

Certification Environments Overview

Certification Environment
New Release Environment
AutoCert+

Version: 1.8

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1. Testing Environments Overview

CME Group offers two testing environments, Certification and New Release. These testing environments are designed to improve the customer development and testing experience.

CME AutoCert, the automated certification tool, is being phased out and replaced by AutoCert+, a more flexible and scalable tool. The CME AutoCert tool will be phased out in 2009.

1.1 Reference Documentation

Refer to the following web page for information pertaining to the Certification and New Release environments: www.cmegroup.com/certsdk

1.2 Customer Testing Environments

Certification Environment

The Certification environment mirrors production functionality at all times. Customers can use the Certification environment to perform:

- Certification testing for CME Globex core functionality
- Maintenance testing
- Development testing for new customer system features (e.g. GUI) or functionality in production-like conditions
- Performance testing with production-level data feeds.

New Release Environment

The New Release environment is where new CME Globex products and releases are available for the customer to test prior to release in production. New functionalities will normally be released in the New Release environment 6 to 8 weeks prior to their release in production. New products will generally be available in New Release two weeks before production launch. Customers can use the New Release environment to perform:

- New product testing
- Development testing on new CME Globex functionalities
- Certification testing on new CME Globex functionalities
- Performance testing in future production state with production-level data feeds.

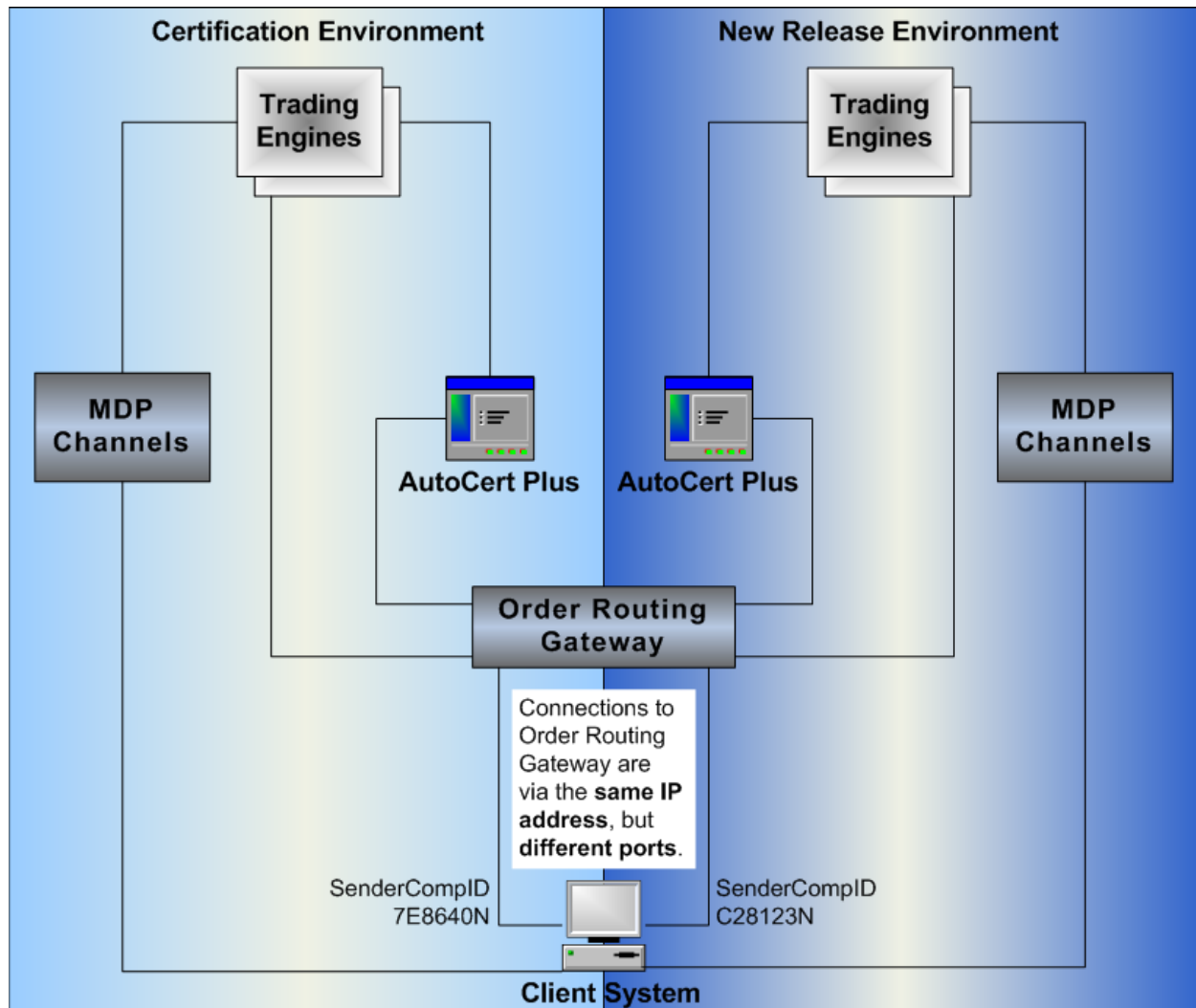
Testing Environments

Both environments are **similar in size and scale to the production environment**. Customers are therefore able to submit order entry messages and receive market data at production rate levels.

In addition, both environments support **straight-through processing (STP) from CME Globex through CME Clearing testing environments**. In fact, both environments are connected to their own clearing testing environments. This allows customers, who have clearing setup in the production environment, to perform end-to-end testing by submitting and executing orders from their front-end systems and receiving the corresponding clearing trade reports on their back-end systems in conditions similar to production.

Features of the testing environments are explained and shown in the diagram below:

- Connection to both environments is through the Order Routing Gateway using the same IP address via different ports.
- Distinguishing which environment you are connected to is simplified by the ID format structure.



Market Data

Each environment has its own set of Market Data Platform multicast channels. Channel information for both environments are available on the CME Group FTP site as described in the FIX/FAST SDK at www.cmegroup.com/fixfastsdk.

1.3 Environments Schedules

Both Certification and New Release are available 12:00 pm CT Monday - 4:00 pm CT Friday, except for the daily maintenance window 4:30 pm - 5:30 pm CT Monday - Thursday. Maintenance windows are a specified period of time during which an environment is unavailable in order to allow CME Group staff to launch and test new releases, and perform maintenance operations.

CME Group broadcasts market data on all FIX/FAST Market Data Platform channels at 1/8th production speed to enable customer market data testing. The market data is broadcast throughout the week except for a daily window 2:30 pm - 6:30 pm CT.

Performance Testing Sessions

Performance testing sessions are offered in each environment to allow customers to test their applications in conditions as close as possible to production. These performance testing sessions consist of replaying a 2-hour window of peak volume, real-time production level trading data across all products (including all MDP channels) supported on CME Globex. This allows customers to send order entry messages and interact with the replayed data/messages.

Note: Due to bandwidth limitations, VPN (Virtual Private Network) connections should not connect during performance testing because of the risk of interruptions. Customers are strongly advised to use higher bandwidth network connectivity options, as detailed in [CME Group Connectivity Options](#).

The client must enable Performance Testing via the AutoCert+ GUI (graphical user interface) in order to have Performance Testing capability (greater than 10 TPS and up to 70 TPS). Refer to the AutoCert+ GUI for additional information.

Weekly Performance Testing Windows

- Certification environment – 7:00am to 9:00am CT on Thursday.
- New Release environment – 7:00am to 9:00am CT on Friday.

1.4 Network Options

The increased rate and bandwidth usage of market data makes VPN connections a less effective network connectivity solution for testing in production-like conditions.

CME Group is working on providing customers with connectivity solutions in addition to VPN to connect to the certification environments. Pricing is generally the same as in production for all network solutions. Clients will be notified as more network options become available. Some of these solutions include:

- VPN
- BT Radianz
- Ethernet MAN.

Please refer to the [Network Connection Guide](#) for all information related to network connectivity solutions.

1.5 AutoCert+

CME AutoCert, the automated certification tool, is being phased out and replaced by AutoCert+. The AutoCert+ tool requires a VPN to connect to a user-friendly web interface and guides customers through the entire certification process. AutoCert+ is flexible and scalable, allowing customers to simultaneously test order entry and market data messages, and to receive instantaneous test results with an explanation for failed tests. Finally, AutoCert+ has extensive online documentation, such as an access guide, detailed test script descriptions and online help.

Certification tests are being migrated to AutoCert+ throughout 2007. All certification suites related to new releases are added exclusively to AutoCert+. During the migration when CME AutoCert and AutoCert+ exist simultaneously, customers may need to use both tools for their certification testing. (Both CME AutoCert and AutoCert+ can be accessed via the same VPN connection).

Functional/Certification Testing has a limit of 10 TPS (transactions per second) whereas Performance Testing allows up to 70 TPS. In order to operate in the Performance Testing mode (or anything greater than 10 TPS), the client must enable Performance Testing via an 'Enable' button on the AutoCert+ GUI. If Performance Testing is not enabled and testing exceeds 10 TPS, the client is logged out and an email is sent to the tester.

Additional AutoCert+ access and online help information is available in the [AutoCert+ Access Guide](#).

1.6 Getting Started in the Testing Environments

In order to connect and test in the testing environments complete the following tasks:

1. Request and configure your new network connection by contacting your CME Globex Account Manager.
 - a. You are invited to discuss other network options with your CME Globex Account Manager.
 - b. This network connection allows you to perform functional testing on both environments and also to access AutoCert+.

Note: The AutoCert+ tool requires a VPN connection for certification testing.

2. Request new iLink IDs for each environment.
 - a. You can choose the firm IDs that you are using in production to perform front-end to back-end system testing.
 - Third-party system providers can provide and set up temporary IDs to perform functional testing.
 - b. The iLink IDs used for connecting to the testing environments are the same as those used for certifying on AutoCert+.
 - c. The Session IDs indicate which environment you are connected to. If the ID is alpha-numeric-numeric (i.e. C28), you are connected to New Release environment. If the ID is numeric-alpha-numeric (i.e. 7E8), you are connected to Certification environment.
3. Download the config.xml file from the CME Group FTP site for configuration information for the applicable environment.

1.7 Additional Information

CME Globex testing environments at www.cmegroup.com/certsdk is a dedicated web site where you can find all information, forms and supporting documentation regarding testing and certification.

1.7.1 Contact Information

For technical development questions, please contact CSET Development support group at 312-930-2322 or csetgroup@cmegroup.com.

Quote Vendors may contact Market Data Operations at 312-648-3653.

For all other inquiries, please contact your CME Globex Account Manager at 312-634-8700 (in Europe at +44 20 7796 7100 or in Asia at +852-3101.7696) or globexaccountmanagement@cmegroup.com.

Revision History

Initial Release	Version	Last Update	Author	Description
2/16/07	1.0	N/A	LM	Initial Release
2/16/07	1.1	5/9//07	LM	Added note to section 1.1. Updated network option availability dates. Added links to CME Globex Market Data Platform New Release Certification Channel Definitions.
2/16/07	1.2	6/04/07	PM	Updated with minor editorial changes.
2/16/07	1.3	6/22/07	LM	Renamed Client DIRECTLink to Client CERTLink.
2/16/07	1.4	10/4/07	LM	Updated the following sections: Performance Testing Sessions, New Certification Environments Overview, Performance Testing Sessions, Network Options, and Project Timelines. Updated CME Group branding.
2/16/07	1.5	8/21/08	JG	Updated links and CME Group branding
2/16/07	1.6	2/28/09	CR	Updated Weekly Maintenance Window
2/28/09	1.7	4/15/09	ZC	Made revisions to bring content up to date.
4/15/09	1.8	5/26/09	ZC	Removed Client CERTLink references.