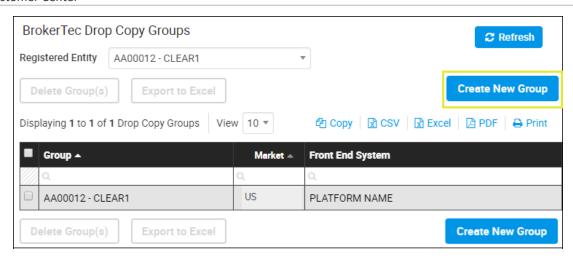
1. From the BrokerTec Requests menu, select Drop Copy Groups.



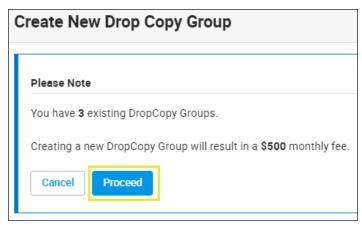
2. Select a Registered Entity to manage.



3. Select Create New Group > BrokerTec EU / U.S..

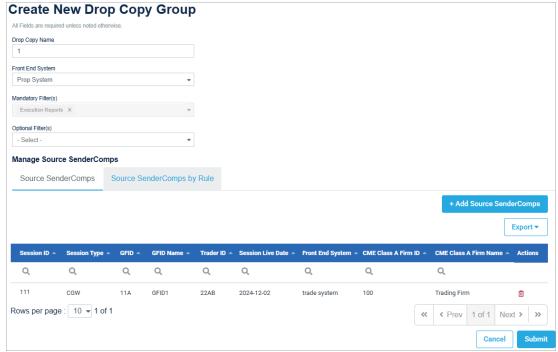


A dialog indicates the number of existing Drop Copy groups and the **fee** for creating a new group, if applicable.



Note: Customers receive one free Drop Copy Group, a <u>fee</u> is incurred for each additional instance. There is no limit to the number of Source SenderComps assigned to a given Drop Copy Group.

- 4. To continue, select Proceed.
- 5. On the page that appears specify the Drop Copy Group Name and Front End System to monitor.



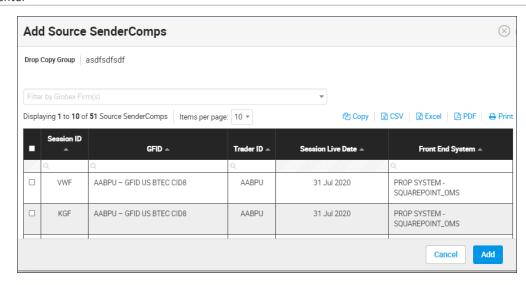
6. For the **Filters**, select *communication types* the Drop Copy Group will track.

Available communication types:

- Acknowledgement (Ack) Messages.
- Execution Reports:
 - Execution Order Entry: New Order Acknowledgement message.
 - Execution Create / Cancel / Modify: Response message
 - Execution Elimination: Order expiration message.
 - Trade Fill Notice: Complete and partial fills.
 - Trade Trade Cancel: Notifies user of trade cancellation.
- Heartbeat: A response message that confirms connectivity.
- Order Mass Action Filter: Confirms the number of canceled orders.
- Reject Messages: Message indicates a session level error has occurred.
- Trade Busts: Trade cancellation: (see Trade Cancel, above).

Note: Using session configuration information, the selected communications are routed to the Source SenderComp / Session IDs.

- 7. Select Add Source SenderComps:
 - a. Filter by Globex Firm (optional).
 - b. Select from the available **Source SenderComps**, then select **Add**.



8. To finalize, select Submit.

Submitted requests are available from the <u>Request Center (ESS) - My Requests</u> and initially assigned an In-Progress status.

After validation and setup, the status changes to **Completed** and the Drop Copy Group appears in the **Drop Copy Group > Registered Entity** list.

Secure Key Pairs

CME Group uses a secure login process for Drop Copy, Order Entry and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request* + *Secret KeyUsed to create HMAC signature.*) to secure user login and Drop Copy message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Generating Keys for Drop Copy Sessions

CME Group uses a secure login process for <u>Drop Copy</u> API services using secure key pairs (Access Key ID + Secret Key) to login to API Order Entry sessions.

Pending Expiration

Prior to expiration, an email notification is sent to registered administrators and a system notification on the Drop Copy, Order Entry or Market Data Session modules. During the pending expiration period a second key pair can be created and the initial key pair remains active for up to four weeks, after which the older key pair is automatically expired (after market close).

Following is an overview of the secure key management process:

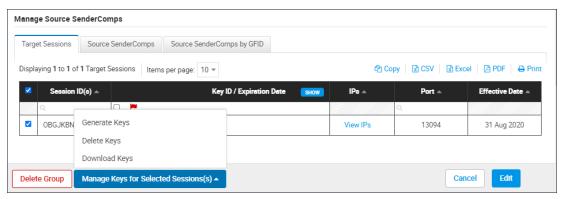
1. From the *BrokerTec Requests* menu, select **Drop Copy Groups**.



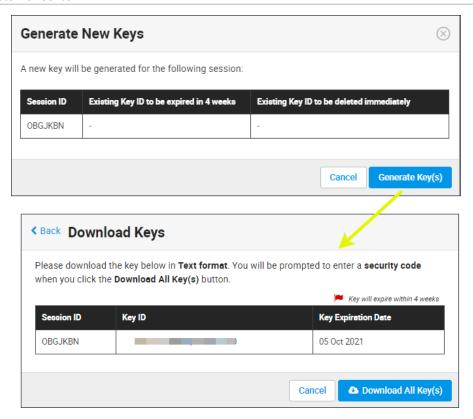
2. Select **Registered Entity**, then select a **Drop Copy Group** to manage.



3. From the **Drop Copy - Target Sessions** tab, select a **Target Session** checkbox, then select **Manage Keys for Selected Sessions > Generate Keys**.

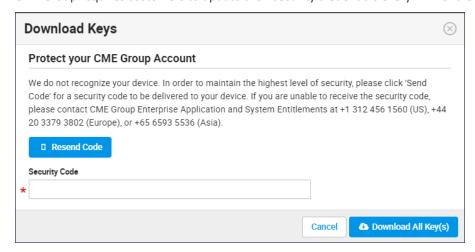


4. On the screen that appears, select **Generate Key**, then **Download the Key**.



5. To download the key, confirm your identity by completing multi-factor identification, using one of the following methods:

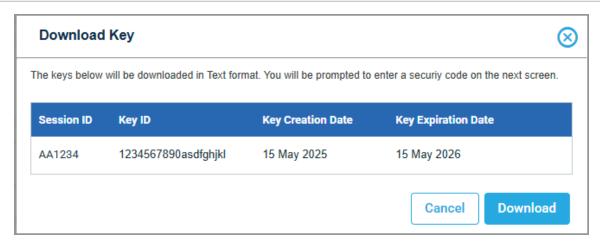
CME Group requires customers to update their security credentials every 12 months.



- SMS code: Sent to the default CME Group Login mobile phone.
- Contact EASE: Upon user identity verification, receive a one-time use code.
- Duo Security

After authenticating, a cryptographic key pair is generated.

A confirmation banner appears, an email confirmation is sent to the registered address and the request is added to **My Requests**.



6. From the saved file, view the corresponding **Secure Key**, which is used for securing Drop Copy Sessions.

Additional Options:

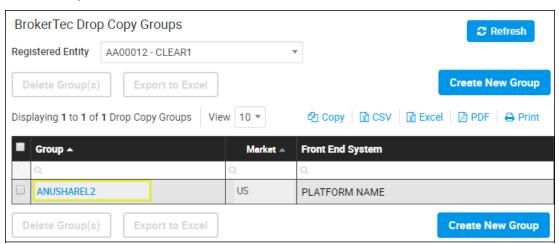
- Delete Keys: Select and confirm deletion.
- Download Keys: Download the cryptographic key as a flat text file.

Editing Drop Copy Groups

Using the CME Globex Drop Copy Group functionality users can view and manage existing Drop Copy Groups.

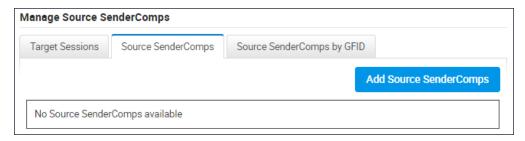
To edit Drop Copy group details:

- 1. From the Globex Requests menu, select Drop Copy Groups.
- 2. From the drop-down menu, select a Registered Entity.
- 3. Select a Groupto edit.

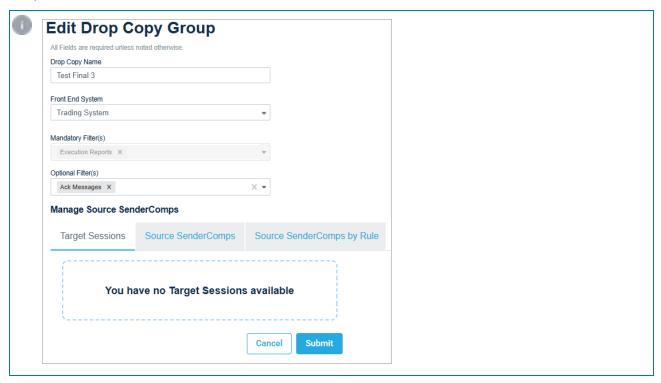


Select **Edit**, then update Drop Copy Group details as required:

- Target Sessions (view only)
- Source SenderComps / Source SenderComps by GFID



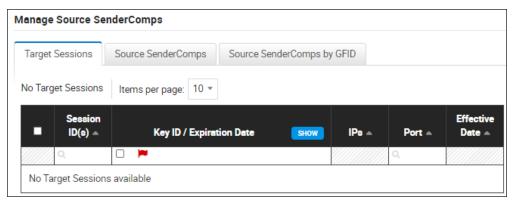
4. On the Details page update the Drop Copy Group Name, Front End System and <u>Filters</u>, Target Sessions, Source Sender-Comps:



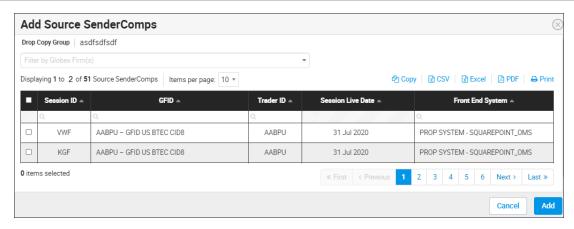
Note: Designated user administrators can update front end system mapping.

• Target Sessions: View-only session <u>configuration</u> details.

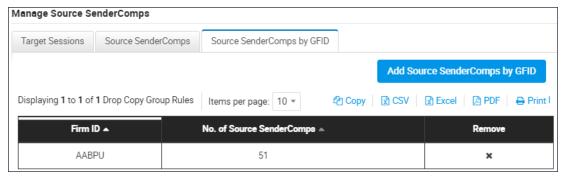
To view Public Key ID details, select Show.



• Source SenderComps: Select additional Source SenderComps that will receive messages.



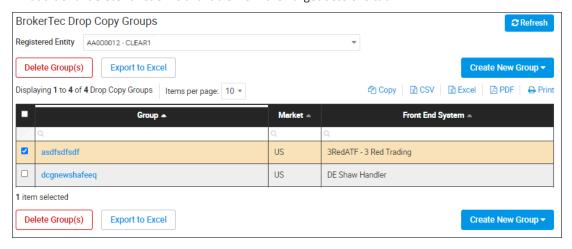
• Add Source SenderComps by GFID: Select firm(s) as required.



5. To finalize updates, select **Submit**.

Additional Options:

Deleting Drop Copy Groups - Select Drop Copy Group(s), click Delete Group(s).
 An additional delete function is available from the Target Sessions tab.



BrokerTec Order Entry Sessions

Using the BrokerTec Requests - Order Entry Sessions function, <u>authorized users</u> can create and manage Order Entry sessions that are used to send and receive orders and confirmation <u>messages</u> between the client system and CME Group.

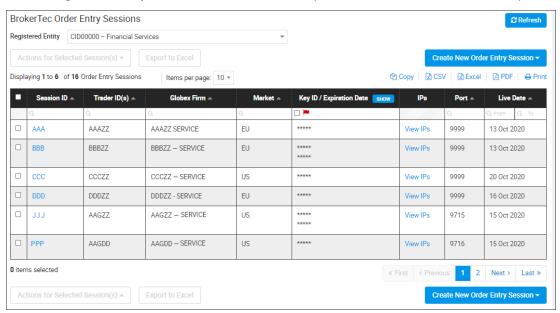
BrokerTec Order Entry Functions

Accessing Order Entry Function

From the CME Customer Center menu, select Request Center (ESS) > BrokerTec Requests > Order Entry Sessions.



Select a Registered Entity; users with access to one entity are directed to the list of Order Entry sessions.



A valid order entry session consists of:

- SenderCompID:
 - Session ID (characters 1-3)
 - Globex Firm ID (characters 4-6)
 - Fault Tolerance Indicator (last character)
- Password
- · Access Key ID
- IP address
- Port
- Market Segment Id (MSGW session)



See also: SenderCompID - iLink - Fault Tolerance.

Order Entry Request Status

Submitted requests are available from My Requests with an In-Progress status.

Upon successful setup and validation of session details request status updates to Completed.

- Requests submitted before 12:00PM CT are processed and will be effective the same day.
- Requests submitted after 12:00PM CT will be effective the next business day.
- Updates to session protocols are processed at 4:00PM CT.

An email and communication center message is sent to the user at submission and completion.

After processing and validation of request details, the iLink session details are available from the BrokerTec Order Entry Sessions page.

Create iLink Order Entry Sessions

The following procedures illustrate the process to create an Order Entry Session for BrokerTec.



To create a new iLink Session:

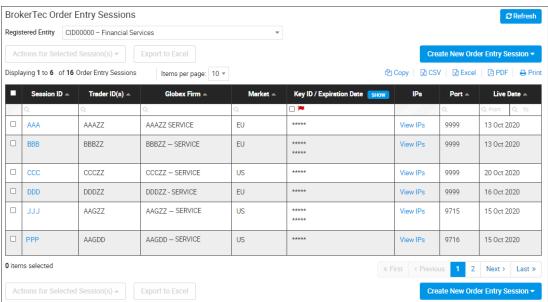
1. From the BrokerTec Requests menu, select Order Entry Sessions.



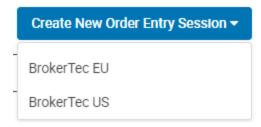
2. Select a Registered Entity.

For users with access to one entity, this is automatically selected.



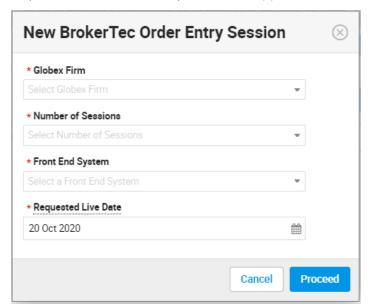


3. Select Create New Order Entry Session, then specify if the session is for U.S. or EU.



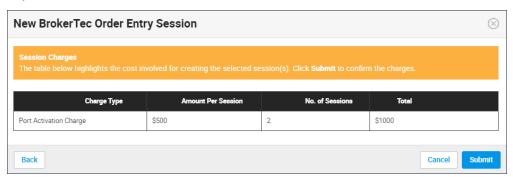
4. On the screen that appears, enter new session details.

Required fields are indicated by a red asterisk (*).



- *Globex Firm
- *Number of Sessions: The number of available sessions cannot be more than allocated to an entity (Globex Firm). Order Entry sessions may incur a fee.

Upon submitting the request an acknowledgment message appears, indicating charges (if applicable) for the requested session.



- *Front End System: Select the application(s) for which the session is authorized.
- *Requested Live Date: The effective date the session will be available.
- 5. Upon completion of required data, click **Proceed**.
- 6. If you agree with the setup details and fee, click Submit.

A notification banner appears, indicating successful request submission.

Administrator approval is not required.

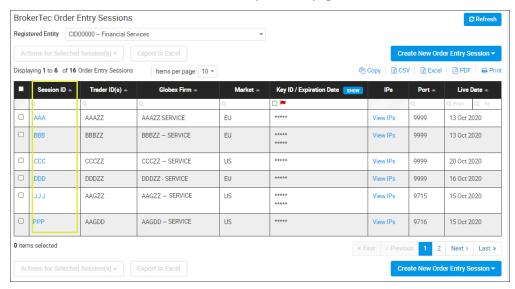
After processing, sessions appear in the list, with an assigned Session ID.

Edit / Delete Sessions

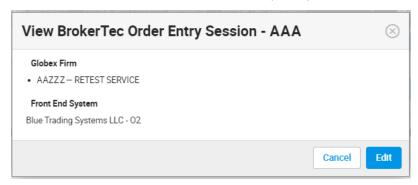
From the Order Entry Session page the following functions can be performed.

The ability to perform advanced functions is determined by a users assigned entitlement.

• View Session ID details: From the Order Entry Sessions page, select a linked Session ID.

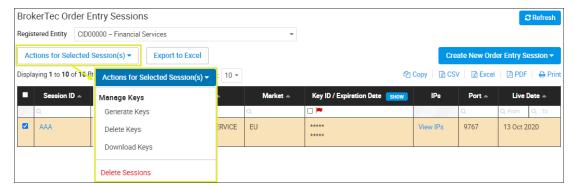


• Edit session details: Select the linked Session ID(above), then select Edit.

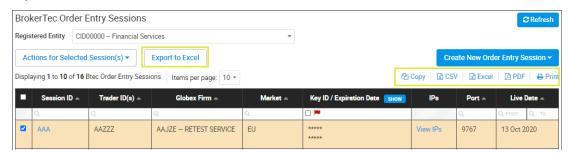


• **Delete Sessions**: Deletions are queued for weekly processing that occurs on Friday afternoons. After submitting, the My Requests (ESS) status indicates *In-Progress*, once finalized the status changes to *Completed*.

If a session is deleted by mistake, contact Global Account Management.



• Export or Print the list of Sessions



Secure Key Pairs

CME Group uses a secure login process for Drop Copy, Order Entry and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request* + *Secret KeyUsed to create HMAC signature.*) to secure user login and Order Entry message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Securing iLink Order Entry Sessions (HMAC)

CME Group uses a secure login process for <u>Order Entry</u> API services via Hash Message Authentication Codes (HMAC). Authorized users can generate private security keys or manage secure Order Entry Session activity.

- Access Key ID: Secure login request to iLink.
- Secret / Private Key: Used to create HMAC signature.

HMAC helps to secure user login and message activity:

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: HMAC codes are generated from a combination of login FIX tag values. CME Globex uses customer submitted credentials to calculate the HMAC value to validate against the login request.

Securing Order Entry Sessions

Following is a overview and detailed instructions for authenticating and managing secure iLink Sessions.

Overview

- API ID: To secure API ID sessions, use the <u>CME Group Login > Profile</u> function.
- Multiple secure keys:
 - iLink sessions can have up to two secure key pairs; until the older key pair is expired four weeks after notice. Expiration occurs after market close.

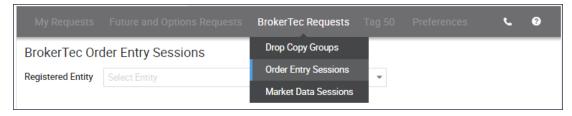
- If a third key pair is generated, the user must select a key pair to delete immediately.
- Expiration: Secure key pairs are valid for 12 months. Prior to expiration, an email is sent to registered administrative users.
- **Key Management User**: A user entitlement to create and manage iLink session secure login pairs. Existing Administrative Manager users are assigned this role as part of their administrative responsibilities.

To request this role, contact Global Account Management.

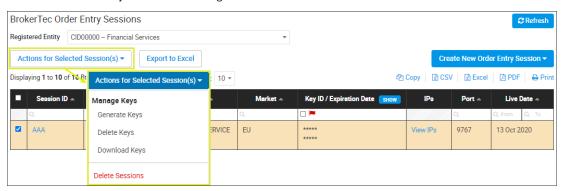
Process

Following is an overview of the secure key management process, including available functions:

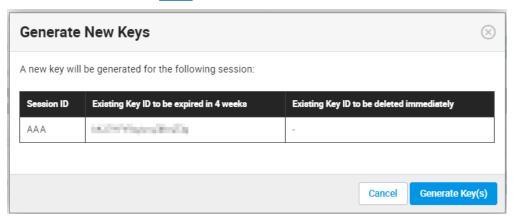
1. From the CME Customer Center menu, select Request Center (ESS).



- Futures and Options Requests > iLink Sessions: Secure Futures and Options iLink Order Entry sessions.
- BrokerTec Requests > Order Entry Sessions: Secure BrokerTec Order Entry sessions.
- 2. Select a Registered Entity.
- 3. Select an Order Entry Session to manage.



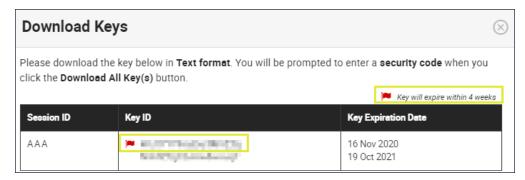
- 4. From **Actions for Selected Sessions**, select from *available functions*:
 - Generate Keys: Generate a keyed-Hash Message Authentication Code (HMAC), that is initially assigned active status, which is valid for logon.



Existing Key IDs appear in a list:

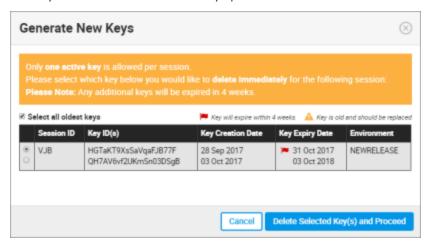
• Existing Key ID to be expired in 4 weeks: This key is set to expire in four weeks, during which both are active.

Prior to expiration, ensure Order Entry Sessions are updated.



• Existing Key ID to be deleted Immediately: If prompted, select a key(s) to be deleted immediately and select Delete Selected Key(s) and Proceed.

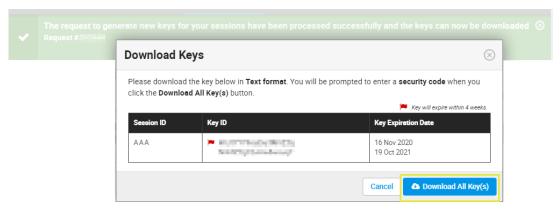
This key id will be deleted immediately upon creation of a new id.



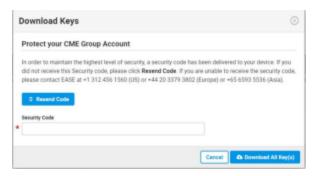
A notification appears at the top of the screen, indicating successful key generation and an email notification is sent to the registered user.

5. On the window that appears, select **Download All Keys**.

CME Group requires customers to update their security credentials every 12 months.



6. To download the key, complete two-factor identification by entering the security code sent to your registered device.



The file is downloaded to the default web-browser destination.

7. Open the file to view secure key pair details that is used to authenticate the Order Entry Sessions.

Note: Once created, credentials are accessible and available for multiple downloads.

In situations when a secure key is near expiration, a customer can have up to two secure key pairs for a Session ID for up to four weeks.

A secure key pair will have a status of active, i.e. valid for logon.

The first (older) secure key pair will expire in four weeks after the market close.

If a customer generates a third secure key pair:

One of the existing secure key pairs will be deleted immediately, based on the customer selection.

The remaining secure key pair will expire in four weeks after the market close.

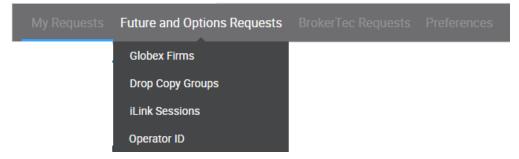
Notification of pending security credential expiration will be sent by email to registered administrators. **Deleting Session Keys**

In addition to deleting Order Entry Sessions, authorized users can delete an associated HMAC authentication key.



To delete a HMAC security key:

1. From the CME Customer Center, navigate to: Request Center (ESS) > Futures & Options Requests > iLink Sessions.



2. Select a Registered Entity to manage.



If you have access to only one entity, a list of iLink Sessions will appear.

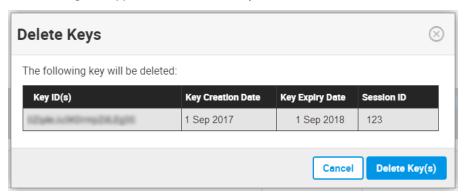
3. Select an **iLink session**, which activates the **Actions for Selected Sessions** menu.



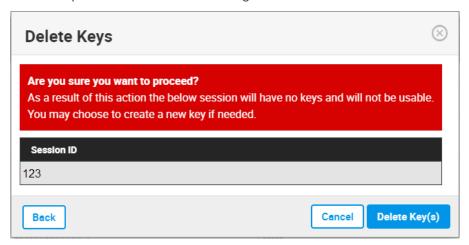
4. From the menu, select Delete Keys.



5. On the dialog that appears, select **Delete Keys**.



6. Select a response to the confirmation dialog.



The screen refreshes to update the status of the *Key ID*, a confirmation banner appears, email confirmation is sent to the registered address and the request is added to **My Requests**.

The request to delete keys for your sessions has been processed successfully and the keys have now been deleted Request #126370

Downloading Session Keys

Once generated, secure key information is available for download.

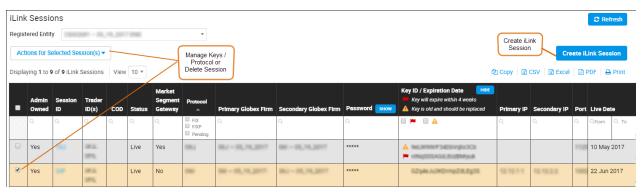


To download an existing HMAC authentication key:

1. From the CME Customer Center, navigate to: Request Center (ESS) > Globex Requests > iLink Sessions, then select a Registered Entity.

If you have access to only one entity, a list of iLink Sessions will appear.

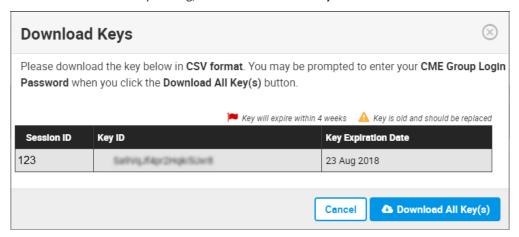
2. Select the **iLink session**, which activates the **Actions for Selected Sessions** menu.



3. From the menu, select **Download Keys**.

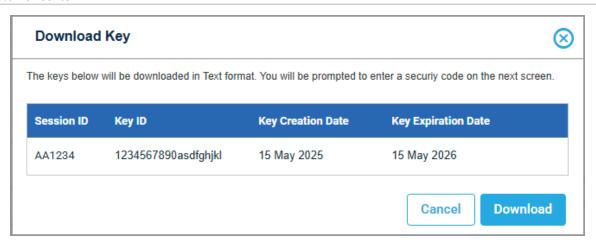


4. On the Generate New Keys dialog, select **Download All Keys**.



The user's multi-factor authenticated credentials are evaluated, to verify the requestor's identity. A cryptographically random key pair is generated; consisting of an Access Key ID and a Secret Keysecure ID.

The screen refreshes to include the *Key ID*, confirmation banner appears, email confirmation is sent to the registered address and the request is added to **My Requests**.



- 5. If not downloaded (to the default browser directory), select **Download All Keys**, to access a text file, that contains the secure (private) key.
 - The file is named with the following pattern: iLink_Session_Access_Secure Key_Download_yyyy-dd-mm.
- 6. From the saved file, view the corresponding **Secure Key**, which is used for securing Order Entry access and transactions.

BrokerTec Market Data Sessions

Using the Market Data Sessions page, authorized users can create and manage sessions that can access TCP market data via an API connection.

The following functions are available:

Creating BrokerTec Market Data Sessions

On the BrokerTec Requests - Market Data Sessions page, users can create new BrokerTec market data sessions.

Globex Firm IDs and Globex User Signatures must be created before requesting market data sessions.

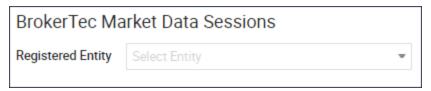


To create a new BrokerTec market data session:

1. From the Request Center (ESS)- BrokerTec Requests function, select Market Data Sessions.



2. Select a Registered Entity, if necessary.



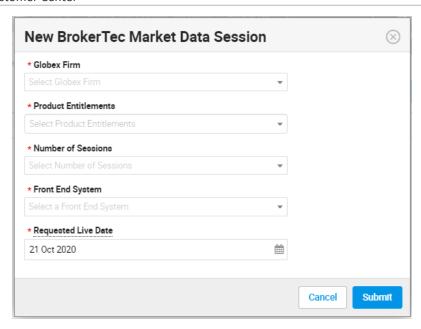
This is automatically selected for users with permissions for just one entity.

Existing market data sessions appear in a list.

3. Select Create New Market Data Session and select a market (BrokerTec EU or BrokerTec U.S.).



4. Enter the session details.



- Globex Firm
- Product Entitlements
- **Number of Sessions**: Upon submitting the request a fee acknowledgment (if applicable) indicates the amount per session and total.
- Front End System: Select the application(s) for which the session is authorized.
- Requested Live Date: The effective date the session will be available.
- 5. To finalize, select Submit.

A notification appears at the top of the screen and an email notification is sent to the registered email address.

The request will have a status of In-Progress until it is processed daily beginning at 4 PM CT.

The request is processed and updated with a status:

- **Completed**: After validation and setup, the status changes to Completed and the created session appears on the BrokerTec *Market Data Sessions* page, with an assigned *Session ID*.
- Failed: Failed requests indicate the reason for failure and appears on the My Requests page.

CME Group uses a secure login process for **Drop Copy**, **Order Entry** and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request + Secret KeyUsed to create HMAC signature.*) to secure user login and Market Data message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

Notification of pending security credential expiration will be sent by email to registered administrators.

- If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Generating Keys for BrokerTec Market Data Sessions

Users can set up a secure key pairs (Access Key ID + Secret Key), using Hashed message authentication codes (HMAC) to secure login to API Market Data sessions.

Secure key pairs are valid for 12 months and are notified prior to expiration. Notification regarding pending security credential expiration will be sent to registered administrators by email and will appear via a system notification on the Drop Copy, Order Entry or Market Data Session modules.

Prior to expiration a *second* key pair can be created and the initial key pair remains active for up to four weeks, after which the older key pair is automatically expired (after market close).

If a third secure key pair is generated, an existing customer selected secure key pair will be deleted immediately.

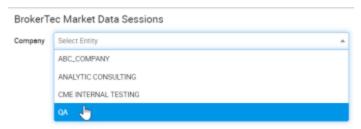


To generate keys for BrokerTec Market Data sessions

1. From the Request Center (ESS) - BrokerTec Requests function, select Market Data Sessions.



2. Select a **Registered Entity**, if necessary.



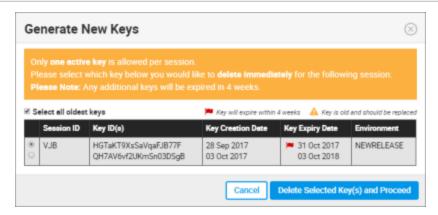
This is automatically selected for users with permissions for just one entity.

- 3. Select a Session ID(s).
- 4. Select Manage Keys for Selected Session(s).



5. Select Generate Keys.

The Generate New Keys window displays existing key IDs.

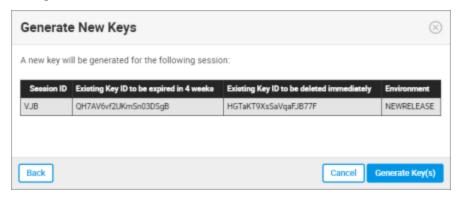


If prompted, select a key to be deleted immediately.

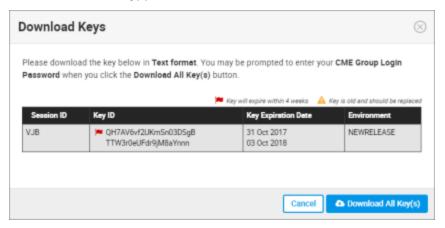
- Existing Key ID to be expired in 4 weeks.
- Existing Key ID to be deleted immediately this key id will be deleted immediately upon creation of a new key
 id.

6. Click Generate Key(s).

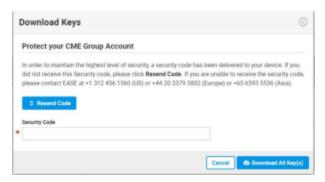
A notification at the top of the screen and the Download Keys window are displayed. An email notification is sent to the registered email address.



7. Click Download All Key(s).



8. Enter the **security code** that was sent to your device.



If you did not receive the security code, select **Resend Code**, then **Download they Key(s)**.

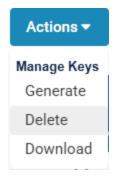
The file is saved to the default browser directory.

Deleting Keys for BrokerTec Market Data Sessions

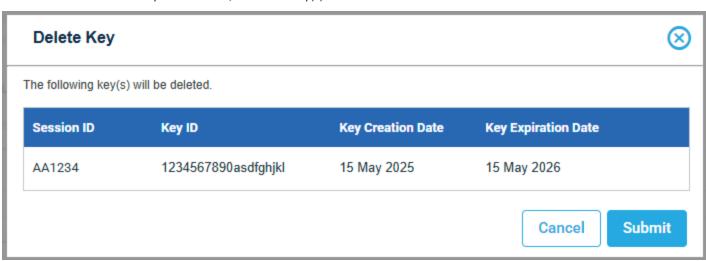


To delete keys for BrokerTec Market Data sessions

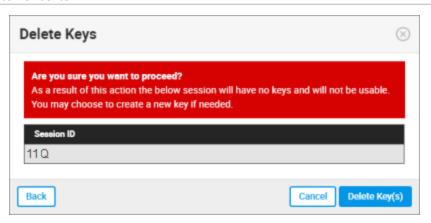
- 1. Select a Market Data Session ID.
- 2. Select Manage Keys for Selected Session(s) > Delete Keys.



If there is more than one key for a session, select the key(s) to be deleted.



- 3. Select Delete Key(s).
- 4. In the confirmation window, select **Delete Key(s)** again.



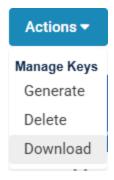
A notification displays at the top of the screen. An email notification is sent to the registered email address.

The request to delete keys for your sessions has been processed successfully and the keys have onw been deleted Request ± 94

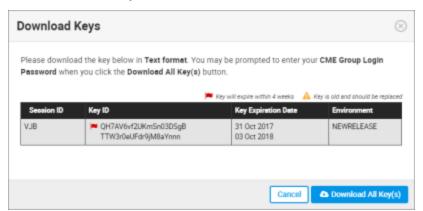
Downloading Keys for BrokerTec Market Data Sessions

To download existing keys in text format for BrokerTec Market Data sessions

- 1. Select a Market Data Session ID(s).
- 2. Select Manage Keys for **Selected Session(s)** > **Download Keys**.
- 3. Select Download Keys.

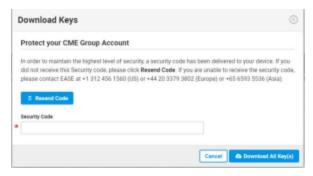


4. Click Download All Keys.



5. Enter the security code that was sent to your device.

If you did not receive the security code, select **Resend Code**.



6. Select **Download All Key(s)**.

The file is saved to the default browser directory.

EBS Requests

EBS Requests is a self-service function used to create and manage entity information for CME Globex - EBS entities.

For setup details, refer to the EBS Operational Readiness Guide,

- a. Create or use an existing CME Group Login.
- b. Sign the CME Customer Center Customer Self-Service Form.
- c. Request self-service application access from your firm's Admin Manager: The Admin manager assigns application access with the User Administration functions or requests via registration forms.
- d. New Release Setup
 - Network Connectivity
 - Setup Request Center (NR/CERT)
 - Test and Certify Application Programming Interfaces (API)
- e. Production Setup
 - Network Connectivity
 - · Setup API applications
 - Entity configuration, application access and secure key
 - Setup User Interface Applications

EBS Requests Functions

• Globex Firm IDs: Create and manage GFIDs, which identify EBS market participants.

Also known as Deal / Floor Code.

Globex User Signatures: Create and manage a GUS, which identifies EBS participants (persons or algo operators)
authorized to manage EBS GFID market participant details and submit trades for the GFID and entity.

Also known as Trader ID.

Note: A GUS can be associated to multiple GFIDs; however, only one GUS/GFID association can be created per request.

A company can have more than one GFID and GUS for each venue / market.

- <u>Algorithmic Trading</u>: Identify algorithmic trading systems used by the GFID and GUS and submit an Algorithmic Trading Certification Form.
- <u>Drop Copy Groups</u>: Create sessions to monitor trading activity messages and manage secure key pairs for session authentication.
- Order Entry Sessions: Create and manage order entry sessions, which are used for bidirectional order entry messages and manage secure key pairs for session authentication.

Note: Using self-service functions, users can create a **SenderComp** [a concatenation of the Globex Firm ID (GFID), Order Entry Session (Session ID) and a Fault Tolerance Indicator (FTI)], to submit production environment orders. The FTI is not managed in Request Center (ESS), but it can be submitted in messages.

See also: Cancel on Behalf - SenderCompID / iLink Order Entry - Fault Tolerance.

• Market Data Sessions: Create sessions to access TCP market data via an API connection.

EBS Globex Firm ID

Using the EBS Requests - Globex Firm IDs function, authorized users can create and manage Globex Firm IDs (GFID) Also known as Deal/Floor Code (also known as Deal / Floor Code) which identify EBS market participants at an entity.



Note: Within a given entity, multiple GFIDs can be created.

- A company can have more than one GFID for each venue (market) and assigned a GUS.

- A GUS can be associated to multiple GFIDs; however, only one GUS/GFID creation request can be created at a time.

EBS - Globex Firm ID Functions

• Creating a EBS Globex Firm ID

After creating a GFID, create a <u>Globex User Signature</u> to assign a person to manage EBS GFID market participant details and submit trades for the GFID and entity.

Request status

Creating a EBS Globex Firm ID

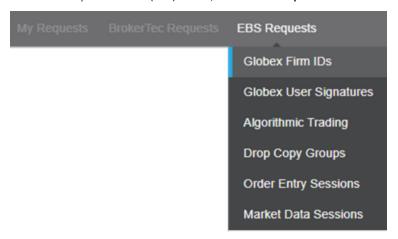
The following instructions illustrate the process to access EBS Requests - Globex Firm ID functions and create a new Firm ID.

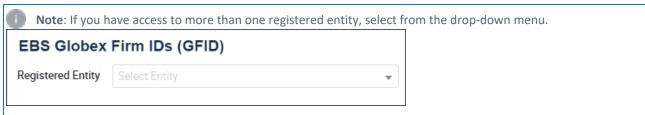




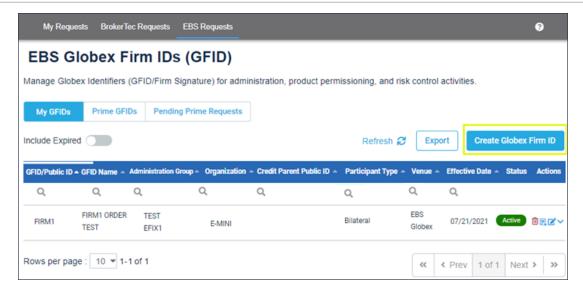
To create an EBS Globex Firm ID:

1. From the Request Center (ESS) menu, select EBS Requests > Globex Firm IDs.

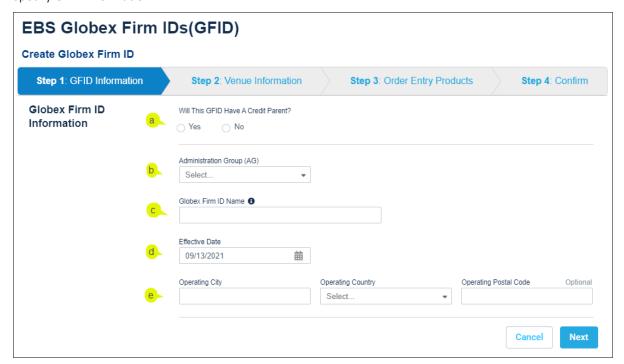




2. From the EBS Globex Firm IDs page, select the **Create Globex Firm ID** button, then complete the following fields (as applicable).



- Step 1: GFID Information
- Step 2: Venue Information
 - Transaction Reporting applicable only for UK MTF
- Step 3: Order Entry Products
- Step 4: Market Data Products
- Step 5: Confirm
- 3. Specify GFID Information:



a. Specify whether the GFID will have a credit parent then complete additional fields.

If Yes, enter the Credit Parent Public ID and additional fields

Globex Firm ID Information	Will This GFID Have A Credit	Parent?				
	Credit Parent Public ID		Confirm			
	Administration Group (AG)					
	Select	-				
	Globex Firm ID Name ①					
	Effective Date					
	03/12/2024	曲				
	Operating City	Optional	Operating Country Select	*	Operating Postal Code	Optional
			If the intended Operating Country is not available in the option, please contact your account manager.			

If No: enter the Public ID and additional fields



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Note: For additional information on EBS GFID and the relationship between credit parents and prime customer / trading participants, see the Client Systems Wiki - EBS Credit Overview on CME Globex.

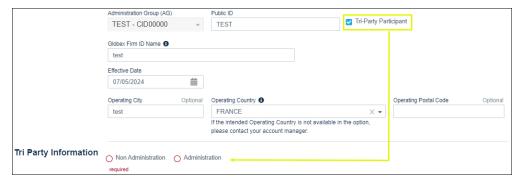
- b. **Administration Group**: A logical grouping of GFIDs, at an entity, with a designated individual that is assigned entitlements to manage GFIDs, details and the ability to create groups of GFIDs for administrative / service management and transaction separation.
 - Public ID / Credit Parent Public ID: The unique 4-character id which the public knows the firm as.
 - **Tri Party Information**: If the new GFID is a Bilateral market participant and trades EBS Direct (only) through a Tri-party agreement with a bank, the bank is responsible for the settlement of deals traded by the GFID; select the checkbox.
 - **Administration**: Applicable if the Tri-party agreement, for the selected GFID, is with a single bank. The bank's admin managers may join in the same Triparty AG (company name as agent of *<bank>*) and (optionally) manage credit. Also specify the **Credit Administrator Public ID**.
 - **Non-Administration**: The entity is responsible for managing administration, including credit, on behalf of the bank with whom the GFID has a tri-party agreement.

- Credit Administrator Public ID and Legal Entity Identifier (LEI): The unique 4-character id which the public knows the firm as
- Credit Administrator Legal Entity Identifier (LEI): Valid identifiers are required for all registered entities.

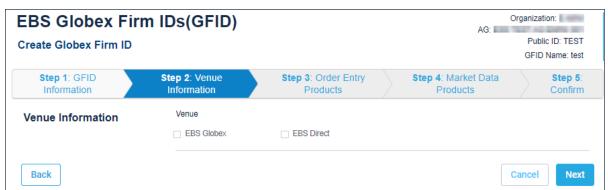


Note: Refer to the Global Legal Entity Identifier Foundation (GLEIF) database at www.gleif.org.

- c. Globex Firm ID Name: Specify a unique (at the entity) market participant name.
- d. **Effective Date**: GFIDs do not require approval and are available for order entry on the specified date (default is today).
- e. **Operating City / Country / Postal Code**: If the intended country is not available, contact <u>Global Account Management</u>.



4. Specify **Venue Information** and <u>Transaction Reporting</u> acknowledgment (applicable only for UK trading venue operators).



a. Select the Venue (trading platform): EBS Globex / EBS Direct.



Note: For details, refer to the EBS Legal Entity and Regulatory Structure.

SWIFT BIC Code: Also known as SWIFT number.

If EBS Direct is selected, also specify:

- Default GUS: The GFID cannot be used for trading until a GUS is assigned.
- SWIFT BIC Code: Also known as SWIFT number.

SWIFT is the Business Identifier Code (BIC) that identifies financial institutions. It consists of the Bank Code (4 letters), Country Code (2 letters), Location (2 characters), Branch Code (3 numbers).

• **EBS Direct Connection Region**: Specify the EBS Direct Connection Region for the GFID. Specific to the *EBS Direct connection*, not the operating country.

- Liquidity Information: (required If EBS Direct is selected) Specify whether the GFID is a Liquidity Provider and/or Liquidity Consumer.
- b. **Transaction Reporting** (Applicable for participants of the EBS UK MTF): The following questions determine if your firm falls under the scope of MiFIR / UK MiFIR, and has an obligation to report transactions to the relevant competent authority.

"Please confirm if the participant is a UK MIFID Investment Firm or is trading on the trading venue through a UK branch or is otherwise required to comply with the transaction reporting requirements of Article 26 of UK MIFIR."

- By selecting **Yes**, the participant is deemed to report all transactions in financial instruments executed by the participant on the trading venue.
- By selecting **No**, the operator of the trading venue shall report the details of transactions in financial instruments executed by the participant on the trading venue.

Pursuant to Article 26(5) of Regulation (EU) 600/2014 (MiFIR) and as onshored (UK MiFIR), trading venue operators are required to report details of to by a firm which is not itself subject to the MiFIR transaction reporting regime. Transactions executed by participants which are required to transaction reported by the participant and not the trading venue operator. The following questions are intended to determine if your firm falls under the scope of National transactions to the relevant competent authority.



If you are uncertain about how to respond to these questions, or your firm's regulatory status, please consult with your legal or co

Applicable for participants of the EBS UK MTF

Please Confirm If The Participant Is A UK MiFID Investment Firm Or Is Trading On The Trading Venue Through A UK Branch Or Is Otherwise Required To Con 26 UK MiFIR.

Yes No

Note: If Yes is selected, the participant is deemed to report all transactions in financial instruments executed by the participant on the trading venue.

If No is selected, the operator of the trading venue shall report the details of transactions in financial instruments executed by the participant on the trading venue.



Note:

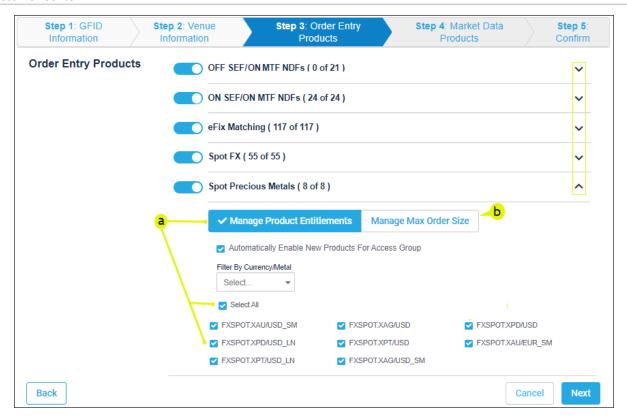
Pursuant to Article 26(5) of Regulation (EU) 600/2014 (MiFIR) and as onshored (UK MiFIR), trading venue operators are required to report details of transactions which are executed through their systems by a firm which is not itself subject to the MiFIR transaction reporting regime. Transactions executed by participants which are required to transaction report under MiFIR (e.g. UK MiFID firms) should be reported by the participant and not the trading venue operator. The following question is intended to determine if your firm falls under the scope of UK MiFIR, and has an obligation to report transactions to the relevant competent authority.

If you are uncertain about how to respond to these questions, or your firm's regulatory status, consult with your legal or compliance team.

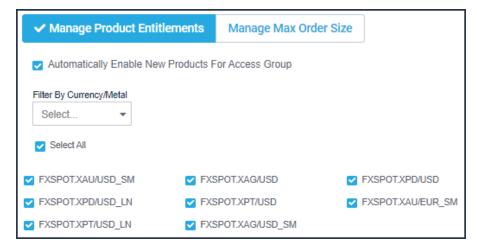
5. Select from credit screened Order Entry Products to enable; including Maximum Order Size (currency or quantity).

Note: An additional feature includes ability to <u>assign FX Spot+</u> products, which is performed using the Globex User Signature function.

- Select () / Deselect (all products within a group.
- Expand / Collapse to show / hide individual products.

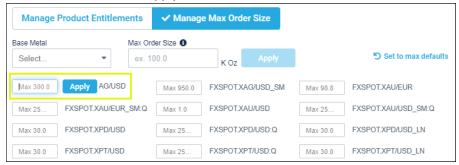


a. Manage Product Entitlements: Expand and select specific products.



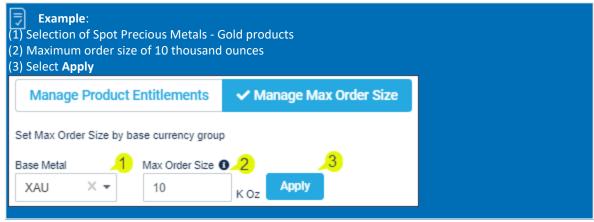
- b. Manage Max Order Size: Specify maximum permitted order value (notional currency value or weight).
 - **Spot Precious Metals**: by *thousand ounce* units (e.g. 20 = maximum order size of 20 thousand ounces of gold).

Enter a value, then select Apply.



Currency: by millions of the selected currency (e.g. 25 = maximum order size of 25 million of the select currency).

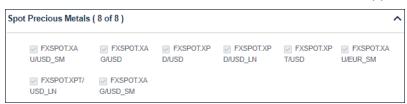




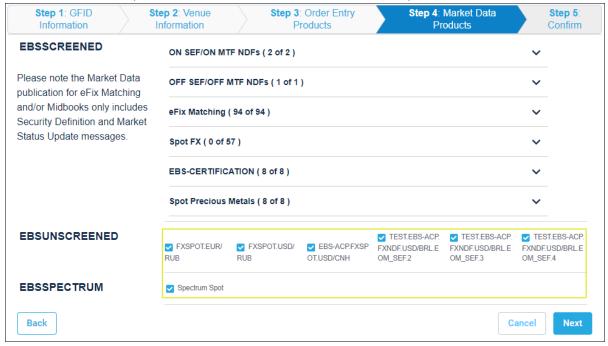
c. Short Code: The short code is required to trade products and associated with the GUS.

Step 4: Market Data Products:

6. Select Market Data Products; default selections include Order Entry products from the previous step.

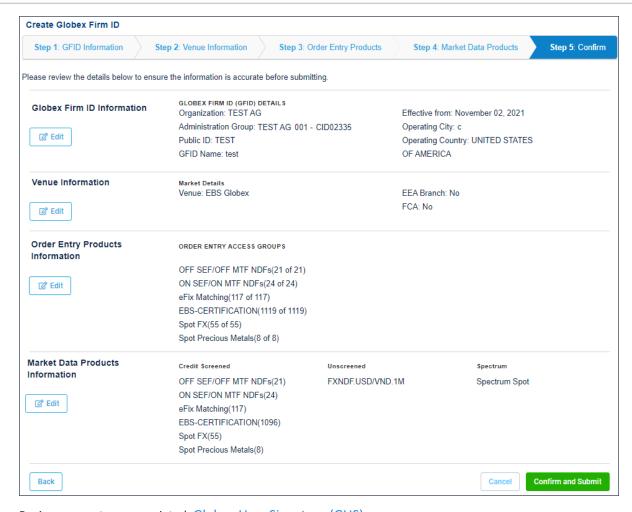


Additional market data products can be selected / deselected, as necessary.



7. Review GFID selections, then select **Confirm** and **Submit**.

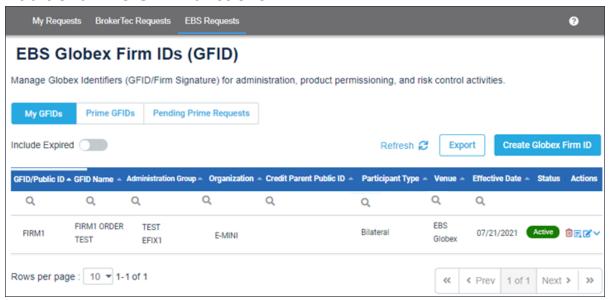
A screen *notification* appears, indicating successful submission.



Review or create an associated Globex User Signature (GUS).

Note: If you receive an error when creating your Globex Firm ID stating "Firm ID you are trying to create already exists" please contact Global Account Management.

Additional EBS GFID Functions





- My GFIDs: List of GFIDs associated to Administration Groups (AGs) which the user has permission to view / manage.
- **Prime GFIDs**: List of Children GFIDs associated to Credit Parent GFIDs that are associated to AGs which the user has permission to view / manage.
- **Pending Prime Requests**: List of Requested Children GFIDs associated to Credit Parent GFIDs that are associated to AGs which the user has permission to view / manage. Pending Prime requests must be reviewed and approved before it is available for use.
- Include Expired: by default expired GFIDs are hidden
- Refresh: view recently added GFIDs
- Export: Download the list of GFIDs to a .csv file.
- **Sort / Filter**: Enter search criteria in the top row, matching results appear as you type, select a heading to sort ascending or descending.
- Actions:
 - **Delete** ((10)) Select delete and the confirmation dialog.
 - Export GFID () details as csv file
 - Edit GFID () For update details, refer to steps 3 through 7.

EBS Globex User Signature

Using the EBS Requests - Globex User Signatures (GUS) function, authorized users can create and manage EBS Globex User Signatures Legacy EBS Market term is Trader Id. (also known as Trader ID), which identify persons or algo operators authorized to manage EBS Globex Firm ID (GFID) market participant details and submit trades for the GFID and entity.

Note: A GUS can be associated to multiple GFIDs; however, only one GUS and GFID association can be created per request.

A company can have more than one GFID and GUS for each venue / market.

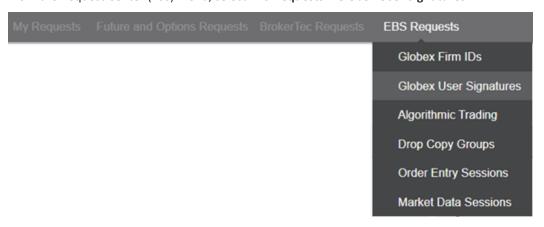
Accessing EBS Globex User Signature

The following instructions illustrate the process to access the EBS Globex User Signatures (GUS) function.



To access EBS Globex User Signature:

From the Request Center (ESS) menu, select EBS Requests > Globex User Signatures.



If you have administrator entitlements to for than one entity, select the Administration Group (Registered Entity) to manage from the drop-down menu.



On the list of GUS identifiers, a header bar displays the currently selected AG/Registered Entity.



EBS GUS Functions

Creating a EBS Globex User Signature

After creating a GFID and GUS, create order entry sessions to transmit orders and handle order related messages.

- Reviewing Submitted GUS Requests
- Editing EBS Globex User Signature details
- Expire EBS Globex User Signature (iii): the selected GUS, including associated registered algorithms.
- Cloning EBS Globex User Signature

Features

a. Filter



- My GUS: GUSs associated with Administrative Groups (AG) and their related GFIDs, which the user has permission to view / manage.
- **Prime GUS**: GUSs associated with Administrative Groups (AG) and their *credit parent* GFIDs, which the user has permission to view / manage.
- Pending Prime Requests: A list of submitted prime GUS requests for administrator review.
- b. Include Expired: View all GUSs, including expired.
- c. **Search / Filter**: Enter search criteria in the top row, results update as you type, or select the column heading to sort by ascending / descending order.
- d. Refresh: Reload the page to view added, updated, deleted GUSs.
- e. **Export**: Export the list of GUSs to a .csv format file for review offline. To export specific records, first enter search criteria in column headings.
- f. Actions:
 - III: Expire the selected GUS, including associated registered algorithms.
 - Export the selected GUS details as csv file.
 - **I**: Edit GUS details (GUS Information / order entry products / market data products).

- **U**: **Clone** an existing user's configuration for a new user.
- V: View summary GUS details, without accessing edit mode.

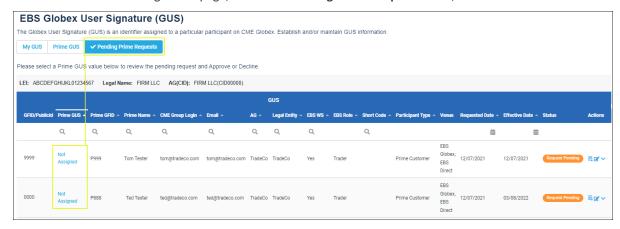
Reviewing Submitted GUS Requests

An administrator of a prime credit parent is responsible for reviewing requests submitted by *Prime Customer*, *Prime-of-Prime Broker* or *Prime-of-Prime Customer* users.

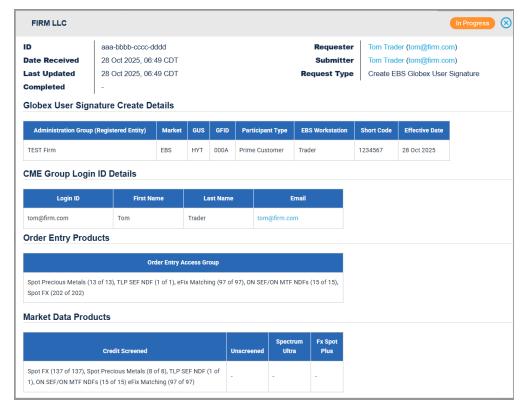


To review submitted GUS requests:

1. On the EBS Globex User Signature page, select the Pending Prime Requests filter, then select a GUS to review.



2. Review the request details (GFID and GUS), including Order Entry / Market Data products.



- 3. Select a decision:
 - Approve: A confirmation banner indicates that the GUS is activated and available for use.



• Decline: Select if request details require update.

Creating an EBS Globex User Signature

The following instructions illustrate the process to create EBS Globex User Signatures (GUS), which identify the person or algo operator authorized to submit orders for a specific GFID, assign product entitlements and limits.

The ability to create and submit a GUS and available fields is dependent on the selected GFID and user's assigned permissions.

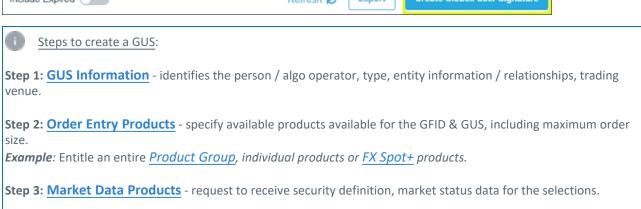
Associated GFID - Type	Create / Submit	Admin Approval
Bilateral	✓	\checkmark
Prime Customer	✓	
Prime of Prime Broker	✓	
Prime of Prime Customer	✓	

To create an EBS Globex User Signature:

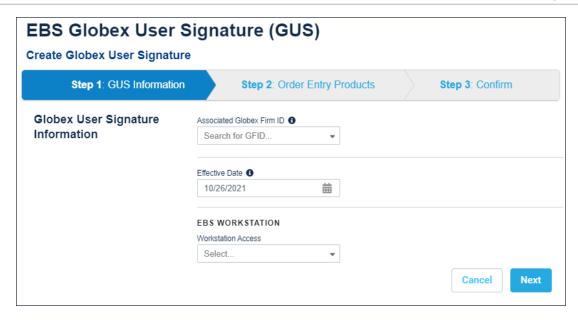
1. From the EBS GUS page, select Create Globex User Signature, then specify:

Step 4: Confirm - review all information on a summary screen before submitting.





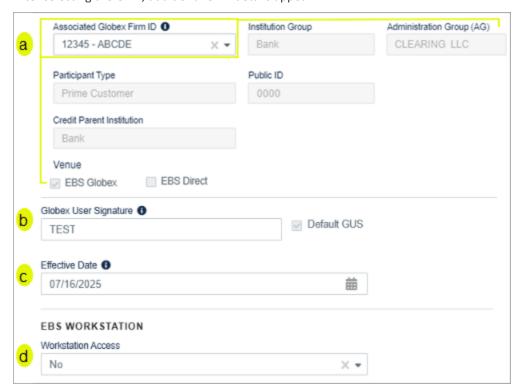
Step 1: GUS Information



a. **Associated Globex Firm ID**: Select the <u>GFID</u> (maximum 32 character) to associate with the GUS person / algo operator.

Available fields may vary, based on selected GFID and credit parent relationship (GFIDs associated with *Prime Customer*, *Prime of Prime Broker* or *Prime-of-Prime Customer*).

After selecting the GFID, additional GFID details appear.



- Institution Group: legally related participants, as defined by CME Group.
- Administration Group (AG)

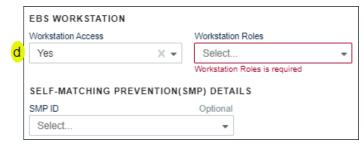
- Participant Type: Bilateral, Sponsored, Self-Prime (more information is available on the CME Group Client Systems Wiki)
- Public ID Unique 4-digit ID which the public recognizes the firm as.
- Credit Parent Institution
- · Venue:
 - FBS Globex
 - EBS Direct: If the GFID is a **Tri-Party Participant** and trades EBS Direct (only) through a Tri-party agreement with a bank, the bank is responsible for the settlement of deals traded by the GFID.
- b. Globex User Signature: Enter three alphanumeric characters that are unique within the GFID.

Note: This field will not be available for requests that require credit parent administrator <u>review</u>; GFIDs associated with *Prime Customer*, *Prime of Prime Broker* or *Prime -of -Prime Customer*. After submitting, contact the credit parent to review and approve.

- c. **Effective Date**: After approval (if applicable, e.g. Prime-of-Prime Customer) the GUS will available on the specified date (default is today).
- d. **EBS Workstation**: Specify if the person / algo operator requires EBS Workstation access, then enter contact information associated with the GUS:
 - Yes: Select a Workstation Role: View Only or Trader
 (Optional) Enter a Self Match Prevention (SMP) ID, which allows market participants to prevent the matching of orders for accounts with common ownership, within and across different Globex Firm IDs and clearing firms.



See also: CME Globex Self- Match Prevention Functionality - Frequently Asked Questions



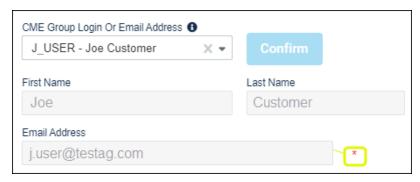
• No: Provide Contact Information for an individual associated with the GUS.

e. Contact

CME Group Login ID: As you enter, suggested matches appear in a list.
 To associate an ID with the entity for the first time, select Add a new CME Group Login ID, then enter the ID and authentication token, which the user previously provided to you or an admin user.



After Confirming the CME Group Login ID, the registered user's name and email address appears below.



*: If the GUS requires approval from a prime bank:

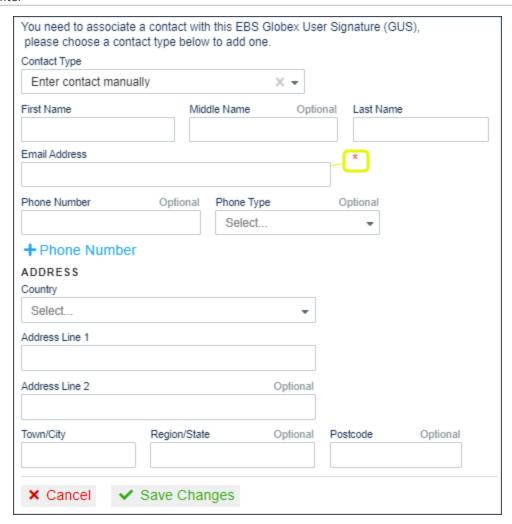
Prior to creating the GUS the email address [including email domain(s)] must be associated with the registered entity and prime bank. The prime bank parent administrator must <u>review / approve</u> GUS creation / edit requests.

Registration is established via the <u>CME Customer Center Self-Service Form</u>, available from <u>Global</u> Account Management.

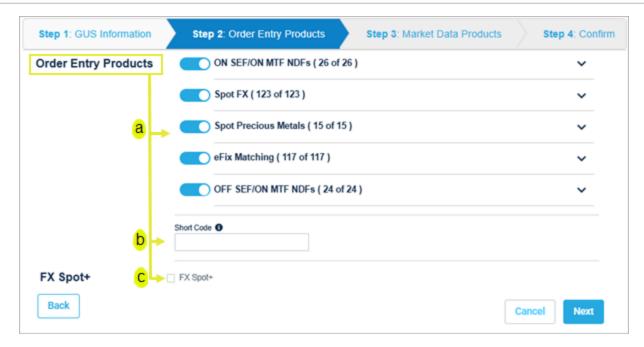
• **Email address**: Use the Search button to confirm the email address is registered with the user's CME Group Login.



• Contact information: Enter contact information and Address details, then select Save Changes.



2. Select **Next**, proceed to **Step 2: Order Entry Products** and **Short Code**; appears when a MiFID regulated product is enabled.



a. Select order entry products to enable.

Expand to view individual products and/or enter maximum permitted order size.

- Select () All / Individual products.
- Expand () / Collapse (): View and assign individual products within a group.
- b. **Short Code**: Required when MiFID regulated products are enabled (e.g. On SEF/ On MTF NDFs, Off SEF/On MTF NDFs).

The short code identifies the person or ATS operator responsible as the financial / executing decision maker, on each order and associates a GUS with Personally Identifiable Information (PII) which is required for regulatory purposes.

Short Codes are mapped to the person's national ID and must be unique within the GFID. Each GFID can be associated with multiple GUS, and each GUS will have a unique associated short code.

Only one individual / natural person short code may be associated with a given Operator ID and GUS; additional person short codes may be registered using a separate GUS for each. One or more short codes may be associated with an Operator ID which represents an individual overseeing the administration and operation of an ATS.

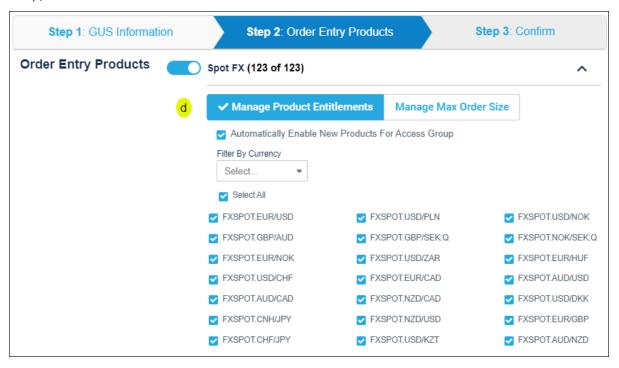
- A natural person GUS with access to the order book may only be used by the identified person and may not be used by any other natural person entity user and may not be used for orders entered by an ATS. It is used on order messages in lieu of a personal identifier.
- For *algorithmic systems*, register one or more short codes for a GFID and GUS. The short code must meet the following conditions:
 - unique for each set of code or trading strategy that constitutes the algorithm.
 - used consistently when referring to the algorithm or version of the algorithm once assigned.
 - unique over time.

Note: As part of the product entitlement process for a GUS / Trader to be allowed to trade MiFID regulated products, Participants must submit PII information. Failure to submit PII data will result in the GUS / Trader not being

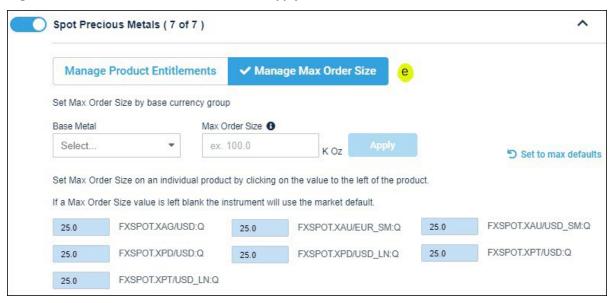


allowed to trade. For details see the following:

- PII Data Submission User Guide
- Personally Identifiable Information (PII) instructions
 - c. **FX Spot+**: To enable FX Spot+ products, select the checkbox.
 - d. **Manage Product Entitlements:** Select / deselect products; use the filter to view products for a particular currency / metal.



e. Manage Max Order Size: Enter a value, then select Apply.



Max Order Size is specified in currency or weight:

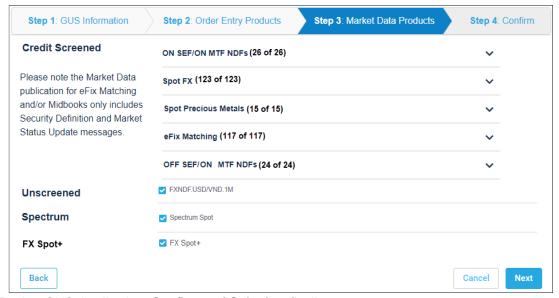
- **Currency**: Currency: by millions of the selected currency (e.g. Currency 25 = maximum order size of 25 million GBP).
- **Spot Precious Metals**: by thousand ounce units (e.g. Ounces 20 = maximum order size of 20 thousand ounces of gold).

To enter a max order size for multiple products, select the Base Metal / Currency, then enter a value and select Apply.

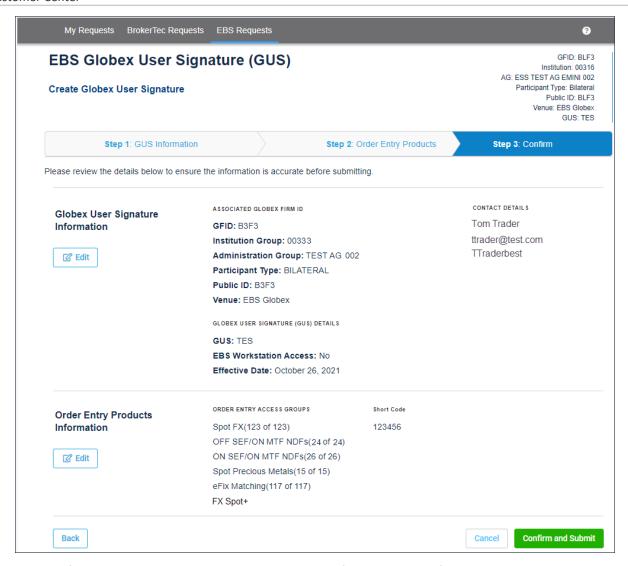
3. Select **Next**, then proceed to Step 3: Market Data Products (if applicable).

Selections are automatically selected based on order entry products from the previous page.

Market data products can be selected / removed, as necessary.



4. Review GUS details, then Confirm and Submit to finalize.



Requests for which the GFID is the credit parent or bilateral firm are available for immediate use.

Requests GFIDs that are *Prime Customer*, *Prime-of-Prime Broker* or *Prime-of-Prime Customer* require credit parent administrator review.

Confirmation and Notification

After **Submitting**: A screen *notification* appears and an email is sent to the admin user.



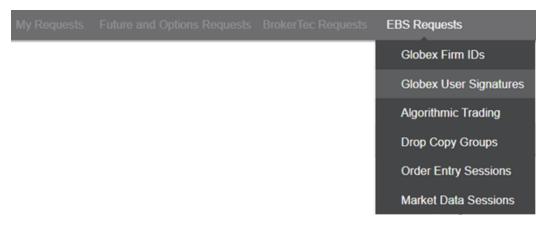
Request details are viewable on the My Requests (ESS) tab. If approval is required, contact the credit parent administrator to review the submitted request.

Editing GUS Information

The following instructions illustrate the process to Edit Information for an existing Globex User Signature (GUS) and the associated Globex Firm ID (GFID).

To edit EBS Globex User Signature Information:

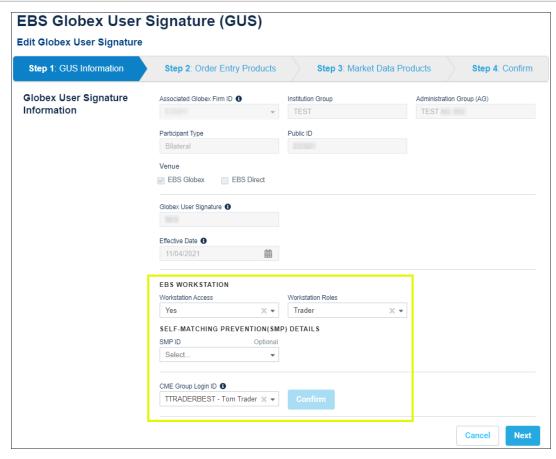
1. From the Request Center (ESS) menu, select EBS Requests > Globex User Signatures.



2. From the *Actions* column, select the **Edit** icon (



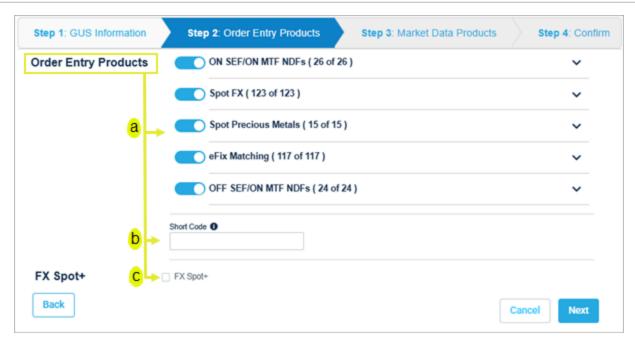
3. Step 1: GUS Information:

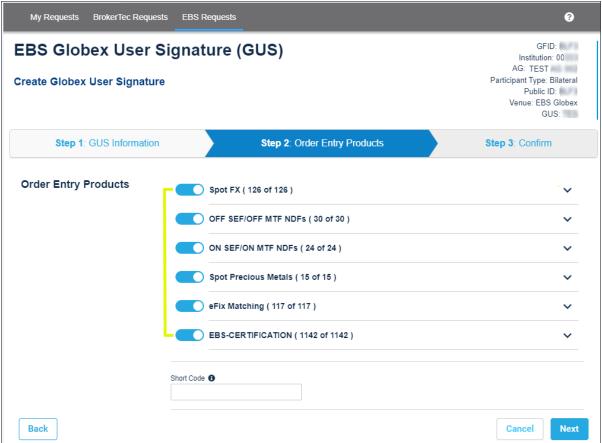


- **EBS Workstation**: Request EBS Workstation access for the person / algo operator and a role (view-only / trader).
- **Self-Match Prevention**: (Optional) Select a SMP ID to prevent matching orders for accounts with a common beneficial owner, within and across different Globex Firm IDs and clearing firms.
- CME Group Login / Email / Contact Information: Review and update contact information for the individual.

4. Step 2: Order Entry Products:

Review and update available products and max order size for this user.

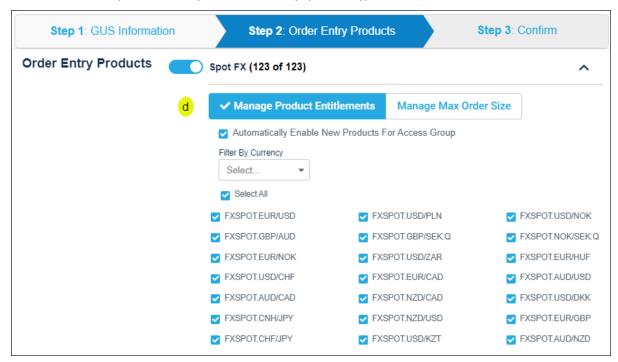




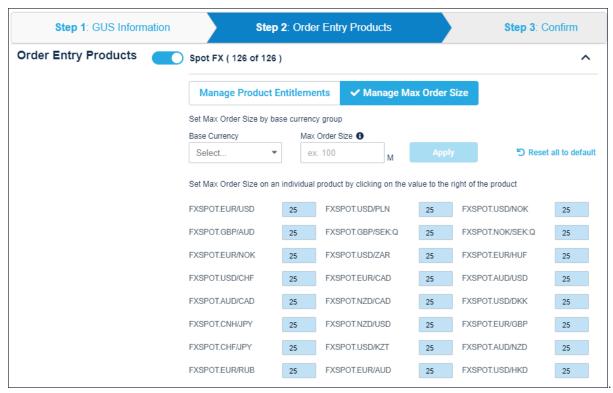
* Select products: Select ()/ Deselect () all products within the group.

To enable individual products after deselecting a group, expand the product group, then select individual checkboxes.

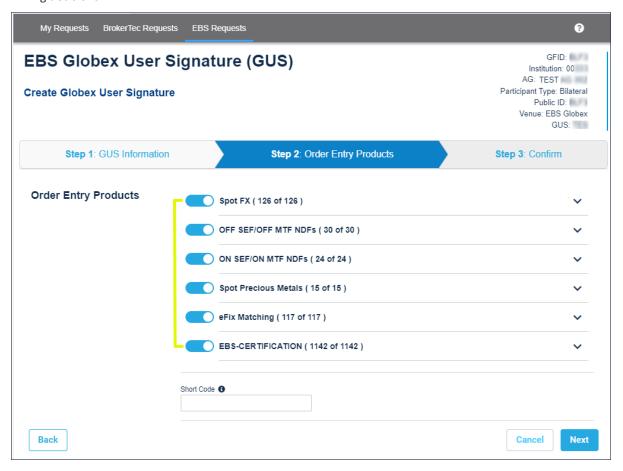
- Manage Product Entitlements: Select / deselect products.
- Filter: View / select products for a particular currency/ product type.



- Manage Max Order Size: Max Order Size is specified in currency or product unit / quantity.
 - Currency: In millions of the selected currency (Example: Currency 25 = maximum order size of 25 million GBP).
 - **Weight**: Example: Spot Precious Metals thousand ounce units (e.g. XAU 20 Ounces = maximum order size of 20 thousand ounces of gold).

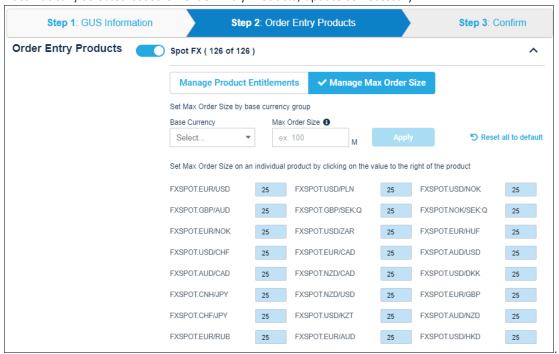


• **Short Code**: Appears when a MiFID regulated product is selected and identifies the individual responsible for trading decisions.



5. Step 3: Market Data Products:

Automatically selected based on Order Entry Products; update as necessary.



6. Select Next, review, then Confirm and Submit.

Editing associated EBS Globex Firm ID Information

The following instructions illustrate the process to edit details for a GFID that is associated with a GUS:

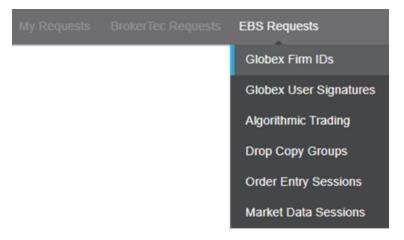
- · Entity information
- Venue
- Order entry / Market data products.



For each step, a list of editable fields is described.

To edit an EBS Globex Firm ID:

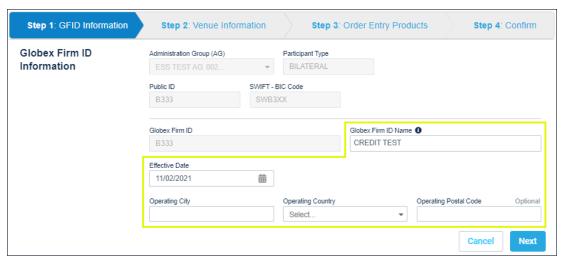
1. From the Request Center (ESS) menu, select EBS Requests > Globex Firm IDs.



2. From the *Actions* column, select the **Edit** icon (**Z**).

The following information can be updated:

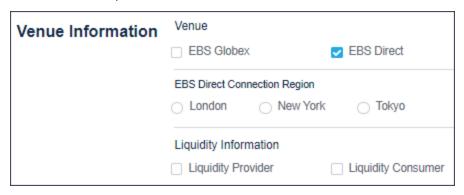
Step 1: GFID Information



- Globex Firm ID Name: The Globex market participant name must be unique at the entity.
- Effective Date: GFIDs are available for order entry on the specified date.
- Operating City / Country / Postal Code

Step 2: Venue Information

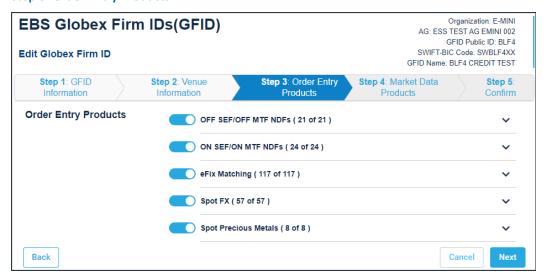
• Venue: EBS Globex / EBS Direct



If EBS Direct is selected, specify information for additional fields:

- Direct Connection Region: Select the direct connection to CME Group: LN-London, TY-Tokyo, NY-New York
- Liquidity Information: Liquidity Provider / Consumer

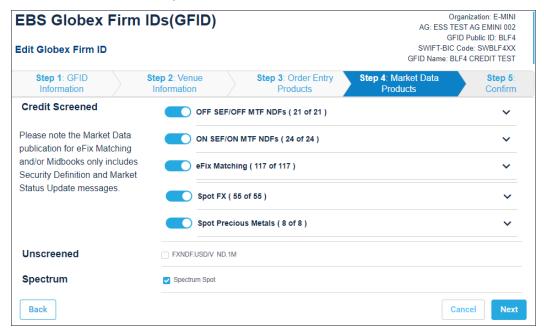
Step 3: Order Entry Products



- Product Entitlements: Select / deselect products or use the filter to view products for a particular currency/ metal.
- Max Order Size: Enter max order size by currency or weight.

Step 4: Market Data Products

Select / deselect market data products.



3. After updating and reviewing GFID details, select **Confirm and Submit** to save.

Expiring an EBS Globex User Signature

EBS Globex User Signature includes a function to expire previously registered identifiers that are no longer needed / not-used.

To expire an EBS GUS:

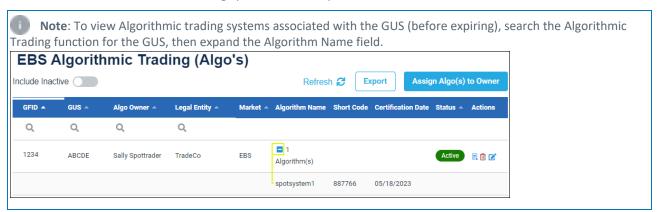
1. From the EBS Requests > Globex User Signature page, select the **Expire** ($^{\textcircled{1}}$) icon (in the Actions column).



2. On the dialog that appears, confirm the expiration request.



The selected GUS and associated trading systems will be expired.



3. If necessary, assign a new GUS for the associated GFID.

Note: To view the expired GUS, select <u>Include Expired</u>, from the filter above the GUS list.

Cloning an existing Globex User Signature:

The following instructions illustrate the process to clone an existing Globex User Signature (GUS) as the basis to create a new GUS. This process reuses entity and configuration information and reduces the effort to create a new GUS.

Example: A new user joins a team that manages EBS trades for a given GFID.



To Clone an EBS GUS:

1. From the Globex User Signature page, select the **clone** () icon (in the Actions column) for an existing GUS to copy.



Use the above fields for additional details on specifying GUS details.

• Step 1: GUS Information

Some *details GFID*, *Institution Group*, *Administration Group*, *Participant Type*, *Public ID*, *Venue* from the existing GUS are copied as the basis for the clone.

Globex User Signature: Specify a new and unique Globex User Signature name.

- Credit Parent
- Administration Group & Public ID

EBS Workstation access

(optional) Self-Match Prevention

Contact Information: Select and Confirm contact details for the person responsible for the new GUS:

• CME Group Login ID: Select existing or Add a new CME Group Login ID

Note: To complete setup, the administrative user cloning a GUS must obtain the person's CME
Group Login ID and Token.

CME Group or the admin user will never ask for the associated password.

- Email address, previously registered with CME Group.
- Contact information, including address details.
- 2. Select **Next**, then review *Step 2: <u>Order Entry Products</u>*. and the **Short Code** (an identifier of the individual responsible for trading decisions, required for certain products).

Products can be deselected as needed.

3. Select **Next**, then review *Step 3: Market Data Products*.

Automatically selected based on associated Order Entry Products.

If EBS Workstation - view-only access is selected this is not available.

4. Select **Next**, review, then **Confirm and Submit**.

Algorithmic Trading - EBS

Use the EBS Algorithmic Trading function to *view*trading systems used by the GFID and GUS and submit an Algorithmic Trading Certification Form to certify conformance with technical system requirements.

Note: Pursuant to rule 5.24 of the <u>EBS UK MTF Rulebook</u>, Algorithmic trading participants shall certify in advance of deployment that the algorithms they deploy have been tested to avoid contributing to or creating disorderly trading conditions prior to the deployment or substantial update of a trading algorithm or strategy and explain the means used for that testing.

Prior to assigning Algorithmic Trading systems, ensure the GFID and Globex User Signature (GUS) is created.

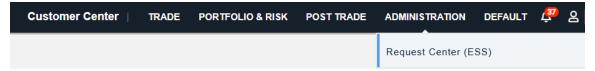
To enable access to Algorithmic Trading functions, authorized Front Office Admin Managers must use the User Administration function to authorize users to **view** and/or **manage** this function via the user role: Request Center - ALGO Read-Only / Full.

The following functions are available:

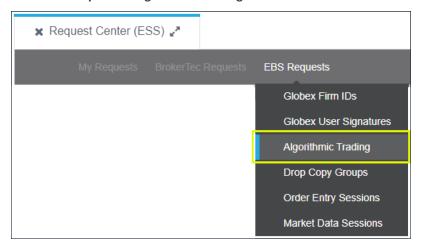
- Access Algorithmic Trading function
- · Assign Algo to GFID Owner: Associate an Algorithmic trading system with a GFID and GUS.
 - Attach certification documents / Enter information
- Annual Algorithmic System Certification
- Update Algorithmic Trading System Owner Information

To access Algorithmic Trading:

1. From the CME Customer Center Menu, select Administration > Request Center (ESS).



2. Select EBS Requests > Algorithmic Trading.

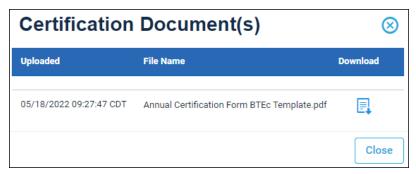


On the screen that appears, a list of associated Algorithmic Trading systems appears with an option to <u>Assign</u> an Algo trading system to a GFID/GUS.



Algorithmic Trading System Actions

• Export (): Opens a screen to download and view previously submitted certification documents.



- **Delete** (): Remove and expire all registered Algos for the selected Owner
- Edit (): Select the Algo to update:
 - Step 1: Algo Information: Algorithm Name, Algo Short Code, Certification Date, including an option to add additional.
 - Step 2: Algo Certification Selection:
 - Upload Certification PDF
 - Manually Enter Algo Information

Assigning Algorithmic Trading Systems to Owner (GFID/GUS)

Use the **Assign Algo to Owner** function to associate algorithmic trading systems with a GFID (Firm) / GUS (Owner) and submit an Algorithmic Trading Annual Certification Form, which certifies conformance to CME Group requirements.

Note: When registering / assigning multiple (including new Algos) Algorithmic Trading Systems to an owner, all certification dates must be identical.

- When uploading a completed certificate form file, the date in the form is applied to all Algos.
- When manually entering details, the certification date defaults to today. Update previously certified Algos to today's date.



To Assign Algos to Owner:

1. From the EBS Algorithmic Trading page, select Assign Algo(s) to Owner, then specify Step 1 AlgoInformation.



Algo Owner

- · Associated Globex Firm ID
- Globex User Signature: Available selections are based on user entitlements and the associated GFID.

Algo Information

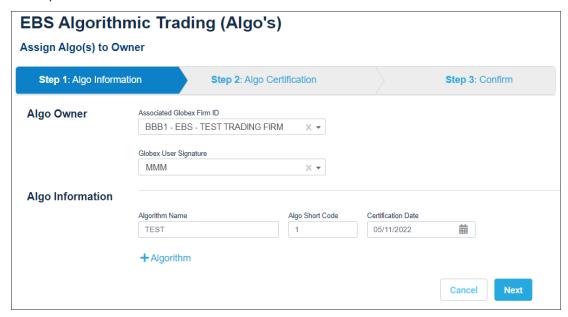
- Algorithm Name: Only alphanumeric characters (A-Z, 0-9), underscore (_), hyphen (-) permitted.
- **Short Code**: Use the shortcode associated with the selected GUS. The shortcode must be unique at the GFID.

 The short code associates the Algorithmic Trading System with a user's Personally Identifiable Information (PII) and GFID/GUS registered with the BrokerTec Upload Facility,



See also: BrokerTec Upload Facility User Guide on cmegroup.com (BrokerTec EU RM section).

• **Certification Date**: The certification date defaults to today's date as represented in U.S. Central Time, adjust for your own time zone.

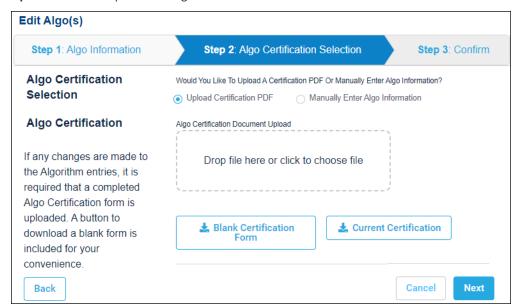


To continue, select Next.

2. Select to (a) **Upload** the Algo Certification form or (b) **manually enter** information.

The file name of the attachment must have alphanumeric characters (A-Z, 0-9), underscore (_), hyphen (-) only. A blank certification form and/or the current certification is available to reference required information.

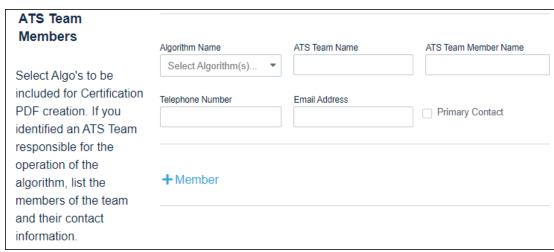
a. **Upload**: Select to upload or drag the attachment.



- b. **Manually Enter**: : Specify required information (i, ii, iii below):
 - ATS Team Members
 - Algo testing and procedure declarations
 - Key Contacts



i. ATS Team Members (required): Select the Algorithm (System) Name, team information and contact information for at least one team member (indicate primary contact) responsible for algorithm system operation and contact for algo system issues.



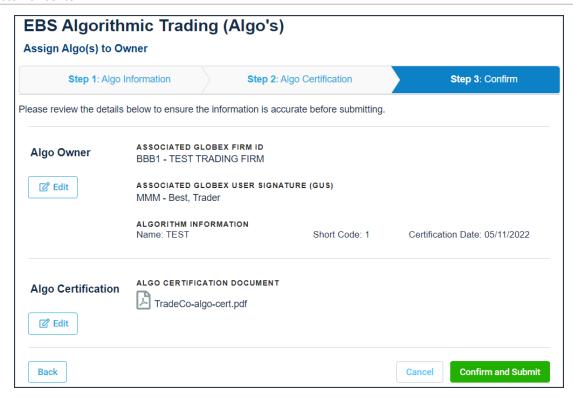
ii. **Algo Testing & Procedure Declarations** (required): Describe the testing procedure used to ensure compliance with CME Group development requirements.

Algo Testing & Procedure	Please Provide An Explanation Of The Means Used For Testing. If This Information Has Already Been Provided In A Prior Submission And No Changes Have Been Made To Your Testing Methodology, Please Indicate So Below.
Declarations	
	Please Describe Procedures In Place To Prevent Erroneous Actions By Algorithms Listed In Annex 1, Including An Ability To Cancel Immediately, As An Emergency Measure, Any Or All Of Unexecuted Orders ('Kill Functionality'). If This Information Has Already Been Provided In A Prior Submission And No Changes Have Been Made To Your Testing Methodology, Please Indicate So Below.

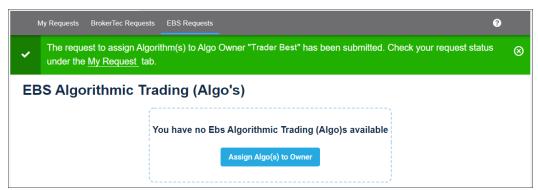
iii. **Key Contacts** (required): Personnel identified as key contacts for an algorithm operations within a firm. If necessary, CME Group will contact these individuals for questions or issues.



3. Review Algo Information and certification details, then select **Confirm and Submit**.



A confirmation banner appears after submission and the request is available from My Requests to view details and processing status.



After confirming, the new Algorithmic Trading system appears in the list.

Available information includes the associated GFID, GUS, Algo Owner, Legal Entity and Market and certification document ().

Expand the **Algorithm Name** to view additional details:

- Algorithm Name: Up to six alphanumeric characters.
- **Short Code**: The short code is required to trade products and is associated with the GUS.
- Certification Date



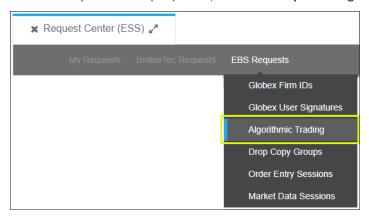
Annual Algorithmic System Certification

The Markets in Financial Instruments Directive - MiFID II CDR EU 2017/584 (RTS 7) requires that EBS EU customers must review and annually certify algorithmic trading system details.

Users authorized by registered owners must review Algo system information, update the Certification Date and attach a new / updated certification form for all registered Algos. You can also add / delete Algos or <u>update</u> the Owner if necessary.

he <u>User Administration functi</u>	 220,1200,311,100	

1. From the Request Center (ESS) menu, select EBS Requests - Algorithmic Trading.



2. Expand the Algorithms as necessary, then review the list of Algo trading systems.



Note: To assist review, the Algo trading system list can be exported to a .csv file (MS Excel compatible format).

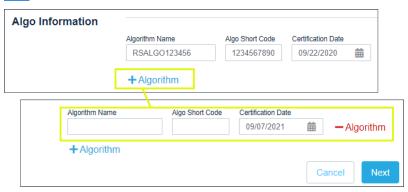
3. Select **Edit** (), then update the *Step 1: Algo Owner / Information*:



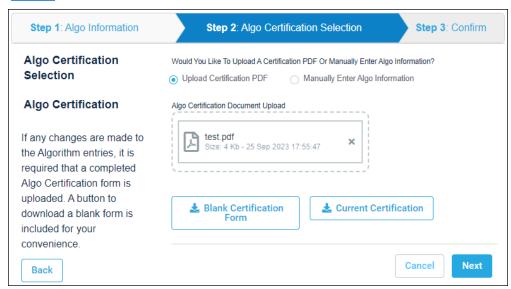
• Certification Date: Specify the date, select Next, then attach an updated certification form.



Add Algorithm: Enter information for additional <u>Algorithmic trading systems</u> registered to the owner (<u>GFID</u> / GUS).



- 4. For Step 2: Algo certification selection, provide required information via upload or by manually entering.
 - Upload



Manually enter: See instructions (above):



5. Select Next, then Confirm and Submit to complete.

Note: For additional information or assistance with the annual certification process, contact Global Account Management.

Update Algorithmic Trading System Owner Information

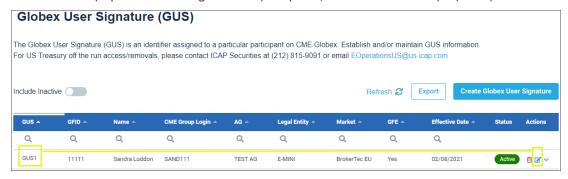
The following instructions illustrate the process to use the Globex User Signature function to update the Algo owner or associated products via the EBS Requests - Globex User Signature function.



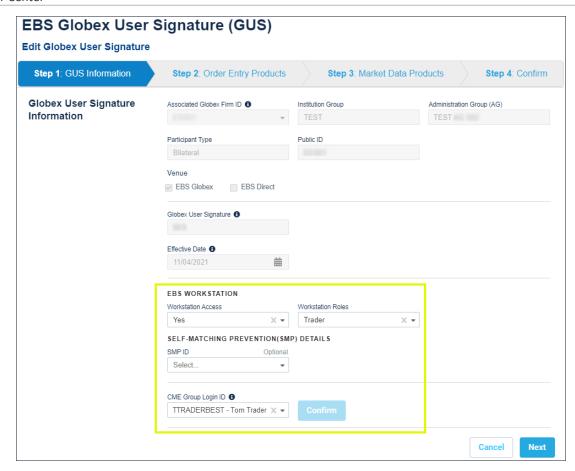
- 1. Find the Algo system to update (e.g. filter the list by entering search criteria in the top row).
- 2. Review the Algo Name and Short Code, then copy the **GUS** that will be updated.
- 3. From the EBS Requests menu, go to the Globex User Signature function.



4. Select the GUS (copied from the Algo function) to update, then select the **Edit** () icon (Actions column).



- 5. Update GUS details, as necessary:
 - Step 1 GUS Information: Select Edit > update GUS Information > Save Changes, then select Next.



- Step 2 Algo Certification: <u>Review / Edit Products</u>(including <u>Market Data Products</u>, if applicable), then select **Next**.
- 6. To save updates, select **Confirm and Submit**.

To view updated Algo information, select the request from the list.

Drop Copy Sessions

Using the **EBS Requests - Drop Copy Sessions** page, authorized users can create sessions that utilize the <u>Drop Copy</u>service to receive trading activity communications via the <u>iLink</u> order entry gateway and manage secure key pairs for session authentication security.

To receive trading activity messages for multiple related entities, configure EBS Drop Copy sessions (target sessions) with one or more source sendercomp sessions.

Users can also generate and manage secure key pairs that are used for authentication during the target session <u>secure logon</u> process.

The following functions are available on the EBS Requests - Drop Copy Sessions page:

- Creating an EBS Drop Copy Session
- · Checking Drop Copy Session status
- Editing EBS Drop Copy Session Information

Secure Key Pairs

- Generating Keys for EBS Drop Copy sessions
- Downloading Keys for EBS Drop Copy sessions
- Deleting Keys for EBS Drop Copy sessions

Creating an EBS Drop Copy Session

On the **EBS Requests - Drop Copy Sessions** page, users can create EBS Drop Copy sessions to receive direct trading activity messages.

Note: Before creating Drop Copy sessions, ensure you have created a <u>Globex Firm ID</u>, a <u>Globex User Signature</u> and at least one <u>Order Entry</u> session.



To create an EBS Drop Copy session:

1. From the Request Center (ESS) menu, select EBS Requests > Drop Copy Groups.

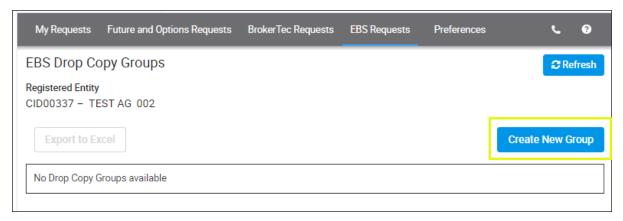


2. Make a selection in the **Registered Entity** drop-down menu, if necessary. As you enter characters in the field matching selections will appear.

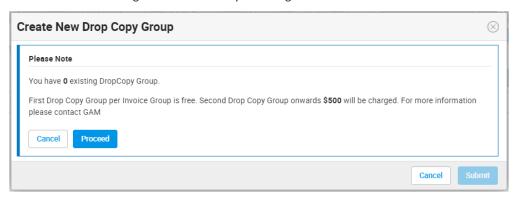
This is automatically selected for users with access to one entity.



3. Select Create New Group.

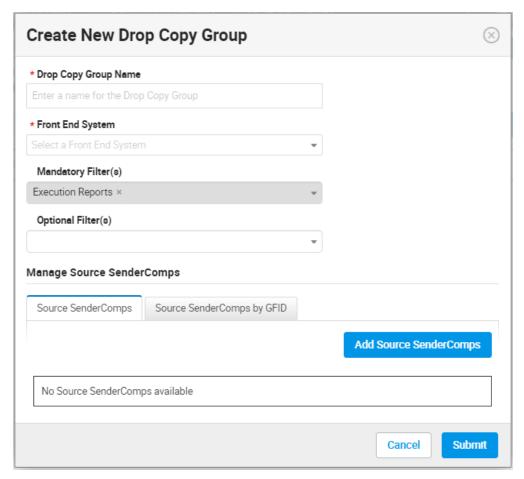


4. Review and acknowledge the fee notice by selecting **Proceed**.



For questions or issues contact Global Account Management.

5. Enter / Select the following details:



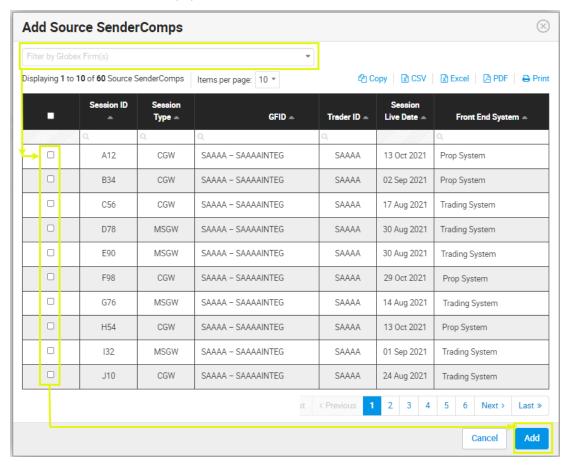
- **Drop Copy Group Name**: Enter a unique name (at the entity).
- Front End System: Receive messages processed by the selected system.
- Mandatory / Optional Filters: Select communication types to track.

Available types:

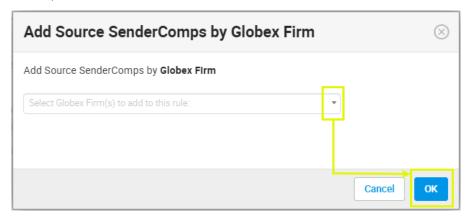
- · Acknowledgement (Ack) Messages.
- Execution Reports:
 - Execution Order Entry: New Order Acknowledgement message.
 - Execution Create / Cancel / Modify: Response message
 - Execution Elimination: Order expiration message.
 - Trade Fill Notice: Complete and partial fills.
 - Trade Trade Cancel: Notifies user of trade cancellation.
- Heartbeats: The response message that confirms connectivity.
- Order Mass Action Filter: Confirms the number of canceled orders.
- Reject Messages: Message indicates a session level error has occurred.
- Trade Busts: Trade cancellation: (see Trade Cancel, above).

Note: Using configuration information, the selected communications are routed to the Source SenderComp / Session IDs.

- 6. Select Add Source SenderComps; then add individually or all Source SenderComps for a GFID.
 - Individual: Source SenderComps tab > Add Source SenderComps button > (optional) Search SenderComps for a Globex Firm > Select checkbox(es).

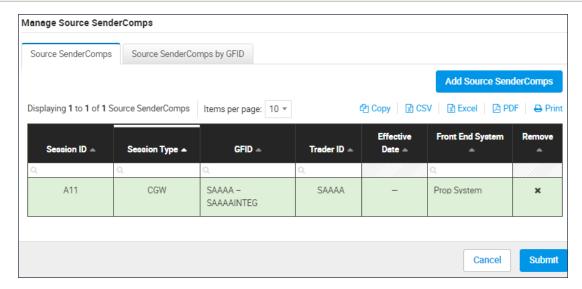


• **By GFID**: Source SenderComps by GFID *tab* > Add Source SenderComps *button* > **Select** the Globex Firm from the drop-down menu.



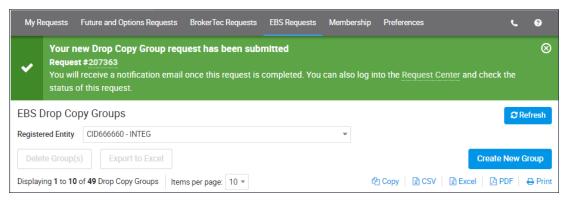
7. After selecting **Source SenderComps**, Click **Add / OK** (when adding by GFID).

The selected source SenderComps appear in a list.



8. Click Submit.

A notification banner appears at the top of the screen and an email notification is sent to the registered email address.



The submitted request is viewable on the My Requests page.

After validation and setup, the status changes to **Completed** and the Drop Copy Group is viewable on the EBS Drop Copy Groups page.

Editing EBS Drop Copy Session Information

The following procedures illustrate the process to access a Drop Copy Group and edit details.

To edit an EBS Drop Copy session:

1. From the Request Center (ESS) menu, select EBS Requests > Drop Copy Groups.

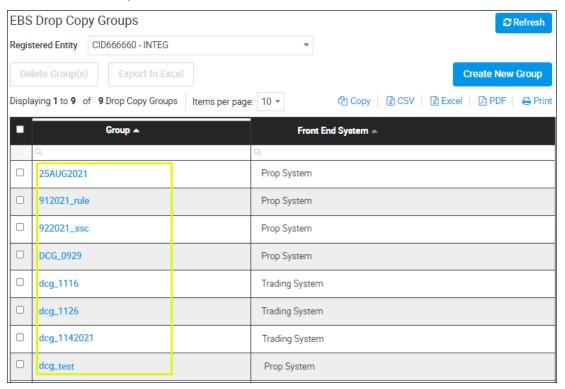


2. Make a selection in the **Registered Entity** drop-down menu, if necessary. As you enter characters in the field matching selections will appear.

This is automatically selected for users with access to one entity.



3. Select the linked **Group** from the list.

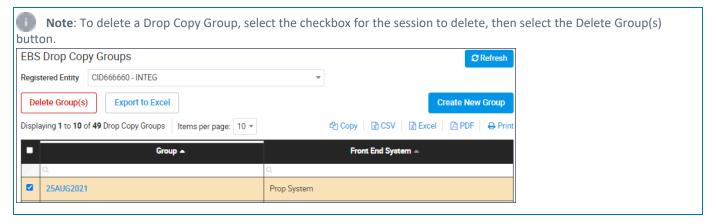


- 4. On the Drop Copy Group details screen that appears, select Edit.
- 5. Edit details as necessary:
 - **Drop Copy Group Name**: Enter a unique name (at the entity).
 - Front End System: Receive messages processed by the selected system.
 - Mandatory / Optional Filters: Select communication types to track.

Available types:

- Acknowledgement (Ack) Messages.
- Execution Reports:
 - Execution Order Entry: New Order Acknowledgement message.
 - Execution Create / Cancel / Modify: Response message
 - Execution Elimination: Order expiration message.
 - Trade Fill Notice: Complete and partial fills.
 - Trade Trade Cancel: Notifies user of trade cancellation.
- Heartbeats: The response message that confirms connectivity.
- Order Mass Action Filter: Confirms the number of canceled orders.

- Reject Messages: Message indicates a session level error has occurred.
- Trade Busts: Trade cancellation: (see Trade Cancel, above).
- Add Source Sender Comps
 - Individual: Source SenderComps tab > Add Source SenderComps button > (optional) Search SenderComps for a Globex Firm > Select checkbox(es).
 - **by GFID**: Source SenderComps by GFID *tab* > Add Source SenderComps *button* > **Select** the Globex Firm from the drop-down menu.
- 6. To finalize updates, select **Submit**.



Secure Key Pairs

CME Group uses a secure login process for Drop Copy, Order Entry and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request + Secret KeyUsed to create HMAC signature.*) to secure user login and Drop Copy message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Generating Keys for Drop Copy Sessions

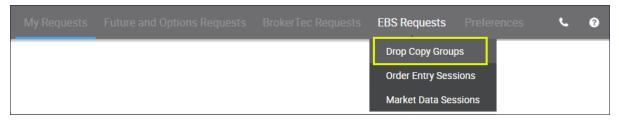
Users can set up a secure key pairs (Access Key ID + Secret Key), which use Hashed message authentication codes (HMAC) to secure login to receive Drop Copy Group messages. Secure key pairs are valid for 12 months.

Pending Expiration

Prior to expiration, an email notification is sent to registered administrators and a system notification on the Drop Copy, Order Entry or Market Data Session modules. During the pending expiration period a second key pair can be created and the initial key pair remains active for up to four weeks, after which the older key pair is automatically expired (after market close).

Following is an overview of the secure key management process:

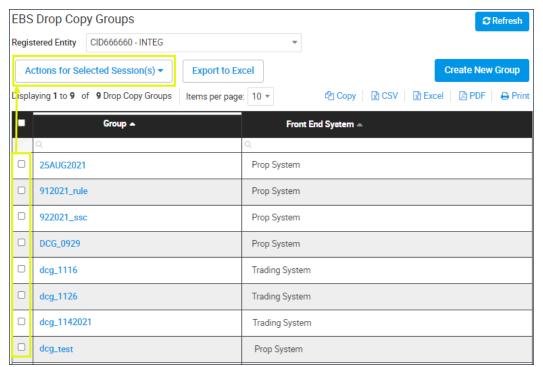
1. From the EBS Requests menu, select Drop Copy Groups.



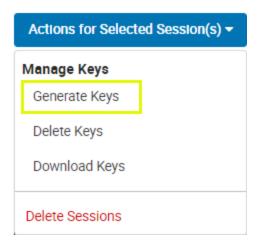
2. Select **Registered Entity**. As you enter characters in the field, matching selections will appear.



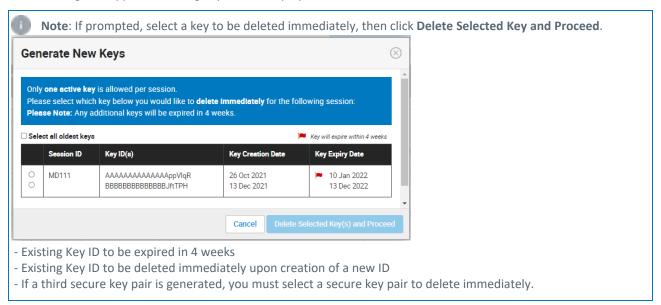
3. From the **EBS Drop Copy Group** page, select a checkbox.



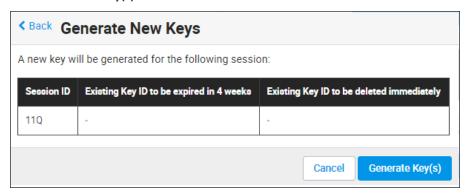
4. From the Actions for Selected Group(s) menu, select Generate Keys.



On the dialog that appears, existing key IDs are displayed.

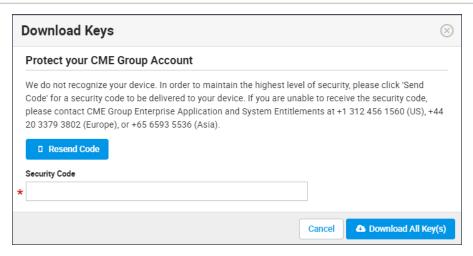


5. Select Generate Key(s).



The Download Keys window appears and an authentication code is sent to the registered mobile phone number.

6. Select **Download All Key(s)**, then enter the **authentication code** that was sent to the mobile phone number.



After verifying the code, the files is saved to the default browser directory.

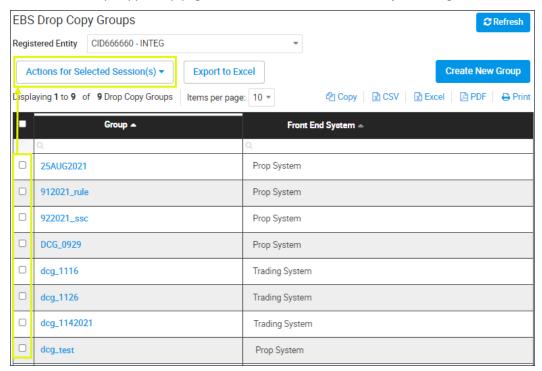
If you did not receive the security code, select Resend Code, then <u>Download the Key(s)</u>.

Downloading Keys for EBS Drop Copy Groups

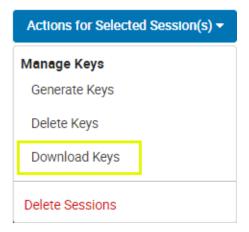
The following instructions illustrate the process to download a previously generated Secure Key ID file.



1. From the EBS Drop Copy Group page, select the checkbox for the Group to manage.

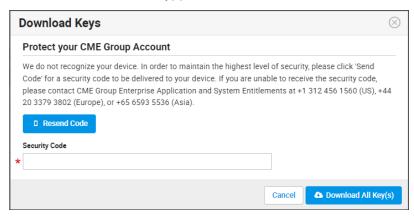


2. From the Actions for Selected Session(s) menu, select Download Keys.



An authentication code is sent to the registered mobile phone number.

3. On the Download Keys screen that appears, enter the **authentication code** that was sent to the mobile phone number, then select **Download All Key(s)**,



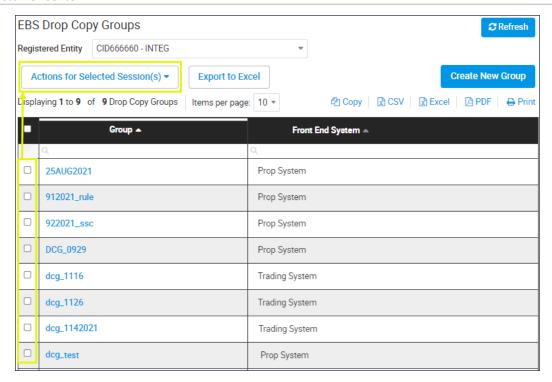
The file is saved to the default browser directory.

4. If you did not receive the security code, select **Resend Code**.

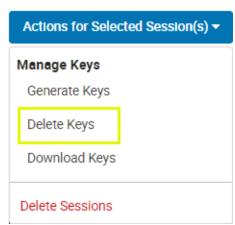
Deleting Keys for EBS Drop Copy Groups



1. From the EBS Drop Copy Group page, select the checkbox for the Session ID(s) to manage.



2. From the Actions for Selected Session(s) menu, select **Delete Keys**.



If there is more than one key for a session, select the key(s) to be deleted.

- 3. Select Delete Key(s).
- 4. On the confirmation window, select **Delete Key(s)** again.

A confirmation banner appears on the screen and an email notification is sent to the registered email address.

Order Entry Sessions

Using the **EBS Requests - Order Entry Sessions** function, authorized users can create and manage order entry sessions which are used to create and manage order entry sessions, which are used to process bidirectional order messages.

Within a single entity (Globex firm), multiple order entry sessions can be created.

Users can also generate and manage secure key pairs that are used to authenticate the <u>secure logon</u> process for order entry sessions.



Note: The iLink IP and port information will be available after sessions are created.

On the Order Entry Sessions page, the following functions are available:

- Creating an EBS Order Entry Session
- Checking Order Entry Session status
- Editing EBS Order Entry Session Information

Secure Key Pairs

- · Generating a Key for EBS Order Entry Sessions
- Downloading Keys for EBS Order Entry Sessions
- Deleting Keys for EBS Order Entry Sessions

Creating a EBS Order Entry Session

On the EBS Requests - Order Entry Sessions page, users can create new EBS order entry sessions.

A valid order entry session consists of:

- SenderCompID
 - Session ID (first 3 characters)
 - Globex Firm ID (next 3 to 5 characters)
 - Fault Tolerance Indicator (last character)
- Password
- · Access Key ID
- IP address
- Port
- Market Segment ID (MSGW session)



To create a new EBS order entry session:

1. From the Request Center (ESS) menu, select EBS Requests > Order Entry Sessions.

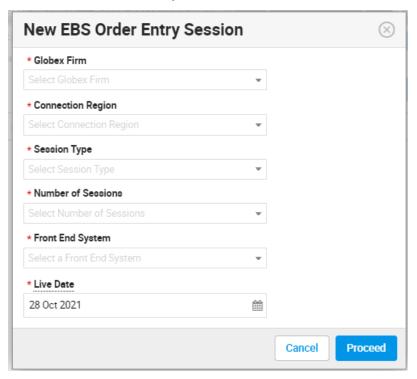


2. Make a selection in the **Registered Entity** drop-down menu. As you enter characters in the field matching selections will appear.

This is automatically selected for users with access to one entity.



3. Select Create New Order Entry Session, then enter session details.



- **Globex Firm**: Identifies the firm associated with the new order entry session. This firm submit orders and receives order and trade related messages.
 - Entitlements: Select products to enable for order entry (EBS-SPOT, EBS-ONSEF-NDF, EBS-OFFSEF-NDF).
- Connection Region: London / New York / Tokyo
- Session Type: Convenience GatewayA connection to any CGW session, which manages routing for all
 order entry messages to all market segments; routing is transparent to customer., Market Segment GatewayA connection to a dedicated market segment, which is defined as a group of products on a given trading engine instance.
- **Number of Sessions**: (Up to 15) The number of available sessions cannot be more than allocated to an entity (Globex Firm).

Order Entry sessions may incur a fee.

- Front End System: Select the application(s) for which the session is authorized.

 Select from available Front-End Systems.
- Live Date: The requested effective date the session will be available.

- 4. Select **Proceed** then set up a <u>Secure Key Pair</u>, which is used for authentication during Order Entry Session login. Confirmation and Notification
 - A screen notification appears, indicating successful submission.
 - To view the new Order Entry Session, select *Refresh* (, then select the linked **Session ID** from the page.
 - An email notification is sent to the registered email address.
 - Request details are viewable on the My Requests tab.

After validation and setup, the status changes to **Completed** and the session appears in the list on the **EBS Order Entry Sessions** page, with an assigned Session ID.

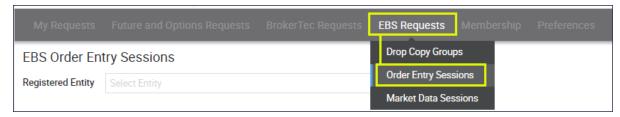
Editing EBS Order Entry Session Information

The following instructions illustrate the process to access the Order Entry Session functions to update details, including secure key pairs.



To edit a EBS order entry session:

1. From the Request Center (ESS) menu, select EBS Requests > Order Entry Sessions.

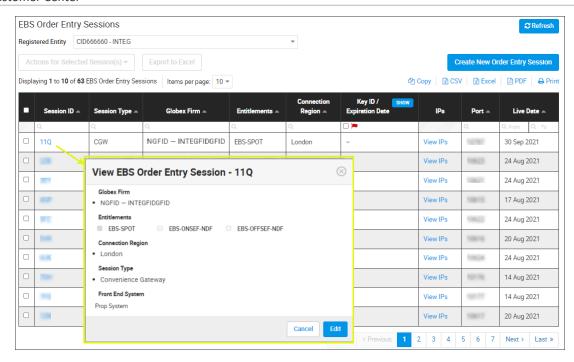


2. Select a Registered Entity from the drop-down menu.

As you enter characters in the field matching selections will appear.



3. Select the linked **Session ID**, then select **Edit** on the screen that appears.



The following fields can be updated:

- Entitlements: EBS products to enable for order entry (EBS-SPOT, EBS-ONSEF-NDF, EBS-OFFSEF-NDF).
- Front End System: Select the application(s) for which the session is authorized.
 Select from available Front-End Systems.
- Live Date
- 4. After updating, select **Proceed** to finalize.

CME Group uses a secure login process for Drop Copy, Order Entry and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request* + *Secret KeyUsed to create HMAC signature.*) to secure user login and Order Entry message activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads.
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Generating Keys for EBS Order Entry Sessions

Users can set up a secure key pairs (Access Key ID + Secret Key), which use Hashed message authentication codes (HMAC) to secure login to API Order Entry sessions.

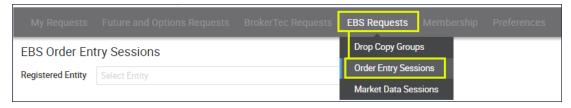
Pending Expiration

Prior to expiration, an email notification is sent to registered administrators and a system notification on the <u>Drop Copy</u>, Order Entry or <u>Market Data Session</u> modules. During the expiration period a *second* key pair can be created and the initial key pair remains active for up to four weeks, after which the older key pair is automatically expired (after market close). If a *third* secure key pair is generated, an existing *customer selected* secure key pair will be deleted immediately.



To generate keys for EBS Order Entry sessions:

1. From the EBS Requests function, select **Order Entry Sessions**.

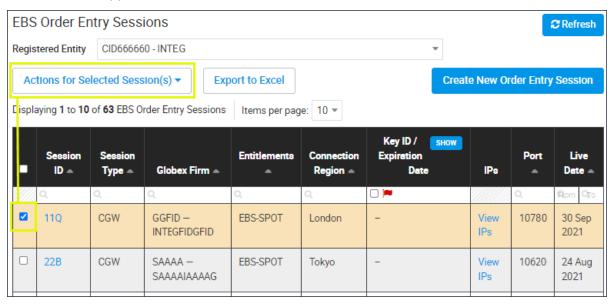


2. Select a **Registered Entity**, if necessary. As you enter characters in the field matching selections will appear.

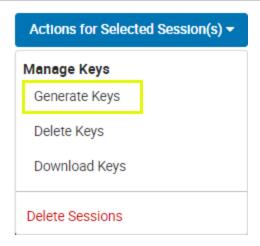


This is automatically selected for users with permissions for just one entity.

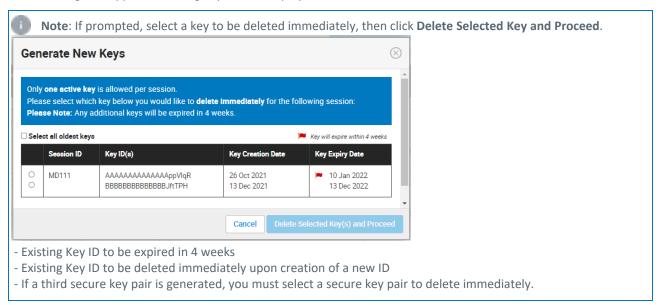
3. Select a Session ID(s) checkbox.



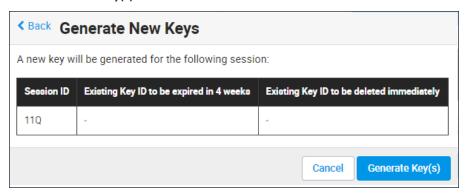
4. From the menu *Actions for Selected Session(s)*, select **Generate Keys**.



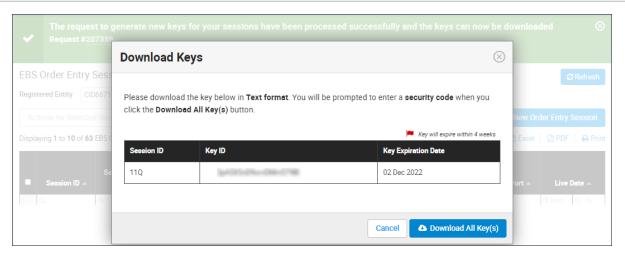
On the dialog that appears, existing key IDs are displayed.



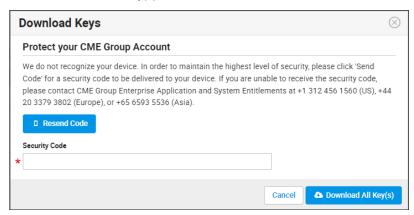
Select Generate Key(s).



The Download Keys window appears and an authentication code is sent to the registered mobile phone number.



6. Select Download All Key(s), then enter the authentication code that was sent to the mobile phone number.



After verifying the code, the file is saved to the default browser directory.

If you did not receive the security code, select Resend Code, then Download the Key(s).

Downloading Keys for EBS Order Entry Sessions

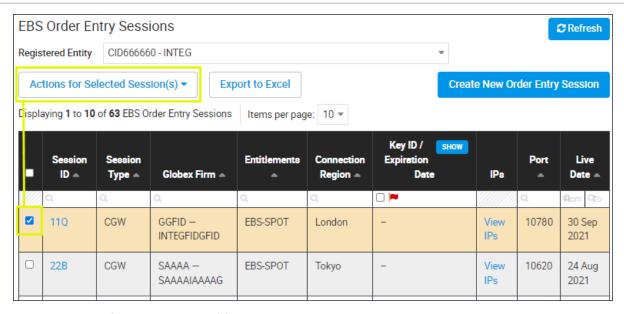
The following instructions illustrate the process to download a previously generated Secure Key ID file.

More: "Secure Key Pairs"

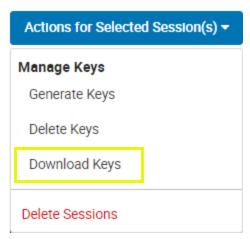


To download secure keys for EBS Order Entry Sessions:

1. From the EBS Order Entry Sessions page, select the checkbox for the Session ID(s) to manage.

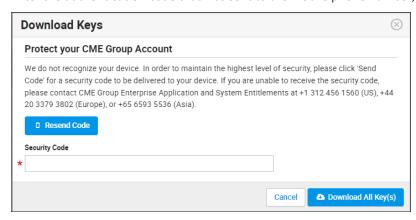


2. From the Actions for Selected Session(s) menu, select **Download Keys**.



An authentication code is sent to the registered mobile phone number.

3. Enter the authentication code that was sent to the mobile phone number, then select Download All Key(s),



After verifying the code, the file is saved to the default browser directory.

4. If you did not receive the security code, select **Resend Code**.

Deleting Keys for EBS Order Entry Sessions

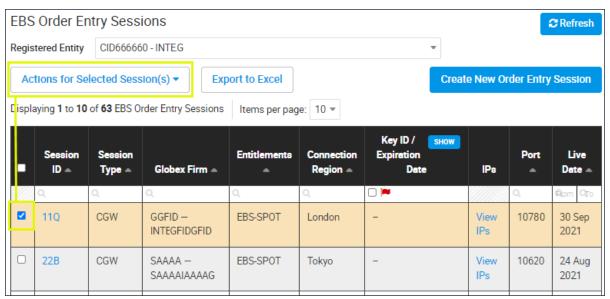
The following instructions illustrate the process to delete a Secure Key ID for an EBS Order Entry Session.

More: "Secure Key Pairs"

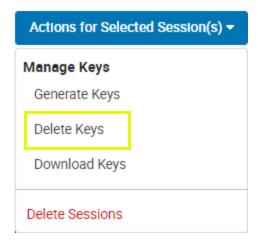


To delete keys for EBS Order Entry Sessions:

1. From the EBS Order Entry Sessions page, select the checkbox for the Session ID(s) to manage.



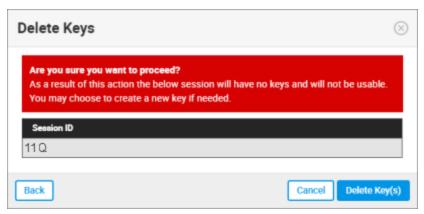
2. From the Actions for Selected Session(s) menu, select Delete Keys.



If there is more than one key for a session, select the key(s) to be deleted.



- Select Delete Key(s).
- 4. On the confirmation window, select Delete Key(s) again.



A confirmation banner appears on the screen and an email notification is sent to the registered email address.

The request to delete keys for your sessions has been processed successfully and the keys have onw been deleted Request ± 9.4

Market Data Sessions

Using the **EBS Requests - Market Data Sessions** function, authorized users can create and manage market data sessions which are used to access TCP market data via an API connection.

The following functions are available on the EBS Requests - Market Data Sessions page:

- Creating EBS Market Data Sessions
- Checking Market Data Session status
- Editing Market Data Session Information

Secure Key Pairs: Secure login key setup

- Generating Keys for EBS Market Data Sessions
- Downloading Keys for EBS Market Data Sessions
- Deleting Keys for EBS Market Data Sessions

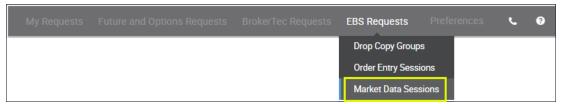
Creating an EBS Market Data Session

The following instructions illustrate the process to create EBS market data sessions.



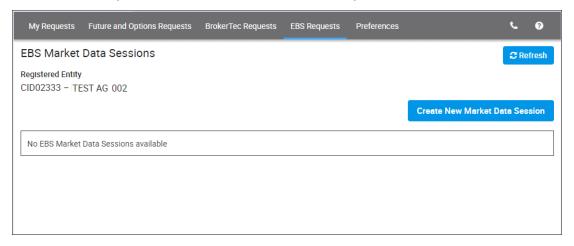
To create a new EBS market data session:

1. From the EBS Requests menu, select Market Data Sessions.

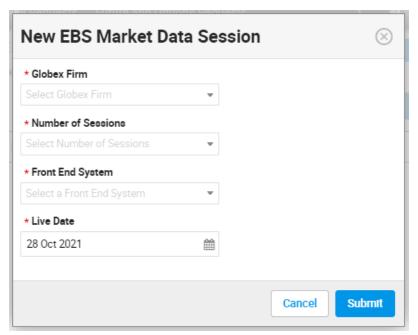


2. Make a selection in the **Registered Entity** drop-down menu. As you enter characters in the field matching selections will appear.

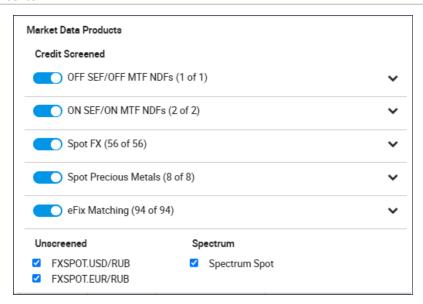
This is automatically selected for users with access to one entity.



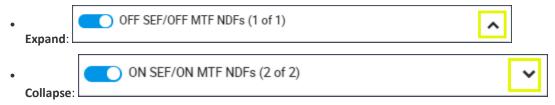
3. Select Create New Market Data Session, then enter session details.



- Globex Firm: Select from EBS market participants, also known as Deal / Floor Code.
- Market Data Products (appears after selecting the Globex Firm): Select ()/ Deselect () all products within a group.



To enable products after deselecting, expand the product group, then Select Individual / All products.



- **Filter**: Select / deselect products or use the filter to view and select products for a particular currency / metal (for Spot Precious Metals).
- Number of Sessions: 1 15
- Front End System: Select the application(s) for which the session is authorized to monitor.
- Live Date: The requested effective date of the session.
- 4. Select Submit when done.

Confirmation and Notification

- A screen *notification* appears, indicating successful submission.
- To view the new Market Data Session, select **Refresh** (Refresh), then select the linked Session ID from the page.
- An email notification is sent to the registered email address.
- Request details are viewable on the My Requests tab.

After validation and setup, the status changes to **Completed**, the session appears in the list with an assigned Session ID and IP address.

Editing Market Data Session Information

The following procedures illustrate the process to access a Market Data Session and edit details.



To create a new EBS market data session:

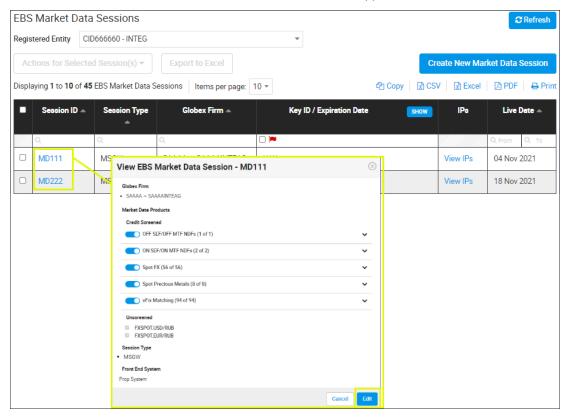
1. From the EBS Requests menu, select Market Data Sessions.



2. Make a selection in the **Registered Entity** drop-down menu. As you enter characters in the field matching selections will appear.

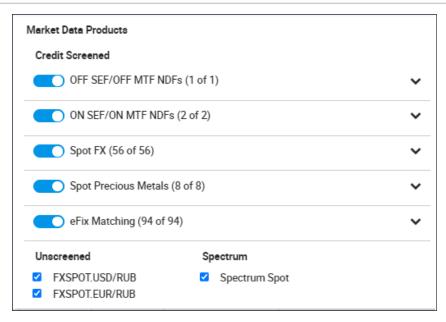
This is automatically selected for users with access to one entity.

3. Select the linked **Session ID**, then select **Edit** on the screen that appears.

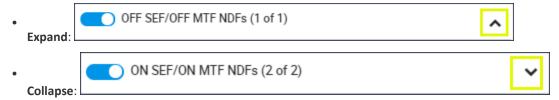


The following fields can be updated:

• Market Data Products: Select ()/ Deselect () all products within a group.



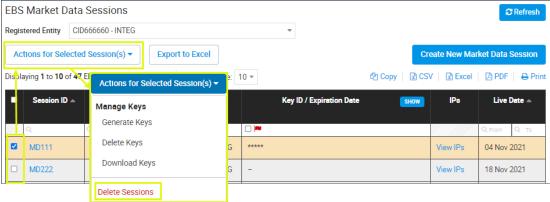
To enable products after deselecting, expand the product group, then Select Individual / All products.



- Front End System: Select the application(s) for which the session is authorized to monitor.
- Live Date: The requested effective date of the session.
- 4. Select Submit when done.



From the main EBS Market Data Sessions page, select the checkbox for the Market Data Session ID to delete, then select **Actions for Selected Session(s)** > **Delete Sessions**.



Secure Key Pairs

CME Group uses a secure login process for Drop Copy, Order Entry and Market Data API services.

Using self-service functions, users can generate and manage key pairs (*Access Key IDSecure login request + Secret KeyUsed to create HMAC signature.*) to secure user login and Market Data activity.

- Customer identity verification: Login is signed with CME Group issued and validated security credentials.
- Message confidentiality and integrity: CME Globex uses customer submitted credentials to calculate the HMAC value to validate against a login request.
 - Once created, credentials are accessible and available for multiple downloads
 - In situations when a secure key is within four weeks of expiration, a user can have two secure key pairs.

 Notification of pending security credential expiration will be sent by email to registered administrators.
 - If a customer generates a third secure key pair:
 - The user must delete a secure key pairs immediately.
 - The oldest secure key pair will expire in four weeks (at market close).

Generating Keys for EBS Market Data Sessions

CME Group uses a secure login process for <u>Market Data Sessions</u> API services. **Generating Keys for EBS Market Data Sessions**

Users can set up a secure key pairs (Access Key ID + Secret Key) to secure login to Market Data API sessions.

Pending Expiration

Prior to expiration, an email notification is sent to registered administrators and a system notification on the <u>Drop Copy</u>, <u>Order Entry</u> or Market Data Session modules. During the pending expiration period a *second* key pair can be created and the initial key pair remains active for up to four weeks, after which the older key pair is automatically expired (after market close). If a *third* secure key pair is generated, an existing *customer selected* secure key pair will be deleted immediately.



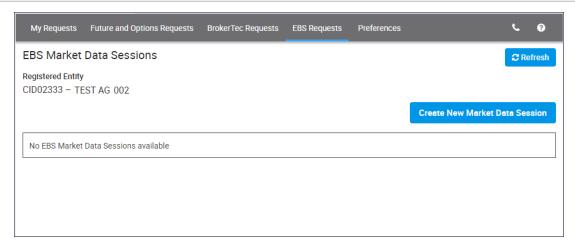
To generate keys for EBS Market Data sessions:

1. From the EBS Requests menu, select Market Data Sessions.

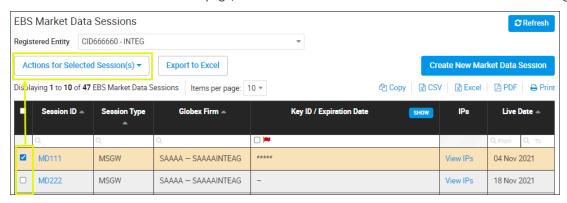


2. Make a selection in the **Registered Entity** drop-down menu. As you enter characters in the field matching selections will appear.

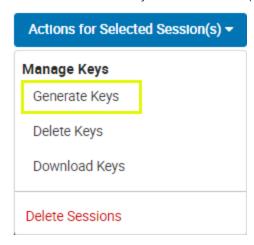
This is automatically selected for users with access to one entity.



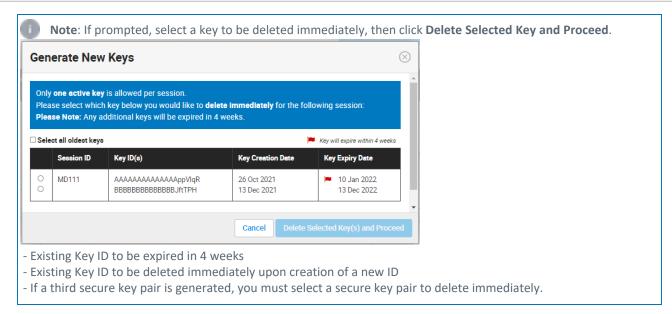
3. From the EBS Market Data Sessions page, select the checkbox for the Market Data Session ID to manage.



4. From the menu Actions for Selected Session(s), select **Generate Keys**.

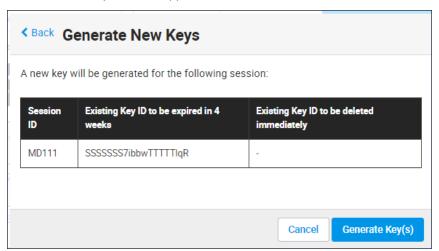


On the dialog that appears, existing key IDs are displayed.

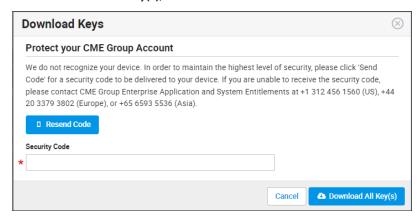


5. Select Generate Key(s).

The Download Keys window appears and an authentication code is sent to the registered mobile phone number.



6. Select **Download All Key(s)**, then enter the **authentication code** that was sent to the mobile phone number.



After verifying the code, the file is saved to the default browser directory.

If you did not receive the security code, select Resend Code.

Downloading Keys for EBS Market Data Sessions

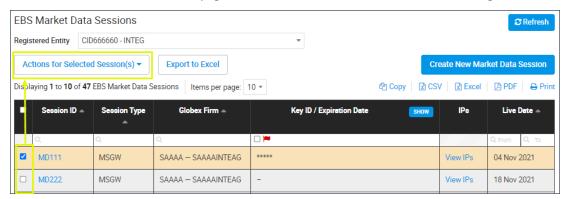
The following instructions illustrate the process to download a previously generated Secure Key ID file.

More: "Secure Key Pairs"



To download secure keys:

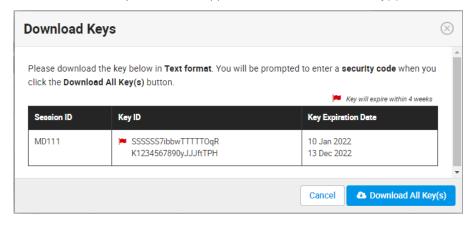
1. From the EBS Market Data Session page, select the checkbox for the Session ID to manage.



2. From the Actions for Selected Session(s) menu, select **Download Keys**.



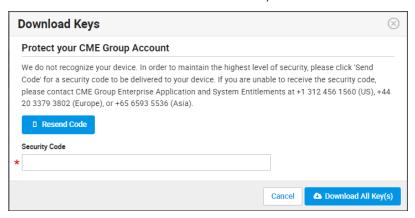
3. On the Download Keys screen that appears, select Download All Key(s),



An authentication code is sent to the registered mobile phone number.

4. Enter the authentication code that was sent to your mobile phone number, then select Download All Key(s).

The file is saved to the default browser directory.



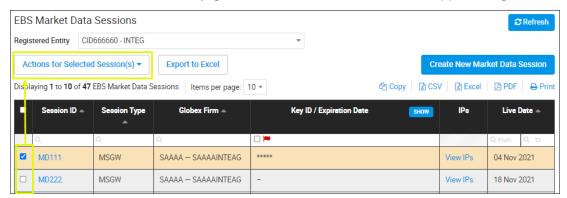
5. If you did not receive the security code, select **Resend Code**.

Deleting Keys for EBS Market Data Sessions

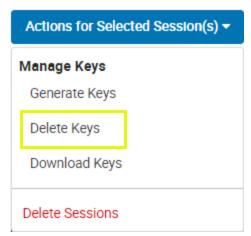
More: "Secure Key Pairs"

To delete secure keys:

1. From the EBS Market Data Session page, select the checkbox for the Session ID(s) to manage.



2. From the Actions for Selected Session(s) menu, select **Delete Keys**.



If there is more than one key for a session, select the key(s) to be deleted.

- 3. Select **Delete Key(s)**.
- 4. On the confirmation window, select **Delete Key(s)** again.

A confirmation banner appears on the screen and an email notification is sent to the registered email address.

Personally Identifiable Information (PII)

Pursuant to the EU and UK MiFID frameworks, CME Group Cash Markets trading venue operators (BrokerTec Europe Limited and CME Amsterdam B.V.) are required to identify participant firms [Globex Firm ID (GUS)], their natural person users [Globex User Signature (GUS), including Short Code and PII data] and trading algorithms for regulatory reporting and record keeping purposes.

To be allowed to trade BrokerTec and EBS CME Cash Markets MiFID Products, ('MiFID Regulated Products'), participant firms must submit the required PII data for manual traders and individuals who are operating algorithm trading systems.

Failure to submit PII data will result in GUS traders not being allowed to trade. The PII data is linked to the short code associated with a Globex User Signature (GUS) ID (or authorised trader).

The Request Center (ESS) Personally Identifiable Information (PII) function includes the following functions for an authorized PII manager to submit required information for record-keeping and reporting obligations.

- Assigning PII Manager Entitlements Performed by an authorized entity Admin Manager
- PII Summary Function Select a Legal Entity Identifier (LEI) to view and provide required identification information for a GUS/Trader.
- <u>File Upload</u> Upload up to 500 GUS/Trader users' PII information with a formatted Comma Separated Value (CSV) file.
- My Requests (ESS) Request Status: View the processing status of previous submissions.

Prior to using the PII function ensure the following:

a. Entity Admin Manager and PII manager have reviewed the CME Group PII Data Submission User Guide, which outlines regulatory requirements and reporting obligations.

Refer to the below referenced user guide sections:

- PII data required (section 3), lists required data and accepted national client identifiers by country.
- An overview of the data <u>submission</u> (section 4.3.1) and <u>upload</u> process (section 4.3.2)
- Data handling and participant's rights (section 5)
- b. A Globex Firm ID (GFID) and associated Globex User Signature (GUS, section 4.2) is created / available, assigned at least one (BrokerTec / EBS) MiFID regulated *product* and the required *Short Code*.
- c. Prior to using this function the Admin Manager must <u>assign</u> the *Request Center PII Manager* entitlement (section 4.1.1) to authorized PII Manager user(s).
- d. The PII manager will <u>enter</u> (individual PII) or <u>upload</u> (multiple PII) and ID information for the person associated with the GUS.

Assigning PII Manager Entitlement

The following instructions describe the process for an *Admin Manager* to access the User Administration function to assign the PII manager role to the user that will submit PII information. Prior to performing this process ensure the PII manager has a CME Group Login with multi-factor authentication.

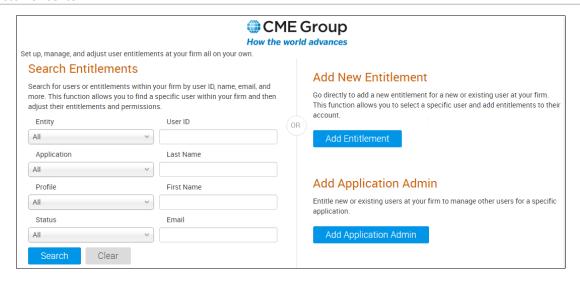


To assign the PII Manager entitlement:

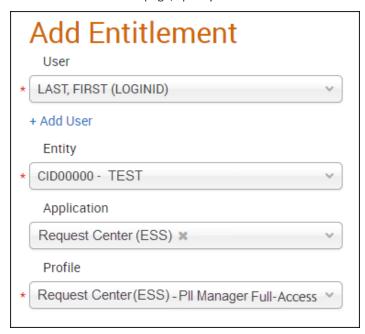
1. From the CME Customer Center menu, select Administration > User Administration.



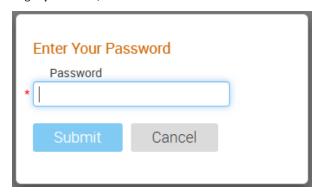
2. From the User Administration page, select Add Entitlement.



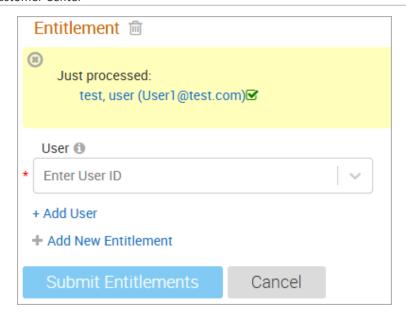
3. On the **Add Entitlement** page, specify the entitlements:



- a. Select the User (Name or CME Group Login)
- b. **Entity**: Select the registered entity (automatically selected for users / administrators with permissions for only one entity).
- c. Application: Request Center (ESS)
- d. Profile: Request Center (ESS) PII Manager Full-Access
- 4. After specifying entitlement and application details, select **Add Entitlement** and confirm by entering your CME Group Login **password**, then click **Submit**.



The user profile page and confirmation appears and an email is sent to the Admin Manager(s) and added user(s).



PII Data Submission

The following instructions illustrate the process used by an authorized PII Manager to access the PII *Summary* function to submit PII data.

Two methods are available:

- Manual (individual) submissions Provide required identification information for a GUS/Trader.
- File (csv) upload Upload up to 500 GUS/Trader users' PII information.

Contents

- Submit Individual PII Information
- File Upload
- View Submitted Request Status



- Impacted markets
- How to assign a short code to a Globex User Signature (GUS)
- How to add or delete PII information for GUS/Traders

View Summary / Submit Individual PII Information

The following instructions describe the process to access PII Summary to submit required information for an individual GUS / Trader.



To submit PII information for an individual:

1. From the CME Customer Center - Administration menu, select Request Center (ESS).

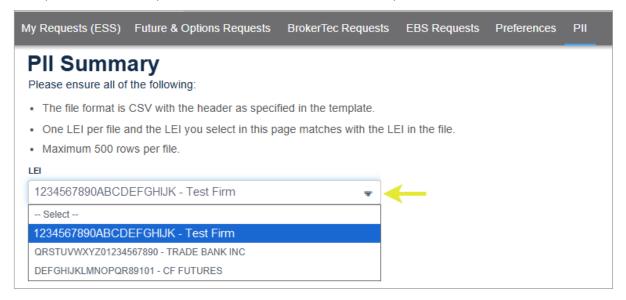


2. From the Request Center menu, select PII> Summary.



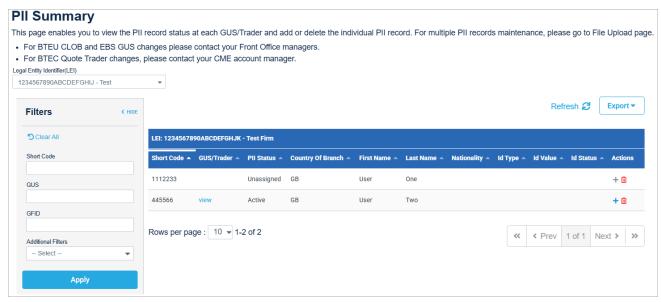
3. (if applicable) Select Legal Entity Identifier (LEI) from the drop-down menu.

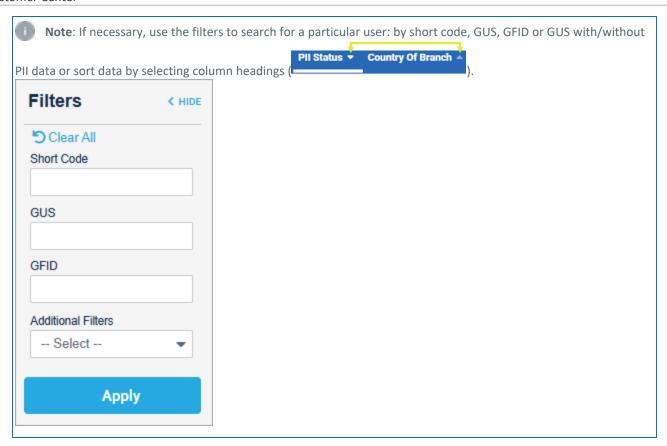
This option is automatically selected for users with access to one entity.



For the selected LEI, the PII Summary page lists Short Codes associated with GUS / Traders.

Available actions:





i. View GUS/Trader: To View GUS PII status and GUS information, select the blue hyperlinked GUS/Trader. Review and validate GUS user information and short code before submitting the required ID set (see next).

Example: The first and last name on submitted IDs must exactly match the GUS/Trader's first and last name.

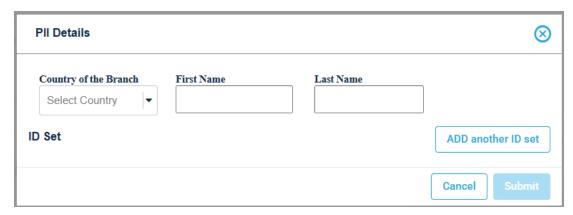
PII data records are linked to the *Short Code*, associated with the GUS / Trader for the selected Legal Entity Identifier (LEI).



ii. Add PII Details (and ID Set (+): View the PII details screen then add the following:

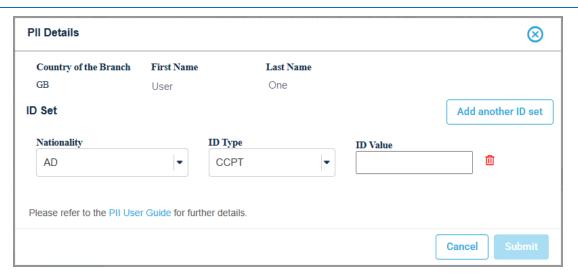
Note: For a list of countries/country code and priority identifiers, refer to Section 3 - National client identifiers and priority levels of the CME Group PII Data Submission User Guide.

• Select the **Country of the Branch** from the drop-down menu.



- -First Name: Must exactly match the first name of the GUS user.
- -Last Name: Must exactly match the last name of the GUS user.
- Select **Add ID Set** (+), then enter required identification details:

Note: To review a list of the acceptable *ID Types* for the selected country, refer to Section 3.1 - National client identifiers and priority levels.

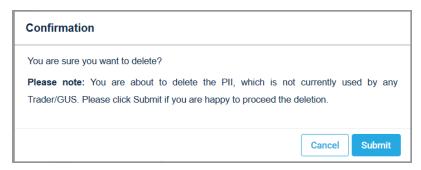


- -Select the **Nationality** from the drop-down menu.
- -ID Type: Based the selected Nationality, select from acceptable ID Types in the drop-down menu.
- -ID Value: Enter the national ID value of the highest priority identifier.
- iii. **Delete** (iii): Upon selecting, a confirmation dialog will appear.

Confirm deletion, by selecting **Submit**.

After deletion, trading MiFID products for the GUS will be disabled.

For regulatory obligations for deleted data, refer to section <u>4.6 Request the deletion of PII data</u>. and section <u>5 Data handling and Participant's rights</u>.



File Upload

The below instructions describe the process to select a LEI and upload a Comma Separated Value (CSV) file with PII and national ID information for up to 500 users. Using the file upload process the PII manager can **add** or **delete** records.



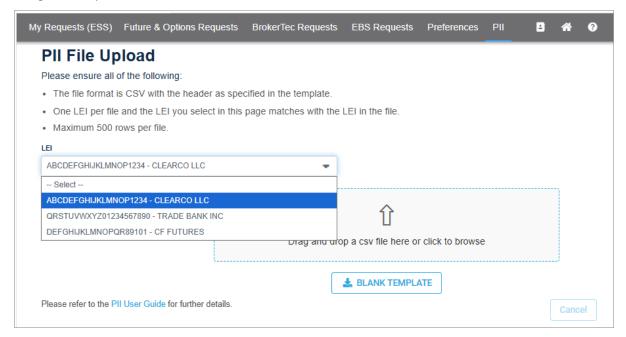
1. From the Request Center (ESS) menu, select PII, then select File Upload.



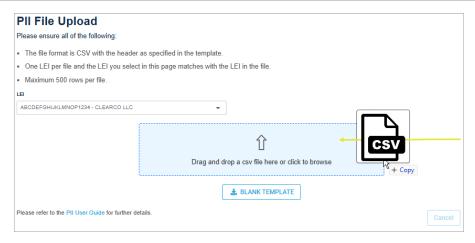
2. (if applicable) From the LEI drop-down menu, select an entity to manage.

This is automatically selected for users with access to one entity.

Using the file upload function, PII details can be added / deleted for one LEI at a time.



3. Select a **Blank Template** then complete with required information *or* use a previously filled CSV file that matches the below referenced data requirements:



The following required data is entered on the csv file:

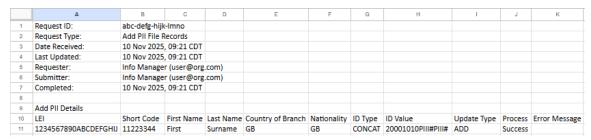
For guidance on preparing data for submission, refer to the CME Group PII Data Submission User Guide - section 3 - PII data required, which outlines fields, format and national client identifier (ID type and value).

- Do not delete the column heading values in row 1
- Participant's LEI (only one LEI is allowed per file)
- · Short code
- · First Name (must match the First Name of the GUS, including capitalization)
- Last Name (must match the Last Name of the GUS, including capitalization)
- Country of Branch ISO 3166-1 alpha-2 (two-letter code)
- Nationality ISO 3166-1 alpha-2 (two-letter code)
- ID Type in accordance with the allowed types and priority identifiers for the selected Nationality
- ID Value corresponds to the ID Type
- ADD or DELETE

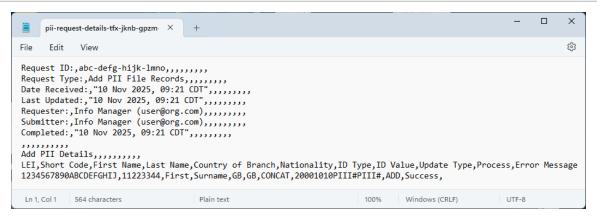
Only ADD or DELETE is permitted. To correct a record, Delete, then ADD the user information. Deleting records will disable the GUS/Trader's ability to trade MiFID products. For regulatory obligations for deleted data, refer to section 4.6 Request the deletion of PII data. and section 5 Data handling and Participant's rights.

The following examples illustrate completed csv information; in worksheet and comma separated value file.

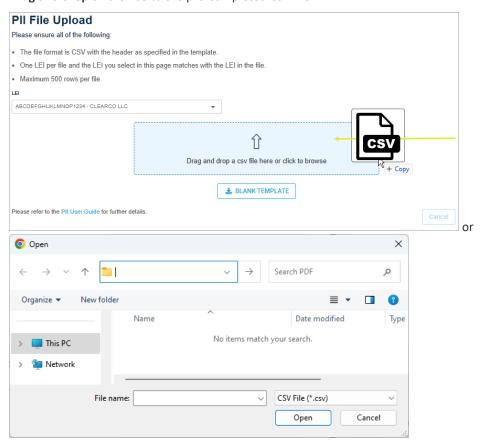
· CSV worksheet view:



CSV file view:



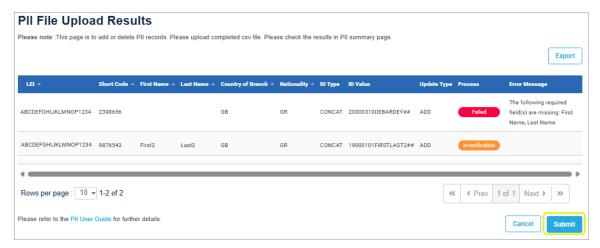
4. Drag and drop or browse to the pre-completed CSV file.



The screen refreshes to show pending uploaded information.

5. Review the **Process** status, resolve *Error Messages* if necessary, then select **Submit**.

For error messages and proposed resolutions, refer to the <u>CME Group PII Data Submission User Guide</u> - section 4.4 - Error messages.



- In-verification: Uploaded details have passed initial data validation.
 Selecting Submit will send for CME Group review.
- Failed: Submitted information has missing or incorrect data. Submission can continue with errors but the record (s) will not be included.

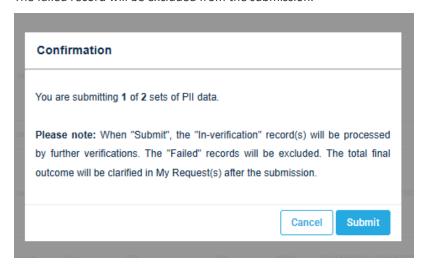
To resolve errors, cancel the upload, then update the CSV file.

After submission, go to My Requests to view final validation results.

6. On the confirmation message that appears, review the details, then select **Submit**.

In this example confirmation message, one submitted record passed initial data validation and will be submitted for review

The failed record will be excluded from the submission.



View Submitted Request Status

PII and file upload submissions are available from My Requests (ESS) - Request Status tab. Details including review progress is indicated in the *Status* column, which indicates successful or failed data validation:

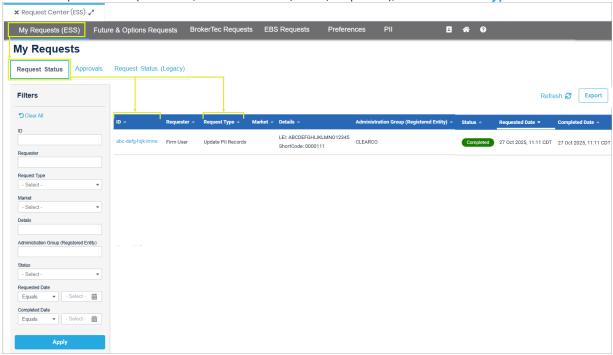
- Completed: Request has been completed. To view details, select the ID.
- In-Progress: Data validation is not complete, refresh the page or view status later.

To find a particular request, use the Filter fields.

B

Example: Request Type = Update PII Records, Administration Group (Registered Entity) = firm/LEI

To view request details (PII Details, submission date / time / requestor), select the blue hyperlinked ID.



After clicking the ID, additional PII details are available, including the ability to *export* as a spreadsheet. The examples below illustrate *Successful* and *Failed* status.

• Success - PII data was submitted successfully; GUS/Trader and ID information correctly matches.



• Failed - The submitted information failed validation. Refer to the error messages for additional actions.

LEI	Short Code	First Name	Last Name	Country of Branch	Nationality	ID Type	ID Value	Process	Error Message
ABCDEFGHIJ1234567890	111222333	Joe	Trader	GB	GR	CCPT	19850101Trader	Failed	The short code at the LEI belongs to a different PII person

User / Firm Administration

User Administration functions enable authorized front, middle, back office administrators to manage user access to applications and services.

Permissions assignment begins with the *Entity Officer* (for Futures & Options) and *Designated Person* (for BrokerTec) who has direct contact with CME Group's Global Account Management to request services. Both roles can be performed by the same individual.

Self-Service Application Roles

The entity officer / designated administrator will receive entity-wide administration privileges for self-service applications and is responsible for assigning front / middle / back office application permissions to themselves and additional users, including:

- Admin Manager: The Entity Officer entitles at least two Front / Middle / Back Office Admin Managers to manage user application permissions.
- Application or Service Administrator: The Admin Manager or Entity Officer specifies assigns an <u>Application or Service Administrator</u> to manage application user access and assign permissions to use, submit and approve self-service requests submitted by entity users.
- **Application Users**: Admin Managers and / or Application Administrators assign <u>user entitlements</u> for users to access self-service applications to view and <u>manage</u> entity details.
- FirmSoft User Administration: Create and manage FirmSoft application user access.
- User Administration Application Roles:
 - Futures & Options
 - BrokerTec
 - EBS

Accessing User Administration

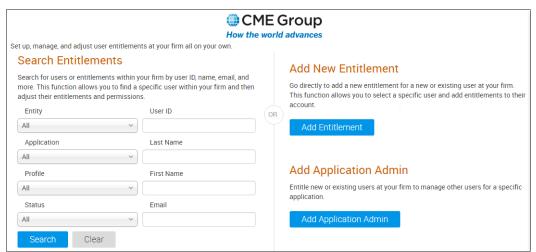


To access User Administration:

1. From the Customer Center menu, select **Administration** > **User Administration**.

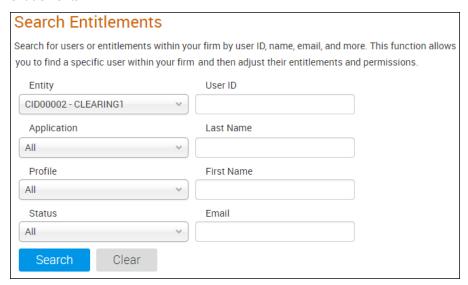


2. On the Search Entitlements page, the following options are available:



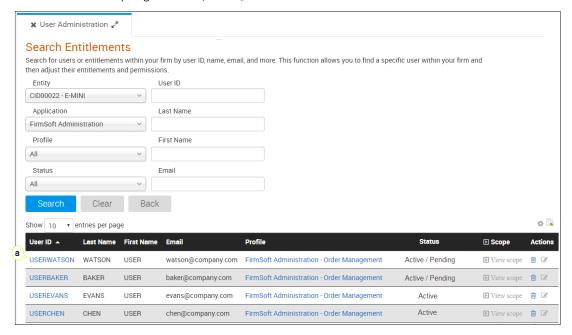
a. Search Entitlements: Search existing users, to view or manage entitlements.

Prior to adding users or entitlements, perform a search and verify currently assigned firm and user entitlements.



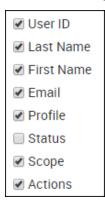
Fields are optional and partially entered criteria return all matching results.

- **Entity** The clearing firm, designated on the CME Customer Center Self Service Agreement, at which the user will be entitled.
- Application Self-service user administration applications.
- Profile Based on assigned entitlements for all available applications, firm-wide.
- Status
- User CME Group Login User ID, Name, Email address.



Column / View Settings

- Clear To clear results and perform a new search.
- Sort Sort the selected column in ascending / descending order.
- Column Settings() Show / hide columns, by selecting / deselecting checkboxes.



Expand Scope (**D**/**D**): To view entitlement details.



b. Add Entitlement: Add application entitlements for one or more users.



c. Additional User Entitlement Functions

EBS Application Roles

The following list illustrates Application entitlements that can be assigned to CME Globex - EBS users via self-service User Administration functions.

Application	Profile / Entitlement	Front Office	Middle Office	Back Office
CME Customer Center - User Administration	Admin ManagerApplication Administrator	Х	n/a	n/a

Firm Admin- istrator Dash- board - Self Match Pre- vention	 Firm Admin Dashboard - Update - all Request Self-Match Prevention IDs View iLink session statistics Firm Admin Dashboard - Update - partial Request Self-Match Prevention IDs View iLink session statistics 	х	n/a	n/a
FirmSoft	 Order Management – Order Inquiry + Cancel: View detailed order information including fill information and order cancel / replace history. Privileged Trader: Users with the EBS GFE privileged trader role can cancel an individual order, multiple orders, all working orders and mass quotes. Access can be restricted by firm, account and / or Order Entry Session. 	х	n/a	n/a
Risk Management Tools	 Risk Management Tools - Full Access Risk Management Tools - Partial Access 	n/a	х	n/a
Globex Firm ID	 Request Center (ESS) – GFID Full Access Request Center (ESS) – GFID Read Only 	х	n/a	n/a
Globex User Signature	 Request Center (ESS)- GUS Full Access Request Center (ESS) – GUS Read Only 	Х	n/a	n/a
Algorithmic Trading	 Request Center (ESS) – EBS ALGO Full Access Request Center (ESS) – EBS ALGO Read Only 	х	n/a	n/a
Order Entry Sessions	 Request Center (ESS) – EBS Order Entry Full Access Request Center (ESS) – EBS Order Entry Read Only Access 	Х	n/a	n/a
Drop Copy Groups	 Request Center (ESS) – EBS Drop Copy Full Access Request Center (ESS) – EBS Drop Copy Read Only 	х	n/a	n/a
Market Data sessions	 Request Center (ESS) – EBS Market Data Full Access Request Center (ESS) – EBS Market Data Read Only Access 	Х	n/a	n/a
Personally Identifiable Information	Request Center (ESS) - PII Manager Full-Access	Х	n/a	n/a

BrokerTec Application Roles

The following list illustrates Application entitlements that can be assigned to CME Globex - BrokerTec users via self-service User Administration functions.

Application	Profile / Entitlement	Front Office	Middle Office	Back Office
CME Customer Center - User	Admin ManagerApplication Administrator	х	n/a	n/a

Administration				
Firm Administrator Dashboard - Self Match Prevention	 Firm Admin Dashboard - Update - all Request Self-Match Prevention IDs View iLink session statistics Firm Admin Dashboard - Update - partial Request Self-Match Prevention IDs View iLink session statistics 	х	n/a	n/a
FirmSoft	 Order Management – Order Inquiry + Cancel: View detailed order information including fill information and order cancel / replace history. Privileged Trader: Users with the BrokerTec GFE privileged trader role can cancel an individual order, multiple orders, all working orders and mass quotes. Access can be restricted by firm, account and / or Order Entry Session. 	х	n/a	n/a
Risk Management Tools	 Risk Management Tools - Full Access Risk Management Tools - Partial Access 	n/a	Х	n/a
Globex Firm ID	 Request Center (ESS) – GFID Full Access Request Center (ESS) – GFID Read Only 	Х	n/a	n/a
Globex User Signature	 Request Center (ESS) – GUS Full Access Request Center (ESS) – GUS Read Only 	Х	n/a	n/a
Algorithmic Trading	 Request Center (ESS) – BTEC ALGO Full Access Request Center (ESS) – BTEC ALGO Read Only 	х	n/a	n/a
Order Entry Sessions	 Request Center (ESS) – BrokerTec Order Entry Full Access Request Center (ESS) – BrokerTec Order Entry Read Only Access 	Х	n/a	n/a
Drop Copy Groups	 Request Center (ESS) – BrokerTec Drop Copy Full Access Request Center (ESS) – BrokerTec Drop Copy Read Only 	х	n/a	n/a
Personally Identifiable Information	 Request Center (ESS) – BrokerTec Market Data Full Access Request Center (ESS) – BrokerTec Market Data Read Only Access 	Х	n/a	n/a
Personally Identifiable Information	Request Center (ESS) - PII Manager Full-Access	Х	n/a	n/a

Futures& Options Application Roles

The following list illustrates Application entitlements that can be assigned to CME Globex - Futures & Options users.

Application	Profile / Entitlement	Description	Front Office	Middle Office	Back Office
CME Customer	Admin Manager	Manages the Registered Entity's Application	Х	Х	Х

Center - User Administration		Admins and users. • Approves self-service requests that require admin manager authorization. • Removes access for end-users that no longer require access. Note: For registered entities, at least two Admin Managers are required. To access applications admin managers must also assign application entitlements to themselves.			
	Application Administrator	 Manages user access requests. View entity, user and contact information. Note: To access applications admins must also assign application entitlements to themselves. 			
Asset Management Firm	Asset Management Firm - Update	 View asset / currency summary, details and transactions status. Enter and manage asset pledges, amendments, withdrawals and view transactions status. 	Х	n/a	х
	Asset Management Firm - Read Only	View asset and currency summary and detail, including transaction status.			
Settlement Firm	Settlement Firm - Read Only	View asset / currency summary and detail, including asset transactions status, currency requirements and settlement variation.	n/a	n/a	n/a
	Scope	Clearing Organization, Product Exchange and Clearing Faccess	Firm data t	hat the user	can
DeliveriesPlus	Deliveries - Update	Provides clearing firm users with inventory and delivery management capability for CME Group contracts.	n/a	n/a	Х
	Deliveries - Read Only	Provides clearing firm users the ability to inquire and view inventory and delivery information of their CME Group contracts.			
	Scope	Clearing Organization, Product Exchange and Clearing that the user can access Selecting ALL enables user access to all trading firms th Entity, Clearing Organization, Exchange and Clearing M	at are avai	lable to the	
Firm Administrator Dashboard	Firm Administrator Dashboard - Update - All	 View specialized reports in the Firm Administrator Dashboard (FADB), which contains information for all Executing firms cleared, including: clearing mapping, iLink session IDs, Firm Registered Contacts, FirmSoft Users & Entitlements, Cancel On Disconnect, Firm Admin Dashboard Users, Messaging Efficiency Contacts and GCC Outbound 	х	n/a	х

	Firm Administrator Dashboard - Update - Partial	 Contacts. View iLink session passwords in the Firm Administrator Dashboard (FADB). Enable / Disable Cancel on Disconnect (COD) functionality. Add, modify, and delete Clearing and Executing Firm Messaging Efficiency Program (MEP) contacts. View messaging metrics for CME Globex Messaging Efficiency Program. Submit CME Globex Messaging Efficiency Program Request for Waivers (RFW). Request Self-Match Prevention IDs. View iLink session stats. Enable / Disable Cancel on Disconnect (COD) functionality. View messaging metrics for CME Globex Messaging Efficiency Program. Submit CME Globex Messaging Efficiency Program Request for Waivers (RFW). Request Self-Match Prevention IDs. View iLink session stats. View iLink Session statistics. 			
	Administrator Dashboard - View - SOx Report				
FirmSoft	FirmSoft - Order Inquiry and Cancel FirmSoft - Order Inquiry	Users can view orders, order status and cancel an individual order, group of orders, working orders and mass quotes. Users can view orders and order status, fill / aggregate fill details.	х	n/a	n/a
	Scope	In the Privilege field, select the entitlement to assign to Execution Firm (GFID), Privileges, Account Restrictions, Session Restrictions that the user can view / manage; r to access all available data.	Operator	ID Restrictio	
Risk Management Tools	Risk Management Tools - Full Access	Clearing Member Firm or registered entity user that can view and manage CME Group Risk Management Tools functions: CME Globex Credit Controls, Access Manager, Kill Switch, Risk Management Interface.	n/a	Х	n/a
	Risk Management Tools - Partial Access	Executing Firm Risk Administrators, at non-clearing member firms that can access and operate CME Group Risk Management Tools functions: Kill Switch.			

Drop Copy Groups	Drop Copy Group - Full Access	Create and manage Drop Copy requests.	Х	n/a	n/a
	Drop Copy Group - Read Only	View Drop Copy group details.			
Globex Firm IDs	Globex Firm IDs - Full Access	Create and manage GFID requests.	Х	n/a	n/a
	Globex Firm IDs - Read Only	View GFID requests at the specified entity / firm.			
iLink Order Entry Sessions	iLink Sessions - Full Access	Create and manage iLink Order Entry sessions.	Х	n/a	n/a
	iLink Sessions - Read Only	View iLink Order Entry sessions.	Х	n/a	n/a
Operator IDs	Operator ID Full Access	Register new Operator IDs, create ATS teams and manage team members.	Х	n/a	Х
	Operator ID Permissions	Entitle execution firms to view Operator IDs, associated with their Registered Entity.			
	Operator ID View	View Operator ID Operator ID details.			

Adding Application Administrator / Admin Manager

The CME Customer Center includes a self-service capability for Admin Managers / Application Admins, at Registered Entities, to create and manage CME Customer Center application user access, via the following roles:

• Admin Manager: Authorized, by the Entity Officer, as the person responsible for managing the Registered Entity's Application Admins and users of applications and services. AM(s) have authority to act as the approver of Self-Service requests that require the entity's authorization. AM(s) are assigned access at the highest entity level and sub-entities (e.g. Globex Firm IDs) related to the Registered Entity. AM(s) are granted access to applications and service requests depending on the type of entity they are representing (Clearing Firm vs non-Clearing Firm) and whether they are responsible for Front, Middle and/or Back Office.

AM(s) must exercise caution when assigning Application Admins as these resources will have privileged access and the ability to grant access to end users for the applications that they are assigned. Access must be removed for end-users that no longer require access.

CME Group requires firms designate at least two Admin Managers, which are specified on the CME Group Customer Center Self-Service Agreement. To access tools, services and entitle other users, Admin Managers must initially add the required roles to themselves, via the User Administration tool.

Note: To add / modify / remove Admin Managers, contact Global Account Management.

• Application Admin: The Application Admin (AA) is assigned entitlements to specific named Applications or Self-Service management functions, for managing users and/or requests. AA(s) can use the CME Customer Center to view entity, user and contact information under their access authority. AA(s) must initially add the required roles to themselves, via the User Administration tool.

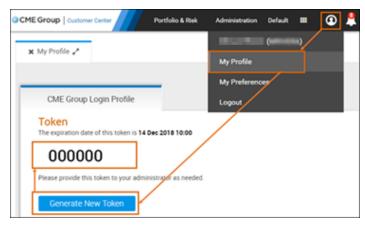
Prior to adding a new user entitlement the user must:

• Have a valid CME Group Login ID.

Existing users with an active CME Group Login ID can be assigned entitlements directly.

• New users (including users with a recently <u>created CME Group Login ID</u>) may be required to generate and provide a <u>temporary token</u> to the firm's admin manager.

To obtain a token, select My Profile > Generate New Token. The token is valid for seven days.



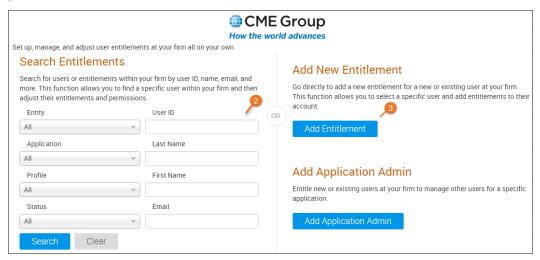
Before using application functions, Admin Managers and Application Admins must initially add individual application roles to themselves (example: FirmSoft) via User Administration process.

To Add an Application Administrator / Admin Manager:

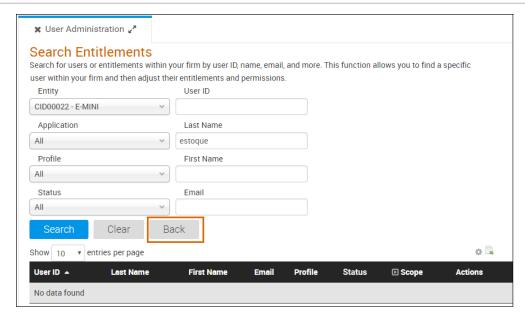
1. From the CME Customer Center menu, select Administration > User Administration.



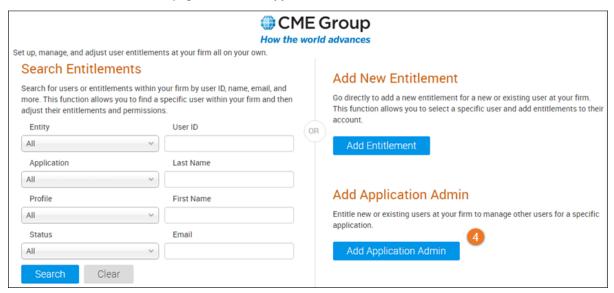
2. Before adding new entitlements, CME Group recommends searching existing users to ensure users don't already have permissions.



3. If the user is not found, select **Back**.



4. From the User Administration page, select Add Application Admin.



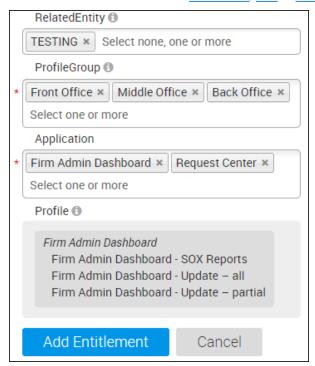
- 5. On the Add Entitlement page, specify the following:
 - User: Select one or more (+ Add User) users.
 - **Entity**: Select the registered entity.



Select one or more of the following permissions.

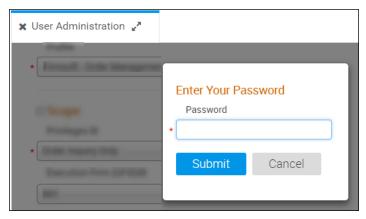
- Related Entity: Clearing and / or Trading Firm(s).
- Profile Group: Front / Middle / Back Office.
- Application: Assigns all administrative entitlements for the selected application(s).

For a list of entitlements refer to **BrokerTec**, **EBS** or **Futures & Options** application roles.



6. To finalize, select Add Entitlement.

For added security, enter your password, then select **Submit**.



The User profile page appears, with the updated profile(s) and user entitlement.

Adding User Entitlements

The following instructions describe and illustrate the process for adding application user entitlements.

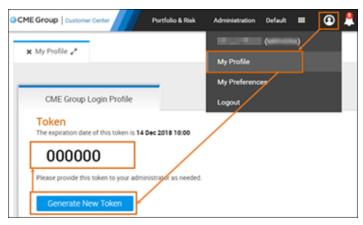
Prior to adding a new user entitlement the user must:

• Have a valid CME Group Login ID.

Existing users with an active CME Group Login ID can be assigned entitlements directly.

• New users (including users with a recently <u>created CME Group Login ID</u>) may be required to generate and provide a <u>temporary token</u> to the firm's admin manager.

To obtain a token, select My Profile > Generate New Token. The token is valid for seven days.



Before using application functions, Admin Managers and Application Admins must initially add individual application roles to themselves (example: FirmSoft) via User Administration process.

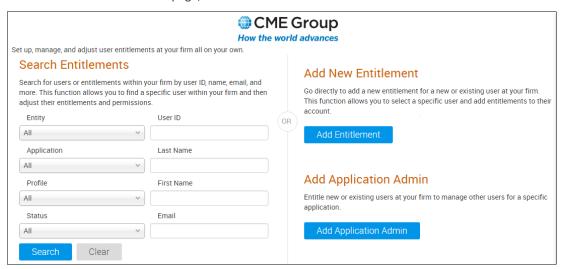
▶ т

To Add an Application User Entitlement:

1. From the CME Customer Center menu, select Administration > User Administration.



2. From the User Administration page, select **Add Entitlement**.



3. On the Add Entitlement page, select the **User**.

Filter the user list by entering the name or username (full / partial).

Note: To add the entitlement for multiple users, select + Add User, then select the User(s) and enter a Token (if applicable).

Add Entitlement
User

User

Token

User

User

User

Token

495670

*

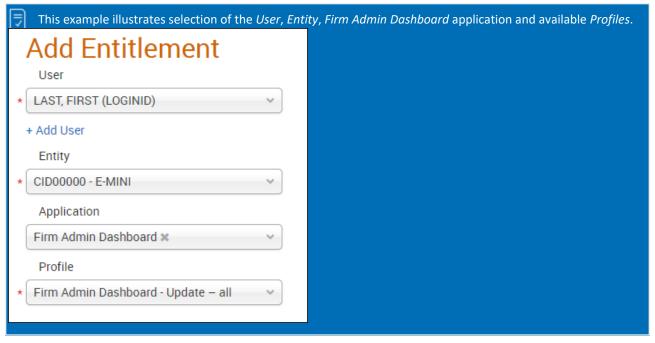
Add User

4. Select the Entity.

For users with entitlements to one firm, this is selected automatically.

5. Select an Application and Profile (assigned entitlement).

Based on the application and Profile selection, the page refreshes to show additional Entitlements and Scope fields.



6. Specify **Scope** details, if applicable.

The scope specifies application level configuration details, including additional permission and association with entities (e.g. clearing, trading firm, GFID) and exchanges.

To view a list of application entitlements, role permissions and scope details, refer to **EBS**, **BrokerTec** or **Futures & Options** Application Roles.

7. After specifying entitlement and scope details, select **Add Entitlement** and confirm by entering your CME Group Login **password**, then click **Submit**.

The user profile page and confirmation appears and an email is sent to the Admin Manager(s), Application Admin(s) and added user(s).

Note: Users are entitled for Applications, Exchanges, Entities and entitlements individually. To entitle a user for more than one Exchange and Entity or grant additional access (example: Adding Asset Management, then Settlement Firm entitlements), repeat the above procedures.

Managing User Entitlements

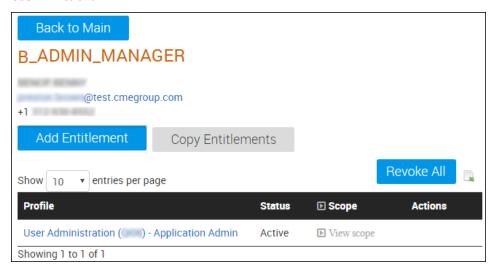
The following procedure describes the process to perform a search then modify scope or entitlements from the search results page.

To view and manage available application entitlements and front / middle / back office details, refer to <u>BrokerTec, EBS or</u> Futures & Options application roles



To manage entitlements:

- 1. From the Customer Center Administration menu, select User Administration.
- 2. On the main Search Entitlements page perform a search and select a User ID from the list.
- 3. Select a User ID (to perform additional actions), expand the Scope.
 - a. User ID Actions



- Add Entitlement
- Copy Entitlements: Copies entitlements from the selected user to a new user.



Prior to copying, the new user must have a valid CME Group Login, then select the User and Profile, which applies the selected user's entitlements for the new user.

Copy requests require approval by admin managers.

- Revoke All: Deletes all entitlements for the selected user.
- Export: Save user entitlement details in an Excel compatible file.
- **View Scope**: Individual entitlements can be deleted by expanding the **Scope** then clicking the **delete** (**x**) icon.
- Select Profile: View the user profile in a pop-up dialog

b. Scope Actions

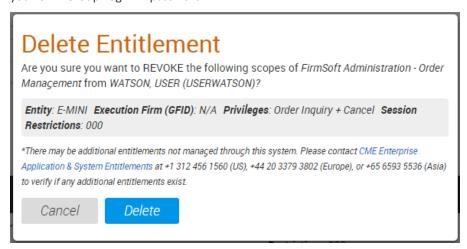
User ID 🔺	Last Name	First Name	Email	Status	Profile	▶ Scope
USER1	WATSON	USER	user@mail.com	Active	Request Center - EBS Drop Copy Full Access	■ Hide scope Entity: CID00001 - TEST 0

- · Status:
- Select Profile: View the user profile in a pop-up dialog
- **Delete**: **x** Individual entitlements can be deleted (**x**).
- Edit: Add/Edit assigned entity.
- Make Pending/Active: Temporarily deactivate the user's listed entitlement(s).

To reactivate pending users, select the **thumb up** (icon.

• **Revoke**: in: From the Actions column, select to remove an entitlement (including all Scope details). This requires confirmation of the deletion / revocation.

Requests may require confirmation and/or Admin Manager approval, including selection from a dialog and/or entering your CME Group Login ID password.



4. An email confirmation and update on the My Requests page may occur.

FirmSoft User Administration

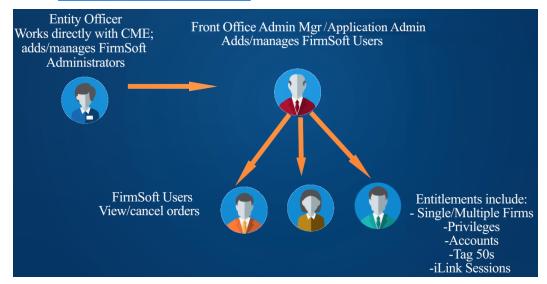
The CME Customer Center includes a self-service capability for Admin Managers (AM) / Application Admins (AA), at Registered Entities, to create and manage FirmSoft application user access, via the following roles:

Role / Entitlement	Description		Futures and Options	BrokerTec	EBS
Order Management – Order Inquiry Only	Users can view orders and order status, fill / aggreg	√	√	√	
Order Management - Order Inquiry plus Cancel	Users can view orders, order status and cancel an i group of orders, working orders and mass quotes.	1	✓	√	
GFE Privileged Trader	Execution Firm (GFID) N/A Privileges Order Inquiry Only	rs, all working orders re assigned access. an be further b, Accounts, Tag 50 cope ecution Firm (GFID)			

Assigning user entitlements and permissions begins with the Registered Entity's designated Entity Officer. The Entity Officer entitles their company's Front Office Admin Manager who adds and manages FirmSoft user entitlements.

AMs and AAs can use CME Customer Center - User Administration to add FirmSoft users, view user entitlements, make FirmSoft entitlements pending, and submit entity requests.

- Adding FirmSoft Users
- Viewing Application Users
- Managing FirmSoft Entitlements



Adding FirmSoft Users

The following procedures illustrate the process to access User Administration functions to assign / add FirmSoft application entitlements for a given user.

This video provides illustrated instructions on the administration process: FirmSoft Administration.

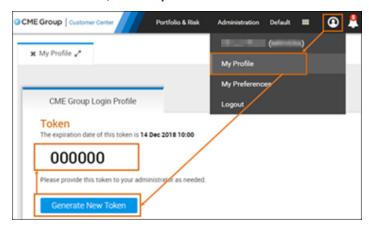


To Add a FirmSoft User:

Prior to adding a new user entitlement the user must:

- Have a valid <u>CME Group Login ID</u>.
 Existing users with an active CME Group Login ID can be assigned entitlements directly.
- New users (including users with a recently <u>created CME Group Login ID</u>) may be required to generate and provide a <u>temporary token</u> to the firm's admin manager.

To obtain a token, select My Profile > Generate New Token. The token is valid for seven days.



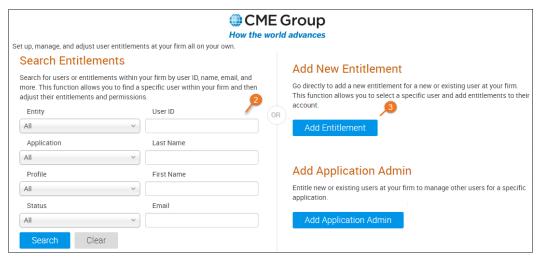
Before using application functions, Admin Managers and Application Admins must initially add individual application roles to themselves (example: FirmSoft) via User Administration process.

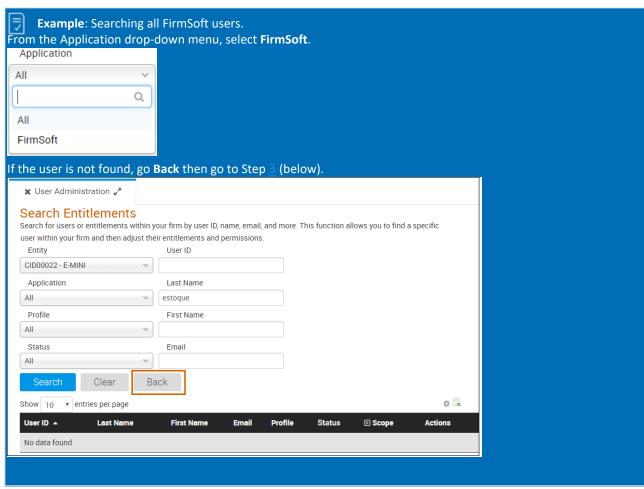
1. From the CME Customer Center menu, select Administration > User Administration.

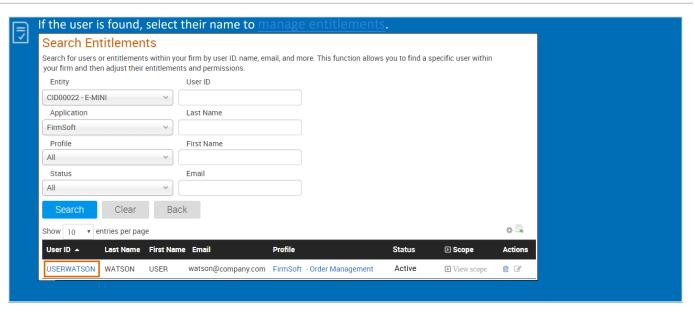


2. Before adding new entitlements, CME Group recommends searching existing users to ensure users don't already have permissions.

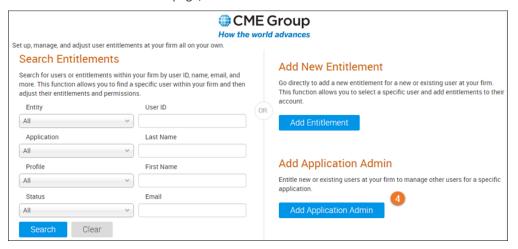
To add user entitlements, go to step 3.



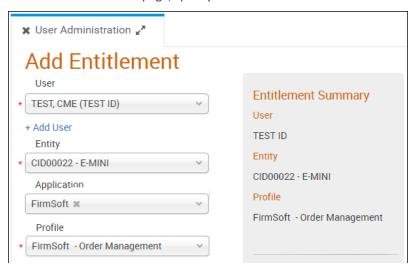




3. From the User Administration page, select Add Entitlement.



4. On the **Add Entitlement** page, specify the entitlements.



a. Select the User

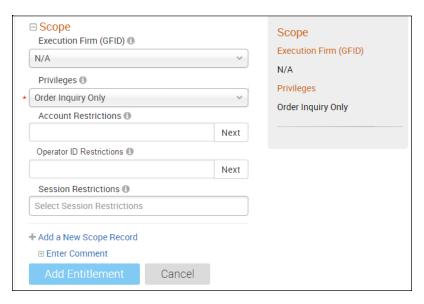
Filter the user list by entering the name or username (full / partial).

For new application users without existing entitlements, enter a token.



- b. **Entity**: Select the registered entity (automatically selected for users / administrators with permissions for only one entity).
- c. **Application**: FirmSoft
- d. Profile: FirmSoft Order Management

Scope: Additional application permission and associations (e.g. clearing, trading firm, GFID, exchange).



e. **Execution Firms**: From the drop-down menu, select **Globex Firm Identifier(s) (GFIDs)** the user is permitted to manage.

Selecting N/A grants access to all GFIDs, at the Registered Entity.

- f. **Privileges**: Allows the user to use FirmSoft or contact the GCC to make order inquiries and / or cancel orders. Futures & Options
 - Order Inquiry Only: Entitles the user to view orders and order status: order information, fill and aggregate fill information, cancellation history. for the specified execution firm, account, Operator ID, iLink session.
 - Order Inquiry plus Cancel: In addition to above, users can cancel an order, group of orders, working orders or mass quotes for the specified execution firm, account, Operator ID, iLink session.
 - BrokerTec / EBS
 - Order Management Order Inquiry Only: Users can view orders, order status, fill / aggregate fill details.
 - Order Management Order Inquiry + Cancel: Users can view orders, order status and cancel an individual order, group of orders, working orders and mass quotes.
 - **Privileged Trader** (BrokerTec only): Users assigned the BrokerTec *Global Front End (GFE) Privileged Trader* role can view and cancel individual / multiple orders, all working orders and mass quotes for a given GFID for which they are assigned access.

Using the Scope fields, permissions can be further restricted to the specified <u>iLink Order Entry</u> Sessions, Accounts, Tag 50 (Operator IDs).

g. **Account Restrictions**: Specify account(s) which the user is enabled to view / manage, then press **Enter** on the keyboard.

No entry (blank): The user may access all accounts available to the firm.

h. **Tag 50 / Operator ID Restrictions**: Specify Tag 50 / Operator ID(s) the user can view / manage, then press **Enter** on the keyboard.

No entry (blank) - The user may access all Globex Operator IDs available to the firm.



Note: Account / Operator ID Restrictions: Separate multiple entries with a comma

i. iLink Order Entry Session Restrictions: Select iLink Order Entry Session(s) the user can view / manage, then

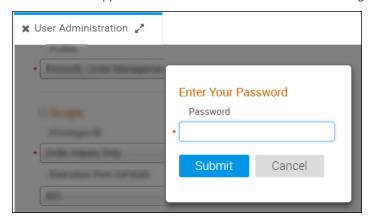
press Enter on the keyboard.

No entry (blank) - The user may access all iLink Session IDs available to the firm.

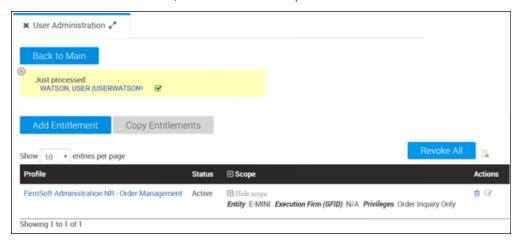
5. To complete entitlement assignment, select Add Entitlement.

For added security, enter your password, then select Submit.

A confirmation appears and an email is sent to the Admin Manager(s), Application Admin(s) and added user(s).

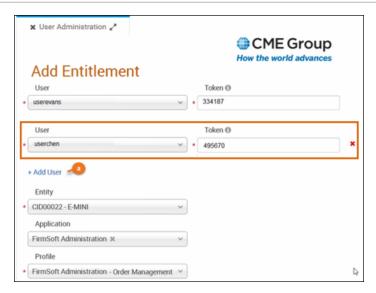


- The entitlement has been added successfully The user profile page appears with the updated profile and user entitlement. A confirmation email is sent to the Admin Managers, Application Admins and users.
- The entitlement requested already exists No new entitlement is added. Confirm whether the proposed entitlement information is correct, then resubmit with updates.

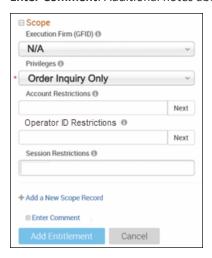


Additional options:

a. Add User: Assign the selected entitlements to additional users.



- Add New Scope Record: For the additional User(s), assign entitlements for the same Entity, Application and Profile.
- c. Enter Comment: Additional notes about the user entitlement.



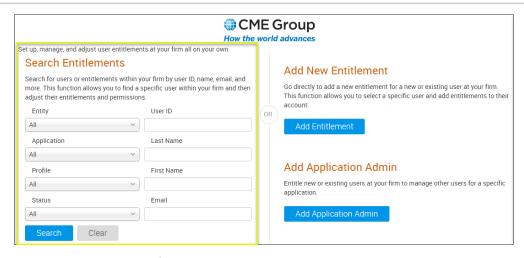
Viewing Application Users

Clearing firms can use the **Search Entitlements** function to view a list of application users and their assigned application entitlements.



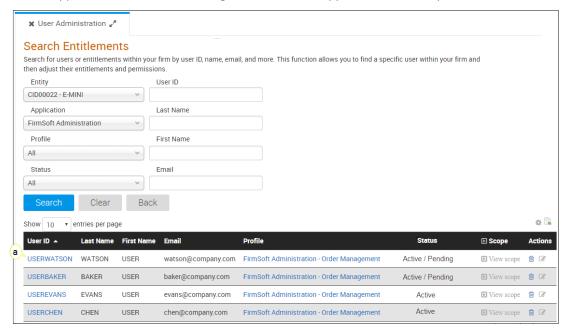
To view application users in the User Administration function:

1. From the User Administration page > Search Entitlements pane, select Entity: Clearing Firm Registered Entity.



- 2. Select Application: FirmSoft
- Select Profile: FirmSoft Administration Order Management Status is optional.
- 4. Click Search.

A list of application users and their assigned entitlements appears in the lower pane of the Search Entitlements page.



- To Add or Remove columns select Settings (\$\mathbb{Q}\$, above the user list)
- Status:
 - All: The default search for columns containing
 - Active: User profile(s) contains only active profiles
 - Pending; User profile(s) contains pending profiles to review and activate
 - Active / Pending: User has multiple profiles, including pending and active
- · To sort the list select column heading.
- The application user list can be exported as a spreadsheet by selecting the **spreadsheet** () icon.

The file is saved to the default browser download location.

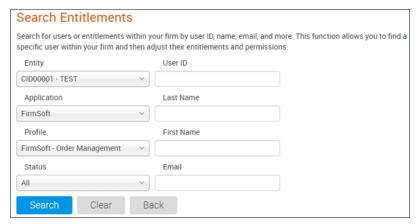
Managing FirmSoft Entitlements

From the User Administration function, authorized firm admins can manage user entitlements and FirmSoft application permissions, including entity, Execution Firm / GFID, permissions to view and / or cancel orders.



To manage FirmSoft Entitlements:

1. From the Search Entitlements page, search for a FirmSoft application user (by Entity, Application, Profile, User).



Authorized User IDs and assigned entitlements will appear in a list with options to manage the User Profile.

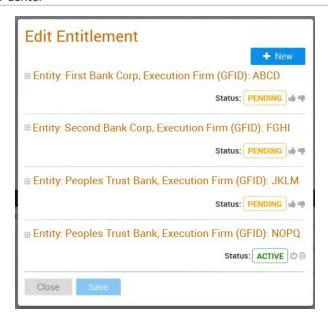
- 2. For a given **User ID**, select a User ID or expand the **Scope**to perform additional actions:
 - Select the linked **User ID**: View detailed application entitlements for the selected user.



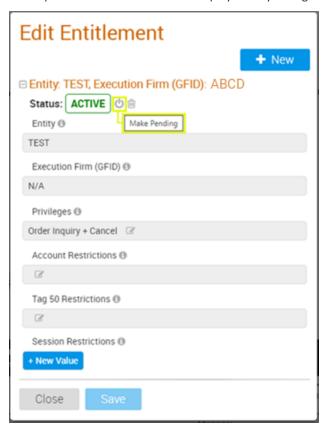
- View (Expand) Scope (
) to view detailed application entitlements and perform additional functions; delete (
), update (
), make pending (
), or revoke (
) entitlements.
 - Edit () to access the Edit Entitlements screen and manage a user's FirmSoft entitlements.



From the Edit Entitlement screen the status of individual entitlements are indicated (ACTIVE) / PENDING) with additional functions to manage entitlements:



The Expanded Entitlement screen displays entity configuration details.



• Create a new (• New) FirmSoft entitlement configuration for the selected user.

• Make Pending (()): Temporarily deactivate users' listed entitlement(s) and displays a pending con-



- Make Active () directly from the Edit Entitlement screen, which displays dialog confirmation the selection.
- **Delete** (iii) the selected entity configuration.
- Add a **Session Restriction** (* New Value), which enables entitlements for a specific Session ID
- Edit (): Enable additional Privileges, Account, Tag 50 / Order Entry Session access.
- Settings (): add / remove columns