

# Margin Service API

The Margin Service API is designed to give all market participants direct access to CME Clearing initial margin engines for portfolios. It allows users to pass through portfolios of all CME Cleared products for initial margin and incremental margin calculation and provides features such as Interest Rate Portfolio Margin savings and margin estimation.

Use this search bar to search topics within the Margin Service API.

This information is intended to provide a complete overview of the Margin Service API for development purposes. To discuss certification testing and the licensing process, please see [Onboarding and Verification](#).

[Contact us](#) for any onboarding or production support.

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## Features

The Margin Service API supports the following features:

- Portfolio maintenance
- Margin calculation
- Optimize calculation
- Incremental margin
- Analytics (portfolio margining)
- Margin estimation and full revaluation for OTC Interest rate swaps
- [Margin Service API ALL-IN-ONE call](#)
- [What-If Analysis](#)
- Futures Compression (requires separate license)

The Margin Service has 6 main endpoints: Analytics, Margin, Optimize, Portfolio, Transactions, and All-in-One. Each endpoint supports the standard GET, POST, PUT, and DELETE HTTP functions.

## Margin Service API Versions and Latest Schema

Margin Service API supports concurrent versions. An XML schema is provided for validation of XML requests and responses supported by the API.



For best results, use **right click + Save As** to download each file.

Version/Schema	Download Link	Additional API Features	NR Release Date	Production Release Date
1.0	<a href="#">Download 1.0</a>	Original Version	Original	Original
1.1	<a href="#">Download 1.1</a>	<a href="#">All-In-One Call</a>	Nov 17, 2013	Nov 17, 2013
1.2	<a href="#">Download 1.2</a>	<a href="#">What-If Analysis</a>	Dec 4, 2013	Jan 20, 2014
1.3	<a href="#">Download 1.3</a>	Swaptions-specific reporting	Mar 2, 2016	Apr 11, 2016
1.4	<a href="#">Download 1.4</a>	Real-time Margin over API Margin Matrix over API	July 6, 2016	July 18, 2016
1.5	<a href="#">Download 1.5</a>	Futures Compression (no margin functionality)	August 14, 2018	August 24, 2018
1.6*	<a href="#">Download 1.6</a>	Optimizer over API	November 27, 2019	December 14, 2019

\*Latest Version

Minor (.X) API versions are backward compatible. We ask that all users update to the latest version of the Margin API schema at their earliest convenience.

For all POST/PUT calls, the core schema version is auto-detected based on the xmlns specified in the root element of the request; the response will be returned in the same schema version.

For all GET/DELETE calls, the API will return the latest schema unless the version is specified as a request parameter in the URL (e.g. /MarginServiceApi/1.1/portfolios/\${marginPortfolio}).

**Best Practice** is to specify the version on every request: (e.g. /MarginServiceApi/1.1/portfolios/\${marginPortfolio})

**The New Endpoints for the Schema 1.3 are:**

**Transactions**

/MarginServiceApi/1.3/transactions

**Margin**

/MarginServiceApi/1.3/margins

**Poll Margin**

/MarginServiceApi/1.3/margins/{post margin response id}

**The New Endpoints for the Schema 1.4 are:**

**Margin Matrix:**

/MarginServiceApi/1.4/analytics/margin-matrix/us-swaptions-buy

/MarginServiceApi/1.4/analytics/margin-matrix/us-swaptions-sell

/MarginServiceApi/1.4/analytics/margin-matrix/us-swaptions-straddle

/MarginServiceApi/1.4/analytics/margin-matrix/us-vanilla

/MarginServiceApi/1.4/analytics/margin-matrix/us-ois

**Real-time Margin:**

/MarginServiceApi/1.4/Analytics/RealTimeMargin

**The New Endpoints for the Schema 1.6 are:**

**Post Optimize**

/MarginServiceApi/1.6/optimize

**Get Optimize**

/MarginServiceApi/1.6/optimize/{post optimize response id}

**Notes:**

The default if no schema is provided is always 1.2

Schema 1.0, 1.1, 1.2 are supported

Schema 1.3 is required for Swaptions

Schema 1.4 is required for Real-time Margin and Margin Matrix over API

Schema 1.5 is required for Futures Compression

Schema 1.6 is required for Optimizer over API

Best practice is to call the API using latest which returns the latest schema.

Example:

/MarginServiceApi/latest/margins/id

## Technology

### REST

The Margin Service API is built upon [Representation State Transfer \(REST\)](#) web service technology. In this methodology HTTP URLs and methods (such as GET, POST, etc.), parameters, and statuses are used to model the remote procedure call behavior.

The API utilizes a custom XML language for requests and responses, which can contain contents in [various formats](#), including industry standard XML formats such as FpML and FIXML. Schemas have been provided for validating the various [request and response](#) XMLs which are possible in the API.

- View [sample messages and error messages](#)
- See [Wikipedia](#) for a full discussion of REST technology

### Asynchronous vs. Synchronous Requests

For requests which are expected to be executed quickly, the API will return the results of the request in the action (synchronously). For some requests (such as margin calculation) which may take longer to process, an asynchronous model is provided. After submitting the request, the service will return an identifier which can be used to query for the results of the operation with subsequent requests. It is then up to the client to poll the server for completion of the request

### Contact

For more information and questions please contact the [support team](#).