

PROGRESS[®]

APAMA[®] CAPITAL MARKETS

FOUNDATION

The Progress[®] Apama[®] Capital Markets Foundation (CMF) enables both business users and IT to dramatically accelerate the development of a variety of capital markets solutions. By exploiting the CMF's configurable components as building blocks, users can access common capital markets tasks involving complex technical logic in a simple way, enabling you to focus your resources on the unique business logic of your applications. The CMF provides application components in four areas: Market Data, Analytics, Order Management and Infrastructure.

CMF MARKET DATA

> Market Data Architecture	APIs and Smart Blocks for Trade, Quote, BBA, Market Depth and Order Book market data
	Scalable multi-context market data event distributor
	Common adapter library to accelerate development of new market data connections
	Pricing framework: for building tiered price spreading/skewing modules
	Market data aggregator service
	FX spot/forward price conversion service
> Market Data Services	Market Data Bridges – share market data between contexts/Correlators
	Configurable Tick and Depth UI models
	Depth and Tick publishing utilities
	Usability utilities for consuming market data
> Trade Services	A service to monitor order updates to extract trade information

CMF ANALYTICS

> Position Services	Closed Position service (sums all trades for a given slice)
	Open Position service (maximum long and short position exposures)
	Reserved Position service (sums buy and sell reservations made on behalf of traders/algorithms)
> Analytic library integration	QuantLib (option pricing, implied parameters, premiums and Greeks)
	Statistics (windowed aggregators backed by QuantLib)
	Matlab
> Standard math library	Trigonometric and other math functions (supplementary to the core Apama platform)

CMF ORDER MANAGEMENT

> Order Management bridging service—share orders between parallel contexts/Correlators		
> Exchange Matching Engine		
> Historic data inference engine (Feed the matching engine with historic data)		
> Order Book Management (used in Matching Engine, also used for dark pools, crossing pools, etc.)		
> Order Book visualisation utilities		
> Smart Order Routing service		
> Order Management Utilities	Order management Publisher (used to submit orders)	
	Order management receiver (used in adapters and matching engines)	
	Order management monitor (snoop order flow between publishers and receivers)	
> Order Firewall	Pre-submission validation of new, amend, cancel order instructions	
	UI models for objections and warnings	
	Reusable framework for creating plug and play rules	
	UI model for firewall rules (parameters and outputs)	
	Current Firewall Rules (all configurable per slice (trader, symbol, etc.))	Order Throttle Limit
		Price Limit
		Quantity Limit [absolute or change]
		Value Limit (price x quantity) [absolute or change]
		Position Limit (limits the sum of open, closed and reserved on a given slice)
		Client credit checking, with conversion of Net Open Position (NOP) to a base currency
Reservation Enforcers (ensures that orders made against reservations comply with the reservation, contract)		

CMF INFRASTRUCTURE

> Utilities for publishing data to Apama dashboards	
> Configurable hierarchical logging infrastructure	
> Persistent hierarchical configuration service for CMF components	
> Latency measurement framework	
> Tools for controlling application flow	
> User session service	
> Status utilities	Adapter connection monitor
	Multi Correlator connection monitoring
	Status information bridging between parallel contexts/Correlators
	Status publishing utilities

PROGRESS SOFTWARE

Progress Software Corporation (NASDAQ: PRGS) is a global software company that enables enterprises to be operationally responsive to changing conditions and customer interactions as they occur. Our goal is to enable our customers to capitalize on new opportunities, drive greater efficiencies, and reduce risk. Progress offers a comprehensive portfolio of best-in-class infrastructure software spanning event-driven visibility and real-time response, open integration, data access and integration, and application development and management—all supporting on-premises and SaaS/cloud deployments. Progress maximizes the benefits of operational responsiveness while minimizing IT complexity and total cost of ownership.

WORLDWIDE HEADQUARTERS

Progress Software Corporation, 14 Oak Park, Bedford, MA 01730 USA
Tel: +1 781 280-4000 Fax: +1 781 280-4095 On the Web at: www.progress.com

Find us on [f facebook.com/progresssw](https://www.facebook.com/progresssw) [t twitter.com/progresssw](https://twitter.com/progresssw) [y youtube.com/progresssw](https://www.youtube.com/progresssw)

For regional international office locations and contact information, please refer to the Web page below:
www.progress.com/worldwide

Progress, Apama and Business Making Progress are trademarks or registered trademarks of Progress Software Corporation or one of its affiliates or subsidiaries in the U.S. and other countries. Any other marks contained herein may be trademarks of their respective owners. Specifications subject to change without notice.

© 2011 Progress Software Corporation and/or its subsidiaries or affiliates. All rights reserved.
Rev. 06/11 | 6525-128080

