CME iLink3 Migration Guide v1.3

August 29, 2024

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Change Log

v1.0 : 2024/08/02 — Initial Document Release

v1.1 : 2024/08/05 — iLink3 Overview section added

v1.2 : 2024/08/16 — iLink3 Overview, Pre-Registration Overview and Pre-Registration Details
     sections expanded and updated to improve clarity

v1.3 : 2024/08/29 — iLink3 Overview, Schedule sections updated

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Current and Future Status

iLink3 Now in Production

In 2019, TT deployed CME Market Segment Gateway (MSGW) iLink3 to production, introducing the first phase of support for CME iLink3. All TT CME MSGW customers completed their migration to iLink3 soon after that time.

In mid-July 2024, TT deployed CME Convenience Gateway (CGW) iLink3 to production, providing full and complete support for CME iLink3. This update enables all remaining TT CME iLink2 customers to complete their migrations to iLink3.

All TT CME Members and Customers still using iLink2 are strongly encouraged to initiate their migration to iLink3 at the earliest opportunity. For migration details please refer to the "iLink3 Convenience Gateway - User Guide" section of this document.

Next Version

The current production release versions of TT Market Segment Gateway and TT Convenience Gateway utilize the CME iLink3 "On Demand" order entry type, which requires all orders to be sent to the exchange using two messages: (1) a Party Roles Definition message and (2) an Order message. The next versions of TT CME iLink3 Gateway will continue to support "On Demand" order entry and will also support the CME iLink3 "Pre-Registration" order entry type, allowing orders to be submitted to the exchange using a single order message alone (please refer to the "Pre-Registration Overview" and "Pre-Registration Details" sections of this document).

Migration Completion

Phase 1: All customers should begin their migration to CME iLink 3.0 using the current "On Demand" Production Release as soon as possible. Upon completion, migration obligations to the exchange can be considered finalized, with no further steps required in the future.

Phase 2: Upon release of support on TT later this year, customers should take steps to enable "Pre-Registration" functionality in order to take advantage of the additional order throughput it provides. Steps to enable "Pre-Registration" will be provided in version 2.0 of this document.

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"On Demand" vs "Pre-Registration"

"Pre-Registration" offers significant advantages to customers. It is anticipated that "Pre-Registration" support on the TT CME Gateway will enable members to send approximately 75% more orders per second compared to what is possible with "On Demand."

Please note that these figures are estimates at this time, and final results may vary pending performance and reliability testing.

iLink2 Support on TT

Update: In anticipation of the seasonal change freezes beginning in December, and the potential penalties imposed by CME for not migrating to iLink 3.0 by the end of 2024, TT has established a deadline of November 15, 2024 for all clients to complete their migration to CME iLink 3.0 on the platform. Support for CME iLink 2.0 on TT will end after this date.

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Schedule

🔴 = Estimate / Tentative Date

	May	June	July	August	September	October	November
TT Internal Planning and Development	███████████						
Initial UAT Deployment CGW OnDemand Only		██████████████████████████████					
On Demand Conformance			██				
On Demand Production Release			██				
Impact Analysis / Migration Guide Updates				██ ██			
Pre-Registration Conformance					🔴		
Go-Live Planning Document					🔴		
Initial UAT Deployment of Pre-Registration Support						████🔴████	
Final, Pre-Prod UAT Deployment Including Pre-Reg for CGW and MSGW							████🔴████
Deadline for iLink 3.0 Migration. Last Day of iLink2.0 Support							██ November 15
TT Go Live for Pre-Registration							⭐🔴

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Steps for Migrating from iLink 2.0 to iLink 3.0

1. **Coordinate with CME**: To apply for an iLink3 Convenience Gateway (CGW) Session, please coordinate with CME.
    1. When applying for a new iLink3 Session, Members should specify the TT frontend name "TT CME iLink3 CGW."
2. **Create New Connections in Setup**: For each iLink Session, please create new Connections in Setup.
    1. Ensure you use a Session ID created by CME specifically for iLink3 (see #1 above).
    2. Set the Connection Type to the appropriate type for your Session ID:
        1. Convenience Gateway iLink3
        2. Convenience Gateway iLink3 - BMD *(for Bursa Malaysia Sessions)*
3. **Functionality Continuity**: All existing FIX Applications, FIX Sessions and configurations, Order Tag Defaults, etc., will continue to function without any changes required, as the functionality of TT CGW iLink3 is identical to TT MSGW iLink3.
4. **Throttle Limits**
    1. For On-Demand order entry on iLink3, TT recommends setting the Max Order Rate for iLink3 Connections to 250 transactions per second to ensure CME iLink session throttle limits are not exceeded.
    2. For Pre-Registration order entry, recommended Max Order Rate settings will be discussed in a future version of this document.
    3. This limit will apply to New Order Single and Change messages, but Cancel messages will not be throttled by TT.
    4. **Note**: Cancel messages are accounted for in the rolling transaction per second queue but will not be rejected by TT.

Important Points

1. **Setup - Connection Type**: Please note that changing an existing Connection to a different "Type" (e.g., from "Convenience Gateway" to "Convenience Gateway iLink3") is not supported. Although this operation is permitted by the Setup GUI, any Connection modified in this manner will fail to connect. Customers with existing connections to iLink2 must create new Connections for iLink3 to proceed with migration.
2. **Routing New Orders**: Any CME Member Firm ID with iLink Sessions connected to both TT CGW iLink2 and TT CGW iLink3, all new orders will automatically be routed by TT via iLink3, not iLink2.
3. **Managing Working Orders**: It is not possible to "carry over" working orders from an iLink2 Session to an iLink3 Session. Orders created using iLink2 will continue to work in the market and be filled on the iLink2 Session. Members must ensure that all iLink2 orders are completely filled or canceled before permanently shutting down iLink2 Sessions.
4. **Testing and Preparation**: Whether starting with new iLink3 Sessions or migrating existing Sessions from iLink2, we strongly advise all customers to conduct thorough testing in UAT. We recommend beginning UAT testing well in advance of live iLink3 trading in production. This is not for the purpose of testing TT software, but to ensure there are no unexpected complications or setbacks due to specialized circumstances unique to individual customers' workflows.

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CME Party Details Pre-Registration on the TT Platform
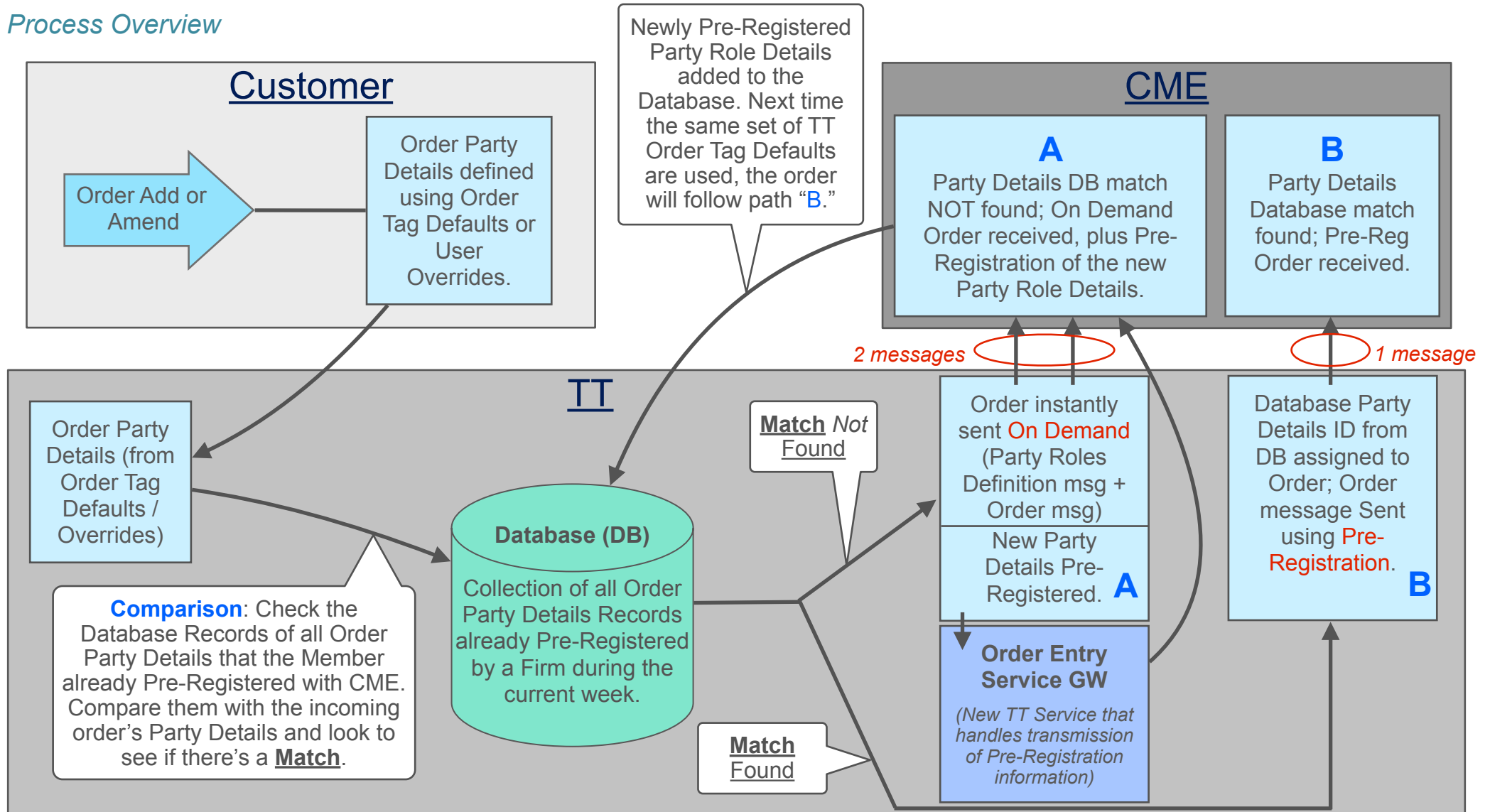
Fact Sheet

Mitigate CME Message Control limit restraints	Pre-Registration helps customers overcome exchange bandwidth limitations by drastically reducing the amount of data that gets encoded into each individual order message. Every On Demand order is required to be sent as two separate messages, a Party Roles Definition message and the Order message. By contrast, orders sent using Pre-Registration are sent using just a single Order message alone. For On-Demand order entry, TT recommends that customers set their Connection level Max Order Rate to 250 transactions per second. Recommendations for Pre-Registration Max Order Rate will be provided in version 2.0 of this document.
Manage Party List Details Automatically	On the TT Platform, the management of customers' pre-registration Party List Details / Administrative information is fully automatic, based entirely on order routing activity.

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CME Party Detail Pre-Registration on the TT Platform

Process Overview

Customer

Order Add or Amend

→ Order Party Details defined using Order Tag Defaults or User Overrides.

Newly Pre-Registered Party Role Details added to the Database. Next time the same set of TT Order Tag Defaults are used, the order will follow path "B."

CME

A
Party Details DB match NOT found; On Demand Order received, plus Pre-Registration of the new Party Role Details.

B
Party Details Database match found; Pre-Reg Order received.

2 messages   *1 message*

TT

Order Party Details (from Order Tag Defaults / Overrides)

Comparison: Check the Database Records of all Order Party Details that the Member already Pre-Registered with CME. Compare them with the incoming order's Party Details and look to see if there's a **Match**.

Database (DB)

Collection of all Order Party Details Records already Pre-Registered by a Firm during the current week.

Match *Not* **Found**

Match Found

Order instantly sent On Demand (Party Roles Definition msg + Order msg)

New Party Details Pre-Registered. **A**

Order Entry Service GW
(New TT Service that handles transmission of Pre-Registration information)

Database Party Details ID from DB assigned to Order; Order message Sent using Pre-Registration. **B**

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New Connection Type - Order Entry Service Gateway

To Support iLink3 Pre-Registration, TT will add a new Connection Types to Setup called "Order Entry Service Gateway (OESGW)."

1. **Purpose:** The new TTUS connection will be used exclusively for pre-registering a Firm's administrative data (Party Roles). Order Entry Service Gateway will not handle order messages.
2. **Usage:** Order Entry Service Gateway will establish a connection to the exchange to handle exchange pre-registration tasks.
3. **Configuration:** Each Firm that plans to use Pre-Registration will be required to setup and configure an OESGW Connection. The required number of OESGW connections will be one for each Firm ID**. This connection must login using the same iLink Session ID and password already in use on any other iLink3 Session that belongs to a Firm. Customers who have multiple iLink3 Sessions are free to choose any Session ID as there is no benefit or detriment to choosing one Session ID over another.
    1. iLink Session can be used simultaneously for both Order Management and Pre-Registration Management.
    2. There is no performance impact to orders on an iLink Session when the same Session ID is used simultaneously for both the Order Connection and the OESGW / Pre-Registration connection.

*** Subject to change pending the results of further analysis and testing.*

New Order Connector Process - "Database"

To Support iLink3 Pre-Registration, A new process is being added to TT CME Order Connector which is called "Database" in the Process Overview flowchart on the previous page. This is not a "Database" in the traditional sense of the word in that it is not a separate server running database hosting software. Rather, it is a process inside Order Connector that will store each Firm's Party Roles Definition records.

Functional Description of the Pre-Registration Process

When an order add or order amend is sent into the market using a unique combination of Order Tag Defaults/Overrides, that unique combination will be stored in a TT Pre-Registration Database along with a corresponding CME Party Details ID. Every subsequent order sent using the same combination of Order Tag Defaults/Overrides will be sent to the exchange using the CME Party Details ID instead of the full collection of Order Tags. This type of order is referred to as a Pre-Registration Order.

TT defines "unique" as any combination of Order Tag Defaults/Overrides that has not previously been used by any user in the Firm during the current week.

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Party List Details / Administrative information

The following Tags comprise the list of Party List Details / Administrative information fields. Every New Order Single or Replace that contains a unique combination of the following tags will result in a Pre-Registration event and creation of a Party Details ID.

1. Tag 1693 DetailRole=96 (take up firm)
2. Tag 1693 DetailRole=1000 (take up account)
3. Tag 1693 DetailRole=1 (executing firm)
4. Tag 1693 DetailRole=118 (operator)
5. Tag 1693 DetailRole=24 (customer account)
6. Tag 582 (CustOrderCapacity)
7. Tag 1816 (ClearingAccountType)
8. Tag 2362 (SelfMatchPreventionID)
9. Tag 8000 (SelfMatchPreventionInstruction)
10. Tag 1031 (CustOrdHandlInstruction)
11. Tag 1731 (AveragePriceGroupID)
12. Tag 819 (AveragePriceIndicator)
13. Tag 1598 (ClearingTradePrice)
14. Tag 9708 (CmtaGiveUpCD)
15. Tag 5149 (Memo)

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FAQ - Implementation and Deployment Details

1	*Can the Pre-Registration Functionality be disabled?*	Pre-Registration functionality will be used automatically whenever a Member / Firm has TT Order Entry Service GW configured in Setup. When TT Order Entry Service Gateway is not setup, all orders will be sent to the exchange as On Demand.
2	*Is any exchange-side planning and preparation required for using Pre-Registration?*	No. Members need to ensure that they have applied for and obtained iLink3 Session IDs. Once obtained, iLink3 Sessions can be used for either On Demand or Pre-Registration.
3	*Is using Pre-Registration Mandatory?*	No, but due to the superiority of Pre-Registration with regard to message handling and Mitigation of CME Message Control limits, it is in all customers' best interests to proceed with adoption of Pre-Registration as soon as it is available in Production.

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FAQ - Technical / Application Details

1	*Will TT Customers be required to create and maintain Pre-Registration Party Details with the exchange?*	No. TT Platform will manage all Party Details automatically on behalf of customers. Customers are not required to perform any creation or maintenance of Pre-Registration Information.
2	*When CME calculates the total number of messages sent during enforcement of Message Control restraints, are messages sent for Pre-Registration of Party Role Tags counted as part of the total?*	No. Only Order Messages and On-Demand-Order Party Roles Definition messages count against the total.
3	*Once created, are Pre-Registration Party Details stored forever?*	No. CME removes all Pre-Registration data from the exchange before the start of trading each week. TT follows the same convention to ensure data continuity with the exchange.
4	*According to the Functional Description of the Pre-Registration Process, Pre-Registration orders are sent to the exchange using the CME Party Details ID and the individual Order Tags are not included. Does this mean Execution Reports sent back to End Users will contain only a Party Details ID?*	No. Pre-Registration Execution Reports and On Demand Execution Reports will be have one difference and one difference only: Pre-Registration Execution Reports will have the Party Details ID added on as an extra field.

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