

# **CME Globex iLink Session ID Policy and Operational Guidelines**

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## Introduction

This document replaces the previously published iLink Session ID Guidelines and provides operational, allocation and distribution information for iLink session IDs in the CME Globex production environment and applies to all CME Group Exchanges, unless specified otherwise.

Market participants should refer to the CME Globex Notices for the latest iLink session ID functionality and policy updates.

If you are not currently receiving the CME Globex Notices, please go to [www.cmegroup.com/subscribe](http://www.cmegroup.com/subscribe) to sign up to receive them.

## 1.0 iLink Session ID Overview

CME Globex iLink session IDs are used to:

- Access the electronic markets to enter, modify, and cancel orders;
- Receive order and fill confirmations;
- Support multiple traders and trading strategies;
- Establish and manage a bi-directional stream of ordered messages within a continuous sequence number series.
  - A successful client logon establishes a FIX connection and terminates it with the corresponding logout.
  - Clients can establish and terminate FIX connections multiple times throughout the week within a single FIX session.

An iLink session is defined by the following:

- SenderCompID (FIX tag 49), made up of:
  - Session ID (first three characters)
  - Globex Firm ID (second three characters)
  - Fault Tolerance Indicator (last character)
- Password (FIX tag 96)
- IP address(es)
- Port
- Market Segment ID (MSGW sessions)

## 1.1 iLink Session ID Types

There are currently two types of iLink session IDs customers may utilize for order entry:

- Market Segment Gateway (MSGW)
- Market segment-agnostic Convenience Gateway (CGW)
- MSGW iLink session IDs:
  - Establish separate TCP connections directly to each MSGW servicing a CME Group market segment (trading engine instance)
  - Are able to login to all 19 MSGW instances. To manage message sequence numbers, customers must leverage the combination of Session ID (the first 3 characters of tag 49-SenderCompID) and tag 1300-MarketSegmentID
    - **Customers are strongly encouraged to rely programmatically on tag 1300-MarketSegmentID in the Market Data Security Definition message to route orders to the correct MSGW**
  - MSGW iLink session ID roundtrip messaging is approximately up to 100 microseconds faster than CGW iLink session IDs.
- CGW iLink session IDs:
  - Establish a TCP connection to a single Convenience Gateway which routes orders to the appropriate matching engine via the MSGWs.

## 1.2 iLink Session IDs and Network Access

iLink session IDs can be used to connect via any of the following available connectivity options:

- CME GLink
- LNet
- Jackson Direct
- CME Globex Hubs
- Client INTERNETLink
- CME EConnect

For details on all available connectivity solutions, please see the [CME Group Production Network Connection Guide](#).

## 1.3 iLink Session ID Best Practices and Operational Guidelines

CME Group expects efficient and quality messaging at all times. Firms utilizing iLink session IDs are responsible for adhering to the following best practices and operational guidelines:

- 1 MSGW iLink session ID should be utilized to access all market segments which the market participant is trading.
  - **Market participants should NOT dedicate 1 MSGW iLink session ID for each individual market segment.**
- Sequence numbers should be reset to “1” prior to the beginning of the week logon
- Utilize [Network Time Protocol \(NTP\)](#)
- Download the [config.xml file](#) for the Production Environment available on the [CME Group ftp site](#) at the beginning of each week. The file contains the Source and Multicast IP addresses as well as the product and group codes for the production market data channels
- Strict adherence to the following:
  - [CME Globex Messaging Controls](#)
  - [CME Globex Messaging Efficiency Program](#)
  - [CME Globex Fault Tolerance](#)
  - [GCC Port Closure Policy](#)

## 1.4 iLink Session ID Certification Requirement

All [application systems](#) (tag 1603) utilized for iLink session ID order entry require mandatory certification. Separate certification test suites are available for the MSGW and CGW session architecture and customers are required to certify for the specific session architecture(s) they will be using for order entry.

Application systems utilized for MSGW iLink sessions will need to have completed both the iLink and MSGW certifications to be considered production ready and meeting minimum certification requirements.

CME Globex iLink session ID certification documentation is available [here](#).

## 1.5 Order Routing and Front-End Audit Trail Requirements

As announced in the [Market Regulation Advisory Notice RA1509-5](#), all firms must comply with the Order Routing and Front-End Audit Trail Requirements (Rule 536.B.). All new and currently certified iLink order routing applications must certify or recertify their trading systems to ensure full compliance with the audit trail requirements.

Detailed audit trail requirement information is available in the [Client Systems Wiki](#).

CME Group recommends all applications certifying to iLink and/or MSGW certify for the new audit trail requirements simultaneously.

Questions regarding the new Order Routing and Front-End Audit Trail requirements should be submitted to: [audittrail@cmegroup.com](mailto:audittrail@cmegroup.com).

## 1.6 iLink Session ID Route-Through Functionality

Market participants often request separate CME Globex Firm IDs (GFIDs) as a means to differentiate iLink session order flow originating from different business units or customers and/or targeted to clear with different clearing firms. Utilizing unique GFIDs creates flexibility around operational support, risk management and access administration.

CME Group Globex technical architecture allows a single CGW or MSGW iLink session to support order routing on behalf of multiple GFIDs via the assigned FIX port by modifying the Tag 49-SenderCompID in the iLink order entry Business messages. Any of the valid SenderCompIDs can be used to establish the FIX connection.

- iLink session route-through restrictions include:
  1. Customer-Side Server
    - For iLink CGW sessions, all orders must be routed through the same customer-side server as only one FIX connection can be active at any point in time.
    - For iLink MSGW sessions, all orders must be routed through the same customer-side server per market segment as only one FIX connection per segment can be active at any point in time. (Same or different servers can be used for each segment but only 1 connection per session/segment combination)
  2. Order Entry System
    - For iLink CGW sessions, all orders must route through the same application system.
    - For iLink MSGW sessions, all orders must route through the same application system for each segment (can be different across segments)
  3. The GFIDs needed must first be enabled for the iLink session within CME Group systems. This can be done via iLink Self-Service application or via request to your Global Account Manager.
  4. [Messaging Controls](#) apply to the FIX connection and will be shared with all route-throughs utilizing the session ID.
  5. iLink session IDs (CGW or MSGW) enabled for mass quoting do not support route-through functionality.
- GFID impacts in relation to the iLink session policy:
  1. When an iLink session is created, a primary GFID will be assigned. That iLink session will be included in the total iLink session count for the primary GFID
  2. Any secondary GFIDs added as route-throughs will not have the iLink session included in the secondary GFIDs total iLink session count
  3. Traded volume, used to calculate MIC, will be summed across all active SenderCompIDs associated with that session
  4. Traded volume, used to calculate ADV for iLink session allocation tiers, will be assigned to the GFID indicated in the SenderCompID responsible for the trade
  5. An iLink session must have a primary GFID assigned in order to interact with the CME Globex platform
- Benefits of route-throughs:
  1. Route-throughs allow for GFIDs from different clearing firms to utilize a single iLink session
  2. Route-throughs allow customers to add multiple GFIDs to a single iLink session
    - Reduces the need for multiple sessions
    - Reduces cost
    - Allows flexibility to send orders from different GFIDs down the same session
    - Utilize session capacity from one GFID to overcome capacity shortfall in another
  3. Risk management tools such as Cancel on Disconnect and Kill Switch are managed at the SenderCompID level, maintaining separation between all the route-through GFIDs
  4. Drop Copy groups can be configured to receive data for each SenderCompID independently or at the iLink session level.

Example:

Not Using Route-Throughs			
	Session ID	GFID	SenderCompID
	ABC	123	ABC123
	DEF	456	DEF456
	GHI	789	GHI789
<b>Total Session Count</b>	<b>3</b>		

  

Using Route-Throughs			
	Session ID	GFID	SenderCompID
	ABC	123	ABC123
	ABC	456	ABC456
	ABC	789	ABC789
<b>Total Session Count</b>	<b>1</b>		

Market participants interested in leveraging route-through functionality should contact their [Global Account Manager](#) with any questions or concerns in the U.S. at +1 312 634 8700, in Europe at +44 203 379 3754 or in Asia at +65 6593 5505 for additional information.

## 1.7 Saturday Testing

Customers that need to test their iLink Session IDs on Saturdays when CME Group systems are available should contact their [Global Account Manager](#) no later than Thursday, noon CT, preceding the Saturday test date. Please provide the following information:

- Date and Time of the test (CME Group supports Saturday testing between 8:00 am – 1:00 pm CT)
- Contact information for the tester(s), including cell phone number and email address
- List of iLink session IDs to be tested
- Name of application system(s) to be tested
- Scope of the testing or scenarios to be tested
- CME Globex site ID(s) that will be utilized in the testing

CME Group will make every effort to provide an agreeable testing window if it can be supported in the requested timeframe and within the scope of CME Group work scheduled for that Saturday.

## 1.8 Related Policies, Programs and Guidelines

All market participants should be aware of the following iLink session ID related policies, programs and guidelines:

- [Business Continuity Management](#)
- [GCC Inbound Contacts - Order Status & Cancellation Procedure](#)
- [GCC Targeted Messaging](#)
- [Globex Roles and Entitlements](#)

## 1.9 Risk Management Tools

CME Group offers Globex customers and clearing firms a wide variety of risk tools which include the following:

- [Cancel on Disconnect](#)
- [Credit Controls](#)
- [Drop Copy](#)
- [FirmSoft](#)
- [Kill Switch](#)
- [Risk Management Interface \(RMI\)](#)
- [Self-Match Prevention \(SMP\)](#)

## 1.10 iLink Architecture and Network Enhancements

CME Group introduced new iLink architecture in 2014 to reduce variability, harden the environment and enhance risk management capabilities. The new architecture includes the MSGW iLink gateway which is dedicated per market segment (i.e., all products on a matching engine instance).

The goals for the iLink architecture and network enhancements are:

- Extend CME Group's technology leadership with the first FPGA-based exchange order entry gateway to improve predictability and consistency, especially for order entry bursts;
- Extend First In, First Out (FIFO) message handling from the trading engine to the order entry gateway, eliminating the need to focus on performance variability across sessions;
- Harden risk management with advanced market controls including new inline, pre-trade credit controls aggregated down to the account and product level.

## 2.0 iLink Session ID Policy

### 2.1 iLink Session ID Policy Objectives

In conjunction with the launch of the MSGW architecture, CME Group introduced a new iLink Session ID policy with the following objectives:

- Provide an objective rationale for iLink session distribution which is easy to explain and administer;
- Incent more efficient use of both CGW & MSGW iLink session IDs;
- Effectively manage iLink session ID distribution in light of scaling limitations.

### 2.2 iLink Session ID Allocation

Only CME Globex customers and vendors who have successfully certified to iLink order entry and have registered [GCC Outbound Contacts](#) will be allocated CGW and/or MSGW iLink session IDs.

### 2.3 iLink Session ID Surcharges

In an effort to optimize CME Group resource allocation and defray unnecessary expense associated with inactive iLink session IDs, the following surcharges apply to both MSGW and CGW iLink session IDs. Please refer to the CME Globex Notices for further information and any updates to this policy.

iLink Session Port Activation Charge (PAC)	iLink Session Monthly Inactivity Charge (MIC)
A one-time surcharge for every new iLink session created (MSGW or CGW).	A monthly surcharge for each iLink session ID (MSGW or CGW) that fails to meet a minimum monthly volume threshold <ul style="list-style-type: none"><li>• MSGW: 1,000 sides per month</li><li>• CGW: 100 sides per month</li></ul>
<ul style="list-style-type: none"><li>• MSGW PAC (per iLink session ID) - \$250</li><li>• CGW PAC (per iLink session ID) - \$125</li></ul>	<ul style="list-style-type: none"><li>• MSGW MIC (per iLink session ID) - \$1,000</li><li>• CGW MIC (per iLink session ID) - \$100</li></ul>

In order to assist with the administration of the iLink Session Policy, Firm Administrator Dashboard (FADB) users have the ability to view volume figures applicable to iLink Session ID Policy administration as well as assigned MSGW tier allocations.

#### • Surcharge Terms and Conditions

- Any CGW or MSGW iLink session ID, unless stated otherwise, which has the ability to route orders to any of the following Exchanges will be held to all surcharge terms and conditions as noted in this document:
  - CME
  - CBOT
  - COMEX
  - NYMEX
- In instances where iLink session ID surcharges are not administered directly to the customer, the clearing firm of record shall be directly responsible for all associated iLink Session ID surcharges
- All PAC(s) and MIC(s) will appear on the applicable CME Globex firm or clearing firm's monthly billing statement.



- Clearing firm of record shall be free to establish and alter iLink session charges they apply to their customers for their service(s), provided that such prices do not misrepresent charges applied by CME Group in accordance with this Policy.
- PAC(s) will be assessed and applied immediately following the iLink session ID calendar date of creation and are non-refundable.
- MIC(s) will be applied as of the end of the first full calendar month following the iLink session ID date of creation if the iLink session does not meet the minimum monthly volume threshold.
- iLink session ID deletion requests submitted by the end of the calendar month will not be subject to the MIC.
- Market participants may request a waiver of the PAC when changing clearing relationships if the transfer of an existing GFID and associated iLink session IDs is not possible. **In order for this waiver to apply, all existing iLink session IDs associated with the prior clearing firm must be deleted.**
- There are currently no charges for port activation (PAC) and monthly inactivity (MIC) for CME Europe.

## 2.4 CGW iLink Session ID Trade-in

Existing customers who wish to adopt the MSGW access model have the opportunity to “trade-in” their existing CGW iLink session IDs for MSGW iLink session IDs and the PAC will be waived for one MSGW session for every two Convenience Gateway (CGW) sessions that are traded-in.

Traded-in CGW iLink session IDs will be kept active for 3 weeks from the trade-in date. After which, they will no longer be able to be utilized for order entry purposes.

## 2.5 MSGW iLink Session ID Distribution

**Please note that this section applies to MSGW iLink session IDs only. CGW iLink session IDs are not subject to the limitations outlined below.**

CME Group utilizes the following tiers to determine MSGW iLink session allocation and all firms will be subject to applicable PAC, MIC and Excess Capacity (ECC) surcharges:

Tier #	CME Globex Firm*** Average Daily Volume*	MSGW iLink Session ID Maximum Base Allowance	MSGW iLink Session ID Excess Capacity Allowance**	MSGW iLink Session ID Total Allowance
1	0-9,999	5	2	7
2	10,000-24,999	10	3	13
3	25,000-49,999	20	4	24
4	50,000-74,999	30	6	36
5	75,000-99,999	50	10	60
6	100,000-249,999	70	15	85
7	250,000-499,999	100	20	120
8	500,000-999,999	150	30	180
9	1,000,000	250	50	300
10	2,000,000	300	60	360
11	3,000,000	350	70	420

\*Measured in sides

\*\*Subject to monthly recurring charge regardless of usage

\*\*\*refer to 2.5.1 for CME Europe

- MSGW iLink session tier allocation measurements, assignments and changes are based on the following:
  - Measure CME Globex Firm average daily volume and adjust tier assignments on a quarterly basis.
  - The greater average daily volume of the last two quarters for a Globex Firm ID will be used to determine the iLink session Tier # and subsequent maximum MSGW iLink session allocation.
  - Market participants who experience fluctuations in their quarterly ADV and move down to a lower tier will have the choice to relinquish all of their MSGW iLink session IDs that exceed their new Maximum Base Allowance or

pay a \$500.00 Excess Capacity Charge for every MSGW iLink session which exceeds their Maximum Base Allowance.

- Any changes to the average daily volume tiers shown above will be announced via the CME Globex Notice prior to the start of the quarter in which the new tiers will apply.

## 2.5.1 MSGW iLink Session ID Distribution for CME Europe

Tier #	CME Globex Firm for CME Europe Average Daily Volume*	MSGW iLink Session ID Maximum Base Allowance	MSGW iLink Session ID Excess Capacity Allowance**	MSGW iLink Session ID Total Allowance
1	0-999	5	2	7
2	1,000-2,499	10	3	13
3	2,500-4,999	20	4	24
4	5,000-7,499	30	6	36
5	7,500-99,999	50	10	60
6	100,000-249,999	70	15	85
7	250,000-499,999	100	20	120
8	500,000-999,999	150	30	180
9	1,000,000	250	50	300
10	2,000,000	300	60	360
11	3,000,000	350	70	420

## 2.6 MSGW iLink Session ID Excess Capacity Allowance

CME Group realizes that some market participants may require additional MSGW iLink session IDs above the maximum base allowance available within their volume tier. As such, an excess capacity allowance has been created to accommodate these needs.

As noted in Section 2.5, each additional MSGW iLink session ID allocated to market participants above the maximum base allowance for the assigned tier will be subject to a \$500 monthly recurring Excess Capacity Charge (ECC) regardless of usage. Please note that these MSGW iLink sessions are still subject to both the PAC and MIC if minimum monthly volume requirements are not met.

## 2.7 CME Direct iLink Session IDs

iLink session IDs utilized to facilitate market access for CME Direct are configured by CME Group and are not subject to the requirements contained in this document. However, the volume attributed to CME Direct iLink session IDs is credited to the CME Globex Firm ID when calculating ADV for the purposes of tier assignment. CME Direct iLink session IDs do not count against the base or excess capacity session allowance described above.

## 2.8 Mass Quote Market Maker iLink Session IDs

iLink session IDs utilized for mass quote market making are subject to all CGW and MSGW pricing and volume requirements contained in this document.

Existing customers who wish to adopt the MSGW access model have the opportunity to trade-in their existing CGW mass quote enabled iLink session IDs for MSGW mass quote enabled iLink session IDs and the PAC will be waived for any MSGW mass quote enabled session for every Convenience Gateway (CGW) mass quote session ID that is traded-in.

## 3.0 Partner Exchanges

All Partner Exchange related iLink session ID inquiries should be directed to [Partner Services Management](#) in the U.S. at +1 312 634 8700, in Europe at +44 203 379 3754, or in Asia at +65 6593 5505.

Additional Partner Exchange information is available [here](#).

## 4.0 Contact Us

### [Global Account Management \(GAM\)](#)

United States: +1 312 634 8700

Europe: +44 20 3379 3754

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### Revision History

Version	Date	Author	Description
1.0	9/14/11	DT	Initial Release
1.1	3/13/11	blf	Updated Section 1.1.1 Operation and Administration of iLink Session IDs with new name of CME Globex iLink Session Guides.
2.0	12/30/14	LS	Renamed doc to CME Globex iLink Session ID Operational Guidelines and Pricing Policy
2.1	1/29/15	CR	Renamed document to CME Globex iLink Session ID Policy and Operational Guidelines
2.2	2/9/15	CR	Various edits
2.3	4/9/15	CR	Revised mass quote, Phase 1 iLink session allocation, MSGW tiers and fault Tolerance information.
2.4	8/17/15	CR	Added Policy Updates section, modified mass quote information and added PAC for MSGW session creation with no trade-in.
2.5	9/9/15	CR	Various edits noted in Policy Updates
2.6	2/16/16	CR	Various edits to sections 1.1, 1.2, 1.4, 2.3, 2.4, 2.5, 2.6 2.8 and 2.9. Added Revision History.
2.7	4/7/16	CR	Section 2.5 MSGW allocation increased from 30% to 50%.
2.8	5/19/16	CR	Section 2.3 iLink session ID Monthly Inactivity Charge (MIC) update. Section 2.4 iLink session ID trade-in update. Section 2.5 MSGW iLink session ID allocation increased from 50% to 100%.
2.9	6/13/16	CR	Revised language in Section 2.5.
3.0	9/8/16	CR	Removed Policy Updates. Revised Sections 2.3-2.5.
3.1	9/19/16	CR	Revised language in Section 1.6 originally authored by NB.
3.2	2/1/17	CR	Revised language in Section 2.3 to note clearing firm right to alter Session ID surcharges in accordance with CME Session ID Policy.
3.3	2/6/17	KD	Added Section 2.5.1 pertaining to CME Europe MSGW iLink session pricing and distribution.