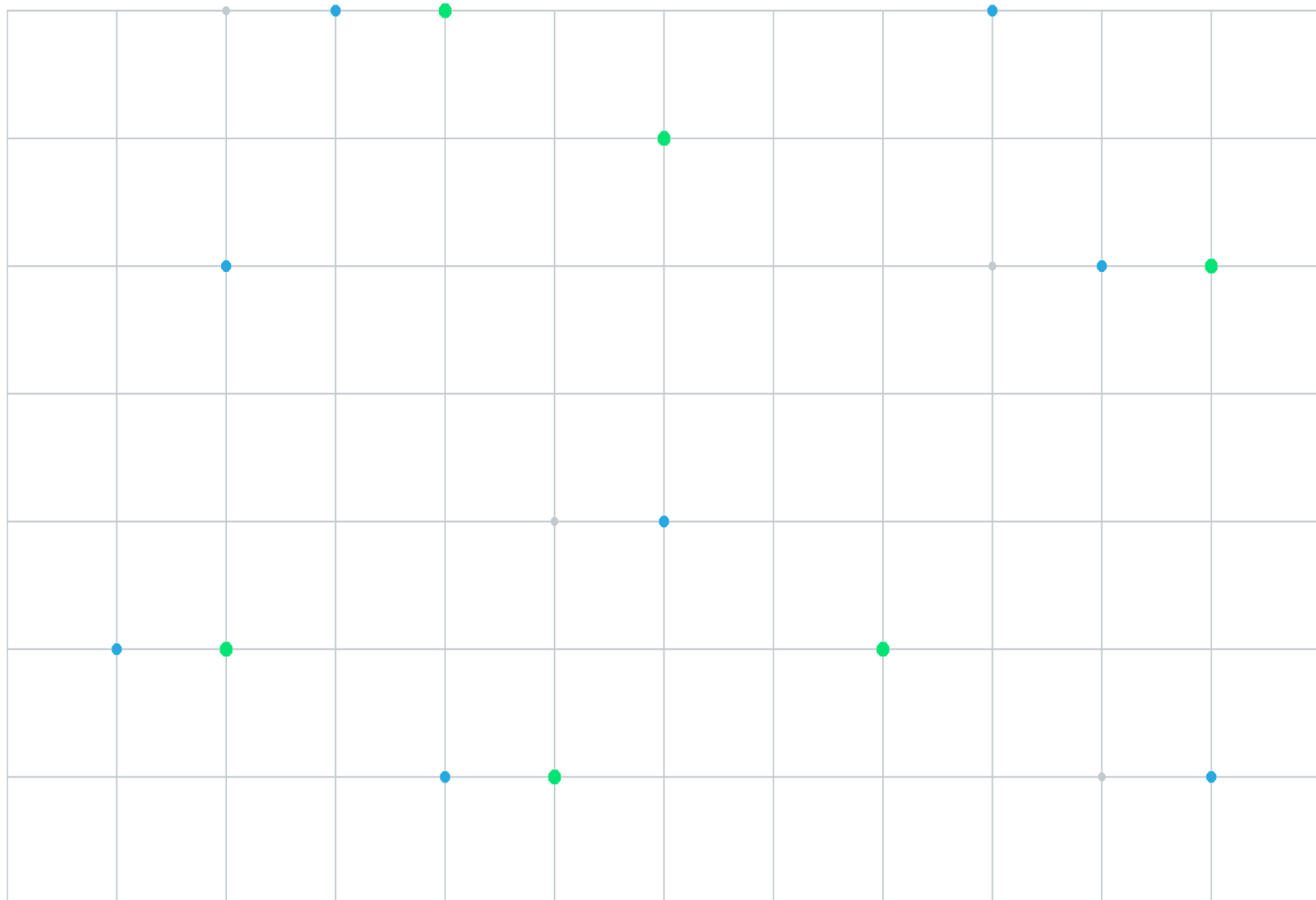CME Group

AutoCert+ Risk Management Interface (RMI) API
User Manual

20 October 2022

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Getting Started

The AutoCert+ tool is an automated testing tool for validating application functionality. It provides an easy-to-use web interface for walking through CME Group certification scenarios.

To facilitate the process of connecting a customer application to CME Globex, CME Group provides a dedicated certification environment to allow customers to test their systems before they complete certification.

The AutoCert+ Risk Management Interface (RMI) API tests focus on verifying that client systems can connect to the RMI API using session-based and session-less connectivity.

> **Note:** RMI API testing includes two sets of test cases. One is for client systems that support session-based connectivity, and the other applies to client systems that support session-less connectivity.

▷ **To run and navigate AutoCert+:**

1. Log into the automated certification tool.

2. Review general AutoCert+ test suite navigation and general interview information.

3. Complete the Interview for this test suite.

4. Complete applicable test cases.

5. Complete the certification process from the Post Certification tab.

What's New

The list below illustrates the updates made to the AutoCert+ Risk Management Interface (RMI) API Help system.

Date	Topic	Description
Oct 20, 2022	Format	Website and PDF format changes only.
April 16, 2014	All	Updated links and edited to meet Help standards.
July 20, 2012	All Order Mass Action Request Order Mass Action Request (Session-less)	Updated all existing content. Formatted according to new ACP Help system standards. Included new test cases.
February 2, 2012	All	Original draft.

RMI API Interview

The interview consists of a series of questions about your application. Based on your responses, certain tests are required and others are optional. You must complete the pre-certification interview before running the test cases.

To complete the interview, select **Yes** or **No** to the questions regarding whether or not your system supports Order Routing Permissioning, Product Reference Requests, Current Prevent Instructions Requests, and Cancel Instruction Requests.

In addition, you must determine if your system supports session-based or session-less RMI API connectivity.

> ⓘ **Note:** Session-based tests require a client system to perform Logon and Logout functions.

After answering the Interview questions, click the **Complete** button.

Tests 1-5

This section contains information on tests 1-5.

RMI API Session-Based Connectivity

1. Session-Based Connectivity

This test verifies that you can connect to the RMI API using session based connectivity, and that your system maintains the correct request number.

This test is mandatory if the interview response is:

- What types of connectivity does your system support: **Session-based RMI API connectivity**

▷ **To test session-based connectivity:**

Click **START TEST** to begin.

For the RMI API Session-Based Connectivity test, submit and receive the following messages:

1. Submit User Request - Logon

> ℹ **Note:** Submit the Logon message over the RMI API.

2. Receive User Request - Logon Confirmation

3. Submit Logout

4. Receive User Request - Logout Confirmation

RMI API Order Routing Permissioning

2. Order Routing Permissioning

This test verifies that clearing members (CMs) are able to route the entitlement definition request over the RMI API, and checks the capability of those CMs to block and unblock the order entry for a trading firm.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-based RMI API connectivity**
- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To test order routing permissioning:**

Click **START TEST** to begin.

For the RMI API Session-Based Connectivity test, submit and receive the following messages:

1. Submit User Request - Logon

> ⓘ **Note:** In the message, ensure SID is the same as the assigned SenderCompID.

2. Receive User Request - Logon Confirmation

3. Submit Party Entitlement Definition Request to prevent order entry

4. Receive Party Entitlement Definition Request Acknowledgement

5. Submit Party Entitlement Definition Request to allow order entry

6. Receive Party Entitlement Definition Request Acknowledgement

7. Submit Logout

8. Receive User Request - Logout Confirmation

3. Order Routing Permissioning (Session-less)

This test verifies that clearing members (CMs) are able to route the entitlement definition request over the RMI API, and checks the capability of those CMs to block and unblock the order entry for a trading firm.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-less RMI API connectivity**

- Does your system support order routing permissioning via the RMI API: **Yes**

Current Testing Configuration

Company Name: ⬛⬛⬛⬛⬛⬛

Tester: ⬛⬛⬛⬛⬛⬛

System Profile: RMI API - Automated Trading System 1.2

TestSuite: RMI API

SenderComp: ⬛⬛⬛⬛ UNASSIGN

Test Suite Status:

Pre-Certification Interview :	✓ Complete
Test Suite Status:	In Progress

RMI API Online Help

Interview | Test Suite | **Test Case** | Post Certification

Steps of the test: RMI API Order Routing Permissioning - Session Less

This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.

Purpose

The purpose of this test is to verify that the Clearing Members (CMs) are able to route the entitlement definition request over the RMI API. This test checks the capability of the CMs to block and unblock the order entry for a trading firm.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

	Description	Status
1	Over an RMI API connection, submit a Party Entitlement Definition Request to prevent order entry [Ensure SID in the message is same as the assigned SenderComp ID]	⚪
2	Receive and process the Party Entitlement Definition Request Acknowledgement	⚪
3	Submit a Party Entitlement Definition Request to allow order entry	⚪
4	Receive and process the Party Entitlement Definition Request Acknowledgement	⚪

Key: ⚪ not tested ● complete ⚪ pending ● failed

REFRESH

▷ **To test session-less order routing permissioning:**

Click **START TEST** to begin.
For the RMI API Session-Less Connectivity test, submit and receive the following messages:

1. Submit Party Entitlement Definition Request to prevent order entry

2. Receive Party Entitlement Definition Request Acknowledgement

3. Submit Party Entitlement Definition Request to allow order entry

4. Receive Party Entitlement Definition Request Acknowledgement

RMI API Product Reference Requests

4. Product Reference Requests

This test verifies that a client system can request the RMI API to get product references. These references can be made with respect to the following:

- All product groups
- CME product groups (products grouped by exchange)
- CME futures (product groups within the specific exchange by security type)

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-based RMI API connectivity**
- Does your system support order routing permissioning via the RMI API: **Yes**

Current Testing Configuration

Company Name:	[redacted]	Tester :	[redacted]
System Profile:	RMI API - Automated Trading System 1.2	TestSuite:	RMI API

Test Suite Status:

Pre-Certification Interview :	✓ Complete
Test Suite Status:	In Progress
RMI API Online Help	

SenderComp : [redacted] UNASSIGN

Interview | Test Suite | **Test Case** | Post Certification

Steps of the test: RMI API Product Reference Requests - Session Based

This test could take up to several minutes. Please do not close the window during the test. Closing window/stopping test requires to rerun the test from step1.

Purpose

The purpose of this test is to verify that the client system can request the RMI API to get the product references. The references can be made with respect to all product groups, product groups by exchange and product groups within the specific exchange by security type.

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.

START TEST

	Description	Status
1	Over an RMI API connection, submit a User Request - Logon message. [Ensure SID in the message is same as the assigned SenderComp ID]	⚪
2	Receive and process a User Response - Logon Confirmation message	⚪
3	Submit a Security List Request message for all product groups	⚪
4	Receive and process the Security List message	⚪
5	Submit a Security List Request message for CME product groups	⚪
6	Receive and process the Security List message	⚪
7	Submit a Security List Request message for CME futures	⚪
8	Receive and process the Security List message	⚪
9	Submit a Logout message	⚪
10	Receive and process a User Response - Logout Confirmation message	⚪

Key: ⚪ not tested 🟢 complete 🟡 pending 🔴 failed

▷ **To test product reference requests:**

Click **START TEST** to begin.

For the RMI API Session-Based Connectivity test, submit and receive the following messages:

1. Submit User Request - Logon

2. Receive User Request - Logon Confirmation

3. In steps 3-7, submit Security List Requests then receive corresponding Security List responses for all product groups, CME product groups, and CME futures, respectively.

4. Submit Logout

5. Receive User Request - Logout Confirmation

5. Product Reference Requests (Session-less)

This test verifies that a client system can request the RMI API to get product references. These references can be made with respect to the following:

- All product groups
- CME product groups (products grouped by exchange)
- CME futures (product groups within the specific exchange by security type)

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-based RMI API connectivity**
- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To test session-less product reference requests:**

Click **START TEST** to begin.

- In steps 1-6, submit Security List Requests then receive corresponding Security List responses for all product groups, CME product groups, and CME futures, respectively.

Tests 6-11

This section contains information on tests 6-11.

RMI API Current Prevent Instructions

6. Current Prevent Instructions

This test determines which customer accounts are currently blocked from trading.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-based RMI API connectivity**
- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To test current prevent instructions:**

Click START TEST to begin.

For the RMI API Session-Based Connectivity test, submit and receive the following messages:

1. Submit User Request - Logon

2. Receive User Request - Logon Confirmation

3. Submit Party Entitlement Definition Request to prevent order entry

4. Receive Party Entitlement Definition Request Acknowledgement

5. Submit Party Entitlement Definition Request to determine prevent instructions

6. Receive Party Entitlements Report

7. Submit Logout

8. Receive User Request - Logout Confirmation

7. Current Prevent Instructions (Session-less)

This test determines which customer accounts are currently blocked from trading.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-less RMI API connectivity**

- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To test session-less current prevent instructions:**

Click **START TEST** to begin.

For the RMI API Session-Less Connectivity test, submit and receive the following messages:

1. Submit Party Entitlement Definition Request

2. Receive Party Entitlement Definition Request Acknowledgement

3. Submit Party Entitlement Definition Request to determine prevent instructions

4. Receive Party Entitlements Report

RMI API Rejection Scenario

8. Rejection Scenario

This test verifies that for instances when a client system does not send messages in proper format, the API generates a business reject message. In addition, the test verifies that a client system can process the business reject message.

This test is mandatory if the interview response is:

- What types of connectivity does your system support: **Session-less RMI API connectivity**

▷ **To run a rejection scenario test:**

Click **START TEST** to begin.

For the RMI API Session-Based Connectivity test, receive and submit the following messages:

1. Submit User Request - Logon

2. Receive User Request - Logon Confirmation

3. Submit Party Entitlement Definition Request to prevent order entry

4. Receive Business Message Reject

5. Submit Party Entitlement Definition Request to prevent order entry

6. Receive Party Entitlements Definition Request Acknowledgement

7. Submit Logout

8. Receive User Request - Logout Confirmation

9. Rejection Scenario (Session-less)

This test verifies that for instances when a client system does not send messages in proper format, the API generates a business reject message. In addition, the test verifies that a client system can process the business reject message.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-less RMI API connectivity**

▷ **To run a session-less rejection scenario test:**

Click **START TEST** to begin.

For the RMI API Session-Less Connectivity test, receive and submit the following messages:

1. Submit Party Entitlement Definition Request to prevent order entry

2. Receive Business Message Reject

3. Submit Party Entitlement Definition Request to prevent order entry

4. Receive Party Entitlements Definition Request Acknowledgement

RMI API Order Mass Action Request

10. Order Mass Action Request

This test verifies that a client system allows a Clearing Member Firm (CMF) to submit instructions to cancel working orders, including Good Till Cancel and Good Till Date order types at the Execution Firm, Account and Exchange levels.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-based RMI API connectivity**

- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To run an order mass action request test:**

Click **START TEST** to begin.
For the RMI API Session-Based Connectivity test, submit and receive the following messages:

1. Submit User Request - Logon

2. Receive User Request - Logon Confirmation

3. Submit Order Mass Action Request

4. Receive Order Mass Action Report

5. Submit Logout

6. Receive User Request - Logout Confirmation

11. Order Mass Action Request (Session-less)

This test verifies that a client system allows a Clearing Member Firm (CMF) to submit instructions to cancel working orders, including Good Till Cancel and Good Till Date order types at the Execution Firm, Account and Exchange levels.

This test is mandatory if the interview responses are:

- What types of connectivity does your system support: **Session-less RMI API connectivity**

- Does your system support order routing permissioning via the RMI API: **Yes**

▷ **To run a sesssion-less order mass action request test:**

Click **START TEST** to begin.

For the RMI API Session-Less Connectivity test, submit and receive the following messages:

1. Submit Order Mass Action Request

2. Receive Order Mass Action Report