



Nasdaq Calypso

Bloomberg Server API Integration Guide

Version 11.8.0

Revision 36.0
March 2025
Approved

Copyright © 2025, Nasdaq, Inc. All rights reserved.

All content in this document is owned, or licensed, by Nasdaq, Inc. or its affiliates ('Nasdaq'). Unauthorized use is prohibited without written permission of Nasdaq.


While reasonable efforts have been made to ensure that the contents of this document are accurate, the document is provided strictly "as is", and no warranties of accuracy are given concerning the contents of the information contained in this document, including any warranty that the document will be kept up to date. Nasdaq reserves the right to change details in this document without notice. To the extent permitted by law no liability (including liability to any person by reason of negligence) will be accepted by Nasdaq or its employees for any direct or indirect loss or damage caused by omissions from or inaccuracies in this document.

Document History

Revision	Published	Summary of Changes
1.0	March 2014	First edition for version Core Calypso Version 14 Suite.
2.0	October 2014	Second edition – Updates for version 14.1 of Core Calypso.
3.0	May 2015	Third edition - Updates for version 1.4.0 - Version 14.3 of Core Calypso.
4.0	September 2015	Fourth edition – Added release notes information.
5.0	January 2017	Fifth edition – Updates for version 1.4.1 - Version 14.3 of Core Calypso. Updates for versions 6.0.2, 6.0.3 – Version 15.0 of Core Calypso. Added information about Entitlement Server.
6.0	January 2018	Sixth edition – Updates for version 1.3.8 – Version 14.2 and under of Core Calypso. Updates for versions 6.0.4 – Version 15.0 of Core Calypso. Updates for version 7.0.0 and 7.0.1 – Version 15.1 and above of Core Calypso.
7.0	April 2018	Seventh edition – Updates for version 8.0.1 – Version 16.0 of Core Calypso.
8.0	October 2018	Eighth edition – Updates for version 7.0.2 – Version 15.2 maintenance of Core Calypso.
9.0	November 2018	Ninth edition - Updates for version 9.0.0 - Version 16.1 of Core Calypso.
10.0	March 2019	Tenth edition – Updates for version 7.0.3.
11.0	May 2019	Eleventh edition – Updates for version 9.0.1.
12.0	May 2019	Twelfth edition – Updates for version 7.0.4.
13.0	July 2019	Thirteenth edition – Updates for version 7.0.5.
14.0	August 2019	Fourteenth edition – Updates for version 9.0.2.

Revision	Published	Summary of Changes
15.0	August 2019	Fifteenth edition – Updates for version 7.0.6.
16.0	March 2020	Sixteenth edition – Updates for version 7.0.7.
17.0	April 2020	Seventeenth edition – Updates for version 9.0.3.
18.0	February 2021	Eighteenth edition – Updates for version 7.0.8.
19.0	August 2021	Nineteenth edition – Updates for version 9.1.1.
20.0	October 2021	Edition 20 – Updated for version 9.1.2.
21.0	February 2022	Edition 21 – Updates for version 10.0.0, 10.1.0 – Technical release only – Version 17.0 compatibility.
22.0	September 2022	Edition 22 – Added “MainEntry.Startup” domain usage.
23.0	October 2022	Edition 23 – Updates for version 10.2.0, 10.3.0 – Technical release only
24.0	June 2023	Edition 24 – Updates for version 10.4.0
25.0	January 2024	Edition 25 – Updates for version 11.1.0, 10.4.1, 11.1.2 – Technical release only – Version 18 compatibility
26.0	February 2024	Edition 26 – Updates for version 11.1.3, 10.4.2
27.0	March 2024	Edition 27 – Updates for version 11.1.4
28.0	May 2024	Updates for version 10.4.3
29.0	June 2024	Updates for version 10.5.0
30.0	July 2024	Updates for version 11.3.0
31.0	August 2024	Updates for version 10.6.0 – <i>Technical release only</i>
32.0	October 2024	Updates for version 10.7.0, 11.3.1
33.0	December 2024	Updates for version 11.6.0
34.0	January 2025	Updates for version 11.7.0, 10.8.1
35.0	February 2023	Updates for version 10.9.0
36.0	March 2025	Updates for version 11.8.0

This document describes the configuration required to integrate the Bloomberg Server-API with Calypso to receive streaming market data from Bloomberg.

 **NOTE:** The Calypso License to use this Calypso Integration Module does not include a license for any third-party data services to which this module can interface. Clients are responsible for contracting with the appropriate third-party data service(s) prior to using this Calypso Integration Module.


 **IMPORTANT NOTE:** For Cloud deployments please contact your application management team as the deployment procedure for Cap Cloud is different.

Table of Contents

Release Notes.....	7
1.1 Version 1.3.0 (May 2013)	7
1.2 Version 1.3.1 (June 2014).....	7
1.3 Version 1.3.2 (July 2014)	8
1.4 Version 1.3.3 (September 2014)	8
1.5 Version 1.3.4 (October 2014)	8
1.6 Version 1.3.5 (November 2014)	8
1.7 Version 1.3.6 (March 2015).....	8
1.8 Version 1.3.8 (January 2016).....	8
1.9 Version 1.4.0 (May 2015)	9
1.10 Version 1.4.1 (Nov 2016)	9
1.11 Version 6.0.2 (June 2016).....	9
1.12 Version 6.0.3 (June 2016)	9
1.13 Version 6.0.4 (December 2017).....	9
1.14 Version 7.0.0 (December 2017).....	10
1.15 Version 7.0.1 (January 2018)	10
1.16 Version 7.0.2 (October 2018)	10
1.17 Version 7.0.3 (March 2019)	10
1.18 Version 7.0.4 (May 2019).....	10
1.19 Version 7.0.5 (July 2019)	11
1.20 Version 7.0.6 (August 2019)	11
1.21 Version 7.0.7 (March 2020)	11
1.22 Version 7.0.8 (February 2021)	11
1.23 Version 8.0.1 (April 2018).....	11
1.24 Version 9.0.0 (November 2018)	12
1.25 Version 9.0.1 (May 2019)	12
1.26 Version 9.0.2 (August 2019)	12
1.27 Version 9.0.3 (April 2020).....	13
1.28 Version 9.1.1 (August 2021)	13
1.29 Version 9.1.2 (October 2021).....	15
1.30 Version 10.4.0 (June 2023)	15

1.31	Version 10.4.1 (January 2024).....	16
1.32	Version 10.4.2 (February 2024).....	16
1.33	Version 10.4.3 (May 2024)	17
1.34	Version 10.5.0 (June 2024)	17
1.35	Version 10.7.0 (October 2024)	17
1.36	Version 10.8.1 (January 2025).....	18
1.37	Version 10.9.0 (February 2025).....	19
1.38	Version 11.1.3 (February 2024).....	19
1.39	Version 11.1.4 (May 2024)	19
1.40	Version 11.3.0 (July 2024)	20
1.41	Version 11.3.1 (October 2024)	21
1.42	Version 11.4.0 (July 2024)	21
1.43	Version 11.6.0 (December 2024).....	22
1.44	Version 11.7.0 (January 2025).....	22
1.45	Version 11.8.0 (March 2025).....	223

Bloomberg SAPI Installation..... 24

2.1	Installation	24
2.2	EMRS Setup.....	25

Calypso Setup Requirements 27

3.1	Domain Values.....	27
3.2	Feed Configuration	27
3.2.1	Bloomberg SAPI.....	27
3.2.2	Bloomberg B-Pipe.....	28
3.3	Feed Addresses	29
3.4	Zero Footprint B-Pipe Setup	31
3.5	User Configuration.....	32
3.6	Data Entitlement	34
3.6.1	“EntitlementCheckFeed” Domain	34
3.6.2	Entitlement Server.....	34

Subscribing to Quotes 35

4.1	Market Data Server Setup	35
4.2	Saving Real-time Quotes	36

Release Notes

1.1 Version 1.3.0 (May 2013)

BSAPI-51: Bloomberg Managed-BPipe should use application and user context when checking entitlements.

Application and user context will be used instead of only user context when checking entitlements for Managed-BPipe in user mode.

BSAPI-55 (HD 88108): Add Age-Out parameter to Bloomberg Feed to allow unrestricted access to previous day data by Bloomberg users.

Added AgeOutDays parameter. See below for details.

BSAPI-61 (HD 94878): Enable AutoRestartOnDisconnect for BloombergSAPI connections.

Added support for Auto Restart On Disconnection.

BSAPI-64 (HD 95776): BloombergSAPI engine in BPIPE mode supports only one feed – You cannot launch 2 engines.

1.2 Version 1.3.1 (June 2014)

BSAPI-71 (HD 94330): Market data server does not listen to changes/additions of feed address mappings.

Implementation of the new FeedHandler's abstract method: `feedAddressChanged(FeedAddress newFeedAddress, FeedAddress oldFeedAddress)`.

If the `oldFeedAddress` is null, it means that a new feed address mapping is created and `XXXFeedHandler` should add new feed address to cache.

If the `oldFeedAddress` is not null, it means that a feed address mapping is modified, and `XXXFeedHandler` should unsubscribe for the quote from the old address, remove old feed address from cache and add new one to cache.

Subscription for quote with the new address is handled by calling the `subscribe` method.

BSAPI-87 (HD 100425): Bloomberg EIDs are not being populated.

The EID field is now explicitly requested.

BSAPI-92 (HD 100100): B-PIPE authentication is not working properly for remote users and Citrix users.

Added "Bloomberg EMRS ID" parameter which should be used instead of "Bloomberg UUID" with "Bloomberg IP" for Citrix users. See below for details.

BSAPI-95 (HD 101214 / HD 115644): SAVE_QUOTE scheduled task process BPIPE auth failures on occasion.

Added `ResponseTimeout` parameter to control maximum time to wait for Bloomberg response.

BSAPI-105 (HD 102311): Main Entry `OutOfMemoryError` due to blocked `BloombergSAPIHostname` IP Address.

BSAPI-110: Failover enhancement.

For the BloombergSAPI Feed Type, the MarketDataServiceName parameter has been added. If this value is not set, it will default to //blp/mktdata, otherwise it will pick up the value set on the Feed window and the BloombergSAPI feed and will try to connect to the specified Market Data Service.

BSAPI-116 (HD 94330): Market data server does not listen to changes/additions of feed address mappings multiplication coefficient.

BSAPI-118: Update service API to use CalypsoServiceException instead of RemoteException.

1.3 Version 1.3.2 (July 2014)

This release fixes a badly named jar file calypso-bloomberg-sapi-service.

1.4 Version 1.3.3 (September 2014)

BSAPI-127 (HD 107035): Fix entitlement check issue for user in server mode. Token needs to be obtained for each user when doing entitlement checks.

BSAPI-138 (HD 112690): Provide functionality to set NumStartAttempts on session options.

Added parameter LogonCheckInterval. See below for details.

1.5 Version 1.3.4 (October 2014)

BSAPI-152 (HD 115674): BPIPE - Unable to configure multiple BPIPE servers to enable Bloomberg failover.

Added support to configure multiple BPIPE servers to enable Bloomberg failover.

1.6 Version 1.3.5 (November 2014)

BSAPI-157 (HD 115647): Wrong quote date for BPIPE feed.

1.7 Version 1.3.6 (March 2015)

BSAPI-162 (HD 119936): Enabling EntitlementCheckFeed domain with BloombergSAPI results in blank quotes in FX rate reset window.

1.8 Version 1.3.8 (January 2016)

BSAPI-177 (HD 125646): RMI Registry fields on Config window are no longer needed.

Removed Authorization Server Name and Port because they are not needed in JBoss.

BSAPI-187 (HD 131539 / 144145 / 153896): Scheduled task SAVE_QUOTES completes with error when 2 quotes have same feed address.

1.9 Version 1.4.0 (May 2015)

BSAPI-177 (HD 125646): RMI Registry fields on Config window are no longer needed.

Removed Authorization Server Name and Port because they are not needed in JBoss.

BSAPI-169: Move entitlement check of bloomberg-sapi out from Engine server to a new Entitlement server.

In version 14.3 and 14.4, the Entitlement server is deployed in the Risk server and the entitlement services are automatically triggered.

1.10 Version 1.4.1 (Nov 2016)

BSAPI-188 (HD 131539 / 144145 / 153896): Scheduled task SAVE_QUOTES completes with error when 2 quotes have same feed address.

BSAPI-195 (HD 129610): Improve logging for Single Point of Failure BloombergSAPI host.

Added session connection messages to provide details about where you are connecting to.

1.11 Version 6.0.2 (June 2016)

BSAPI-169: Move entitlement check of bloomberg-sapi out from Engine server to a new Entitlement server.

In version 15.0 and up, the Entitlement server is deployed in its own WAR.

BSAPI-189 (HD 131539 / 144145): Scheduled task SAVE_QUOTES completes with error when 2 quotes have same feed address.

BSAPI-196 (HD 129610): Improve logging for Single Point of Failure BloombergSAPI host.

Added session connection messages to provide details about where you are connecting to.

BSAPI-207: Remove CacheLimit dependency.

1.12 Version 6.0.3 (June 2016)

BSAPI-213: Reintroduce CacheLimit dependency.

1.13 Version 6.0.4 (December 2017)

BSAPI-220 (HD 156457): Bloomberg feed for new feed address mapping starts updating only after the Market Data Server is restarted.

When a feed address is added, the Bloomberg feed now subscribes to the corresponding quote.

1.14 Version 7.0.0 (December 2017)

BSAPI-204: Move schema files to `bin/dbscripts/core`.

The schema files have been moved from `bin/dbscripts` to `bin/dbscripts/core`.

1.15 Version 7.0.1 (January 2018)

BSAPI-218 (HD 155147): BloombergSAPI error when receiving subscribed data.

1.16 Version 7.0.2 (October 2018)

BSAPI-224 (HD 156457): Bloomberg feed for new feed address mapping starts updating in MDS following restart.

BSAPI-244 (HD 170555): `DuplicateCorrelationIDException` is thrown by Entitlement Server.

1.17 Version 7.0.3 (March 2019)

BSAPI-255 (HD 175401): `SAVE_QUOTES` scheduled task throws error for matured bonds.

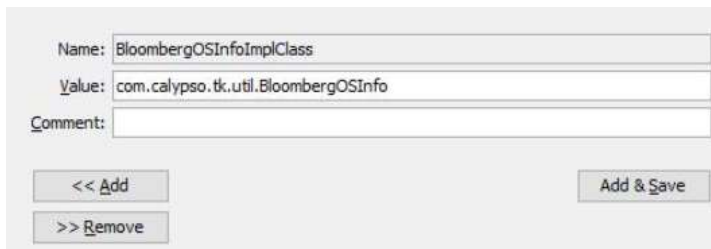
1.18 Version 7.0.4 (May 2019)

BSAPI-263 (HD 174961, HD 186895): BPS users cannot connect to Bloomberg SAPI from RDS machine.

We have enhanced SAPI connection while using EMRS ID. Now the IP address of the host (where Bloomberg terminal is running) will be fetched dynamically from the session that is established. If the "Bloomberg IP" is provided, then this takes precedence.

You need to implement the interface `com.calypso.tk.util.BloombergOSInfoProviderI`, and provide your dynamic IP by implementing the method `getIPAddress()`.

You also need to specify this implementation class with its fully qualified name in the `BloombergOSInfoImplClass` domain.



The screenshot shows a configuration form with the following fields and buttons:

- Name:** `BloombergOSInfoImplClass`
- Value:** `com.calypso.tk.util.BloombergOSInfo`
- Comment:** (empty text box)
- Buttons:**
 - `<< Add`
 - `Add & Save`
 - `>> Remove`

1.19 Version 7.0.5 (July 2019)

BSAPI-279 (HD 179177): Unable to get correct quote date via B-Pipe.

BSAPI-286 (HD 173158): AgeOutDays parameter doesn't work in Bloomberg SAPI.

1.20 Version 7.0.6 (August 2019)

BSAPI-286 (HD 173158): AgeOutDays parameter doesn't work in Bloomberg SAPI - Additional fix.

To allow entitlement to pass, user mode is now the default behavior when nothing is specified in the 'Bloomberg User Mode' property.

BSAPI-296 (HD 182645): Bloomberg entitlement failure because of dynamic system IP.

Added support to accept the 'Bloomberg IP' user attribute with a host name and resolve the IP dynamically.

► See [User Configuration](#) for details.

1.21 Version 7.0.7 (March 2020)

Component	HelpDesk	Issue	Type	Description
BBERG SAPI 7.0.7	191904 193131 193369	BSAPI-313	Issue	Issue – Bloomberg real-time Market Data Server stops working.
BBERG SAPI 7.0.7	186895 191563	BSAPI-317	Issue	Issue – Bloomberg config with dynamic IP in user default doesn't affect Pricing Sheet/trade window. Fix – We now bypass the Navigator's UserDefaults for the custom hook.

1.22 Version 7.0.8 (February 2021)

Component	HelpDesk	Issue	Type	Description
BBERG SAPI 7.0.8		BSAPI-335	Enh	Issue – Add support for Zero Footprint B-PIPE. ► See Zero Footprint B-Pipe Setup for details.

1.23 Version 8.0.1 (April 2018)

BSAPI-181: Add support for Zero Footprint B-PIPE.

► See [Zero Footprint B-Pipe Setup](#) for details.

1.24 Version 9.0.0 (November 2018)

BSAPI-235: Add support for Zero Footprint B-PIPE.

► See [Zero Footprint B-Pipe Setup](#) for details.

1.25 Version 9.0.1 (May 2019)

BSAPI-257 (HD 175401): SAVE_QUOTES scheduled task throws error for matured bonds.

BSAPI-269 (HD 178111): Proxy support in Zero Footprint B-PIPE.

We have added support to provide multiple host names with port numbers in the "BloombergSAPIHostName" parameter.

► See [Feed Configuration](#) for details.

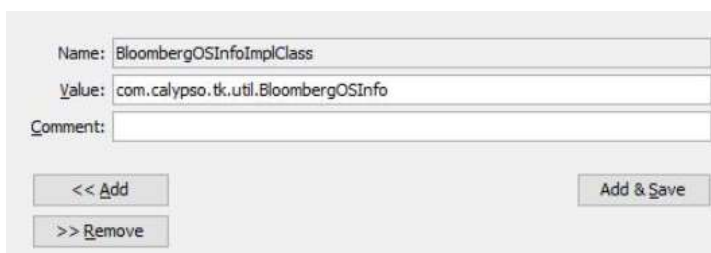
1.26 Version 9.0.2 (August 2019)

BSAPI-261 (HD 174961, HD 186895): BPS users cannot connect to Bloomberg SAPI from RDS machine.

We have enhanced SAPI connection while using EMRS ID. Now the IP address of the host (where Bloomberg terminal is running) will be fetched dynamically from the session that is established. If the "Bloomberg IP" is provided then this takes precedence.

You need to implement the interface `com.calypso.tk.util.BloombergOSInfoProviderI`, and provide your dynamic IP by implementing the method `getIPAddress()`.

You also need to specify this implementation class with its fully qualified name in the `BloombergOSInfoImplClass` domain.




BSAPI-278 (HD 179177): Unable to get correct quote date via B-Pipe.

1.27 Version 9.0.3 (April 2020)

Component	HelpDesk	Issue	Type	Description
BBERG SAPI 9.0.3	173158	BSAPI-288	Issue	Issue – AgeOutDays parameter doesn't work in Bloomberg SAPI. Fix – After 1 day has passed, users do not need to be registered in EMRS or have a Bloomberg id - any user will have access to quotes.
BBERG SAPI 9.0.3	182645	BSAPI-297	Issue	Issue – Bloomberg entitlement failure because of dynamic system IP. Added support to accept the 'Bloomberg IP' user attribute with a host name and resolve the IP dynamically. ► See User Configuration for details.
BBERG SAPI 9.0.3	193131 191904 193369	BSAPI-312	Issue	Issue – Bloomberg real-time Market Data Server stops working.
BBERG SAPI 9.0.3	186895 191563	BSAPI-316	Issue	Issue – Bloomberg config with dynamic IP in user default doesn't affect Pricing Sheet/trade window. Fix – We now bypass the Navigator's UserDefaults for the custom hook.

1.28 Version 9.1.1 (August 2021)

Component	HelpDesk	RPM	Issue	Type	Description
BBERG SAPI 9.1.1	00004552 00009204	RPM-4226 RPM-5196	BSAPI-332	Issue	Issue – Bloomberg entitlement check fails for VPN desktops when using Bloomberg SAPI. Fix – We now authenticate user based on token even for non-managed BPIPE.
BBERG SAPI 9.1.1	170555		BSAPI-246	Issue	Issue – DuplicateCorrelationIDException is thrown by Entitlement Server.
BBERG SAPI 9.1.1	175401		BSAPI-258	Issue	Issue – SAVE_QUOTES scheduled task throws error for matured bonds.
BBERG SAPI 9.1.1	174961 186895		BSAPI-260	Enh	Issue – BPS users cannot connect to Bloomberg SAPI from RDS machine. Fix – We have enhanced SAPI connection while using EMRS ID. Now the IP address of the host

Component	HelpDesk	RPM	Issue	Type	Description
					<p>(where Bloomberg terminal is running) will be fetched dynamically from the session that is established. If the "Bloomberg IP" is provided then this takes precedence.</p> <p>You need to implement the interface <code>com.calypso.tk.util.BloombergOSInfoProviderI</code>, and provide your dynamic IP by implementing the method <code>getIPAddress()</code>.</p> <p>You also need to specify this implementation class with its fully qualified name in the <code>BloombergOSInfoImplClass</code> domain.</p> 
BBERG SAPI 9.1.1	178111		BSAPI-268	Issue	<p>Issue – Proxy support in Zero Footprint B-PIPE.</p> <p>Fix – We have added support to provide multiple host names with port numbers in the "BloombergSAPIHostName" parameter.</p> <p>► See Feed Configuration for details.</p>
BBERG SAPI 9.1.1	179177		BSAPI-276	Issue	Issue – Unable to get correct quote date via B-Pipe.
BBERG SAPI 9.1.1	173158		BSAPI-289	Issue	<p>Issue – AgeOutDays parameter doesn't work in Bloomberg SAPI.</p> <p>Fix – To allow entitlement to pass, user mode is now the default behavior when nothing is specified in the 'Bloomberg User Mode' property.</p> <p>And after 1 day has passed, users do not need to be registered in the EMRS or have a Bloomberg ID – any user can have access to quotes.</p>
BBERG SAPI 9.1.1	182645 190489		BSAPI-294	Issue	<p>Issue – Bloomberg entitlement failure because of dynamic system IP.</p> <p>Fix – Added support to accept the 'Bloomberg IP' user attribute with a host name and resolve the IP dynamically.</p> <p>► See User Configuration for details</p>
BBERG SAPI 9.1.1	191904		BSAPI-310	Issue	Issue – Bloomberg real-time Market Data Server stops working.

Component	HelpDesk	RPM	Issue	Type	Description
BBERG SAPI 9.1.1	186895 191563		BSAPI-314	Issue	Issue – Bloomberg config with dynamic IP in user default doesn't affect Pricing Sheet/trade window. Fix – We now bypass the Navigator's User Defaults for the custom hook.
BBERG SAPI 9.1.1		RPM-5347 RPM-5580	BSAPI-340	Enh	Issue – Adapt calypso-bloomberg-sapi-service to Springboot stack.

1.29 Version 9.1.2 (October 2021)

Component	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 9.1.2	00022859		BSAPI-348	Enh	Issue – Upgrade to Bloomberg Sapi Library blpjavaapi-3.16.3.1.

1.30 Version 10.4.0 (June 2023)

Component	Introduced In	Capability Group	Capability	Asset Group	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.4.0	16.1.MR.May21	Integration	Market Data Integration	Cross	00066856		BSAPI-372	Issue	Issue – NPE in entitlementserver while subscribing to quotes. Impact analysis – Local impact to BloombergSAPIEntitlementServerImpl - Initialized feed handler hash to avoid NPE.

1.31 Version 10.4.1 (January 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
BBERG SAPI 10.4.1	Pre-MR	Market Data	None	Cross	00092651 00097568		BSAPI-386	Issue	Issue – Bloomberg SAPI Feed exception. Impact Analysis – Local impact to BloombergSAPIImpl – Added debug logs.
BBERG SAPI 10.4.1		Integration	Market Data Integration	FI	00099239 00086241		BSAPI-384	Issue	Issue – RFR Quotes: Wrong date being applied by SAVE_QUOTES ST from Bloomberg SAPI. Impact Analysis – Local impact to BloombergSAPIImpl – Fixed incorrect quote date issue.

1.32 Version 10.4.2 (February 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
BBERG SAPI 10.4.2		Market Data	None	Cross	00092651		BSAPI-367	Issue	Issue – Clear the entitlement status cache when the Navigator user logout. Impact Analysis – Local impact to BloombergSAPIImpl – Added logs.

1.33 Version 10.4.3 (May 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.4.3	Pre-MR	Integration	Market Data Integration	Cross	00107222		BSAPI-406	Issue	Issue – Bloomberg User Mode default value. Impact Analysis – Local impact to BloombergSAPIImpl – Corrected default behavior is Y if not set.

1.34 Version 10.5.0 (June 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.5.0	Pre-MR	Integration	Market Data Integration	Cross	00107222		BSAPI-404	Issue	Issue – Bloomberg User Mode default value. Impact Analysis – Local impact to BloombergSAPIImpl – Corrected default behavior is Y if not set.

1.35 Version 10.7.0 (October 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.7.0							BSAPI-434	Sec	Issue - Security: Upgrade third-party libraries spring from

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
									5.3.34 to 5.3.37.

1.36 Version 10.8.1 (January 2025)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.8.1	18.0.MR.Jul24						BSAPI-450	Issue	Issue – Improvised logging for BSAPI client. Impact Analysis – Local impact to BloombergSAPIImpl – Added missed logging for time out.
BBERG SAPI 10.8.1	18.0.MR.Oct24						BSAPI-457	Issue	Issue – MDS issue with Bloomberg SAPI: realtime quotes not fetched during GMT TZ rollover. Impact Analysis – Local impact to BloombergSAPIImpl – Introduced new constant TDY_DATE to be set against Date field in Feed address mapping to tackle past date issue for quotes.

1.37 Version 10.9.0 (February 2025)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 10.9.0						APL-6274 APL-8851	BSAPI-401	Issue	Issue – Added Fallback support for B-PIPE with date range in BPipeRefData.

1.38 Version 11.1.3 (February 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 11.1.3	Pre-MR	Integration	Market Data Integration	FI	00086241 00099239		BSAPI-388	Issue	Issue – RFR Quotes: Wrong date being applied by SAVE_QUOTES ST from Bloomberg SAPI. Impact Analysis – Fixed incorrect quote date issue.
BBERG SAPI 11.1.3	Pre-MR	Market Data	None	Cross	00092651 00097568		BSAPI-387	Issue	Issue – Bloomberg SAPI Feed exception. Impact Analysis – Local impact to BloombergSAPIImpl – Added debug logs.

1.39 Version 11.1.4 (May 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 11.1.4	Pre-MR	Market Data	None	Cross	00092651		BSAPI-396	Issue	Issue – Clear the entitlement

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
					00032099				status cache when the Navigator user logout. Impact Analysis – Changed the getUserDetails to getUser from the SecurityEvent as userdetail was always returning the calypso_user instead of navigator user.

1.40 Version 11.3.0 (July 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
BBERG SAPI 11.3.0	Pre-MR	Integration	Market Data Integration	Cross	00107222		BSAPI-405	Issue	Issue – Bloomberg User Mode default value. Impact Analysis – Local impact to BloombergSAPIImpl – Corrected default behavior is Y if not set.

1.41 Version 11.3.1 (October 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 11.3.1		Integration	Market Data Integration	Cross	00131273		BSAPI-440	Issue	<p>Issue – Update Bloomberg IP in user defaults when specified localhost to give ipv4 address instead of loopback address when using BPIPE.</p> <p>Impact Analysis – Local impact to BloombergSAPIImpl – Added fix for the Market data being not populated when Bloomberg IP is set to localhost.</p>

1.42 Version 11.4.0 (July 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 11.4.0						APL-9838, APL-10338	BSAPI-408	Sec	Issue – Upgrade thirdparty library - com.enterprisedt:edtfjpj-pro from 7.2.0 to 7.7.0 and spring.springframework:spring-* 6.1.4 to 6.1.6.

1.43 Version 11.6.0 (December 2024)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
BBERG SAPI 11.6.0							BSAPI-439	Issue	<p>Issue – Update Bloomberg IP in user defaults when specified localhost to give ipv4 address instead of loopback address when using BPIPE.</p> <p>Impact Analysis – Local impact to BloombergSAPIImpl – Added fix for the Market data being not populated when Bloomberg IP is set to localhost.</p>

1.44 Version 11.7.0 (January 2025)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RP M	Issue	Type	Description
BBERG SAPI 11.7.0	18.0.MR.Jul24						BSAPI-451	Issue	<p>Issue – Improvised logging for BSAPI client.</p> <p>Impact Analysis – Local impact to BloombergSAPIImpl – Added missed logging for time out.</p>
BBERG SAPI 11.7.0	18.0.MR.Oct24						BSAPI-458	Issue	Issue – MDS issue with Bloomberg SAPI: realtime quotes not

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
									<p>fetches during GMT TZ rollover.</p> <p>Impact Analysis – Local impact to BloombergSAPIImpl – Introduced new constant TDY_DATE to be set against Date field in Feed address mapping to tackle past date issue for quotes.</p>
BBERG SAPI 11.7.0							BSAPI-402	Issue	Issue – Added Fallback support for B-PIPE with date range in BPipeRefData.

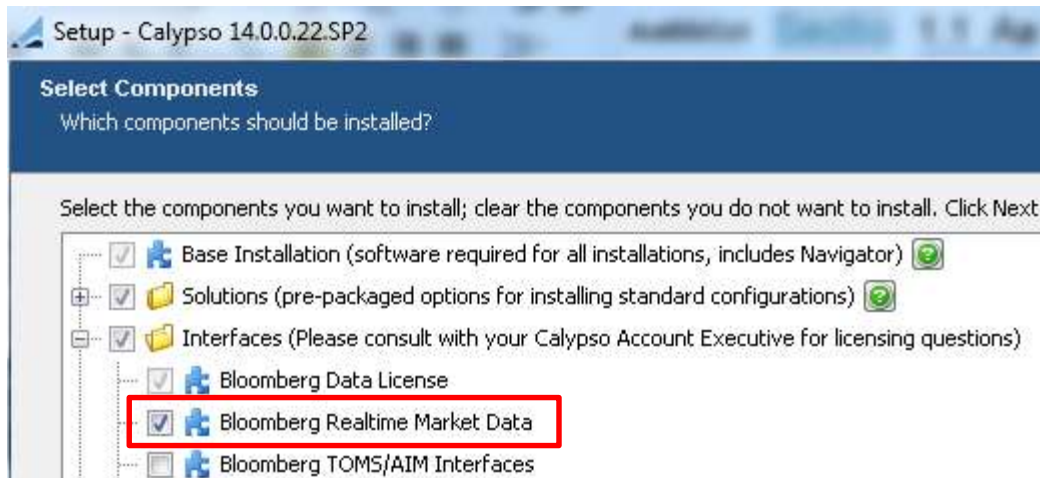
1.45 Version 11.8.0 (March 2025)

Component	Introduced In	Capability Group	Capability	Asset Class	HD/Case	RPM	Issue	Type	Description
BBERG SAPI 11.8.0						APL-13635	BSAPI-473	Sec	Issue – Security: Upgraded thirdparty library - org.springframework:spring-* from 6.1.14 to 6.1.16.

Bloomberg SAPI Installation

2.1 Installation

The Bloomberg Server API and Bloomberg B-Pipe are installed as part of the Calypso Installer when you select the “Bloomberg Realtime Market Data” interface:



In the Common Third Party Libraries & Extension panel > Libraries (Jar files) area, add the `blpjavaapi.jar`, which is part of the Bloomberg Server-API product installation (with the Java library included) supplied by Bloomberg.



► Please refer to the *Calypso Installation Guide* for complete details on the Calypso Installer.

If you are installing a Calypso Upgrade package instead, the instructions are also in the *Calypso Installation Guide*.

If you are using Bloomberg B-Pipe, you must have a B-Pipe access device and required access information from Bloomberg or a suitably configured B-Pipe appliance.

i NOTE: Calypso's support for the Bloomberg Server-API Java library is predicated on the use of JDK 6.0_13+ platforms. Use with older versions is not supported. You must use the JDK appropriate for your version of Calypso.

Calypso supports Bloomberg's `blpjavaapi.jar` version 3.3.1.0 or later, and Server-API version 3.10.3.0 or later.

Database Upgrade

When you run Execute SQL as part of your installation, the Bloomberg SAPI file will be already loaded. There is no checkbox. The Bloomberg SAPI tables will be added / updated.

2.2 EMRS Setup

The following steps are needed to configure EMRS for your Bloomberg B-Pipe system. Refer to your EMRS/B-Pipe documentation for information on performing specific procedures in the Bloomberg system.

Step 1 - Add a new user NameFormat:

EMRS > 4) Admin Tools > Configuration Management > Add

Step 2 - Add user as necessary using User NameFormat

EMRS > 1) Add

This step creates a new UUID and SID.

i NOTE Bloomberg requires the user to be setup with machine name\user name format for user mode. Use as a BPS user requires that the user is logged on to Bloomberg Professional, whereas a Non-BPS user need not be logged on to Bloomberg Professional.

Step 3 - After creating the user, double click the user entry to assign any entitlements that were already added via the Exchange Entitlement Management screen on BPS.

Step 4 - Add a new application NameFormat:

EMRS > 4)Admin Tools > Configuration Management > Add

i NOTE: For **application** NameFormat, please contact Bloomberg if the Application choice is not available under the **Name Format Type** dropdown.

Step 5 - Create the application using application NameFormat and then assign entitlements. Calypso uses hardcoded application name: "calypso", with a user-defined prefix and suffix specified in the Application NameFormat.

Step 6 - After creating the application, double click the application entry to assign any entitlements that were already added via the Exchange Entitlement Management screen on BPS.

EMRS > 4)Admin Tools > Exchange Entitlement Management

Step 7 - Login to BPS using the user name and password provided by Bloomberg.

Step 8 - Enable exchanges:


Exchanges ->Update By SID

Step 9 - Click **Next**.

Step 10 - Click **Enable**, then click **Next**.

Step 11 - Enter an Exchange code, then click **Search**.

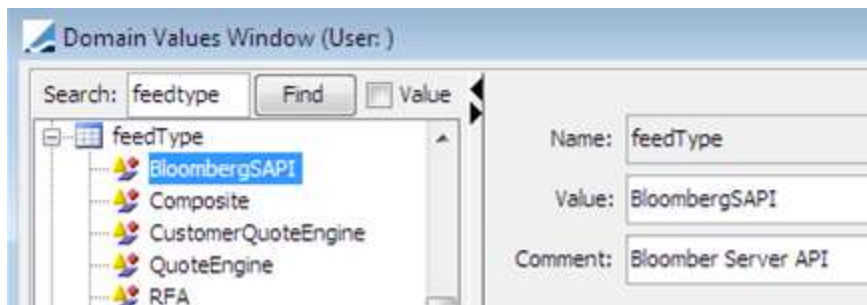
Step 12 - Select an Exchange, then click **Next**.

 **NOTE:** Data for newly added exchanges may not appear immediately.

Calypso Setup Requirements

3.1 Domain Values

In the “feedType” domain, create an entry for BloombergSAPI. This entry covers both the Bloomberg Server API and Bloomberg B-Pipe.

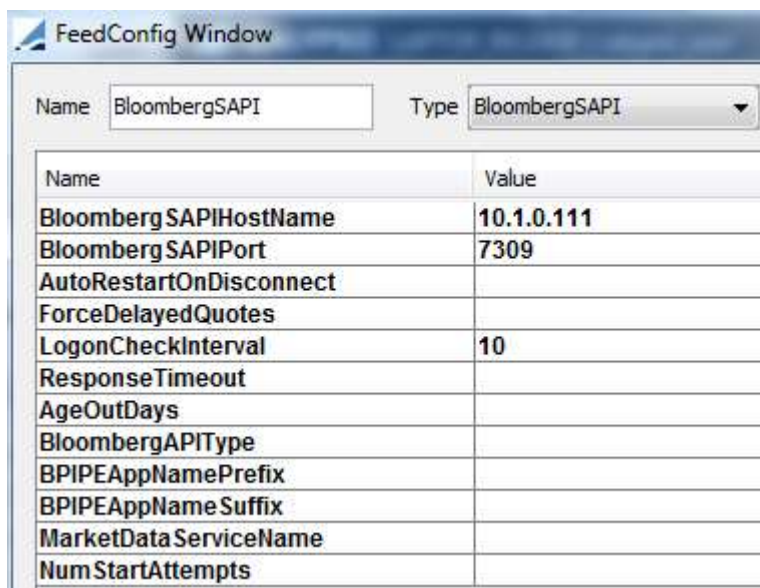


3.2 Feed Configuration

From the Calypso Navigator, navigate to **Configuration > Market Data > Feed Configuration**.

Create a Feed configuration for Bloomberg SAPI and one for Bloomberg B-Pipe as applicable.

3.2.1 Bloomberg SAPI



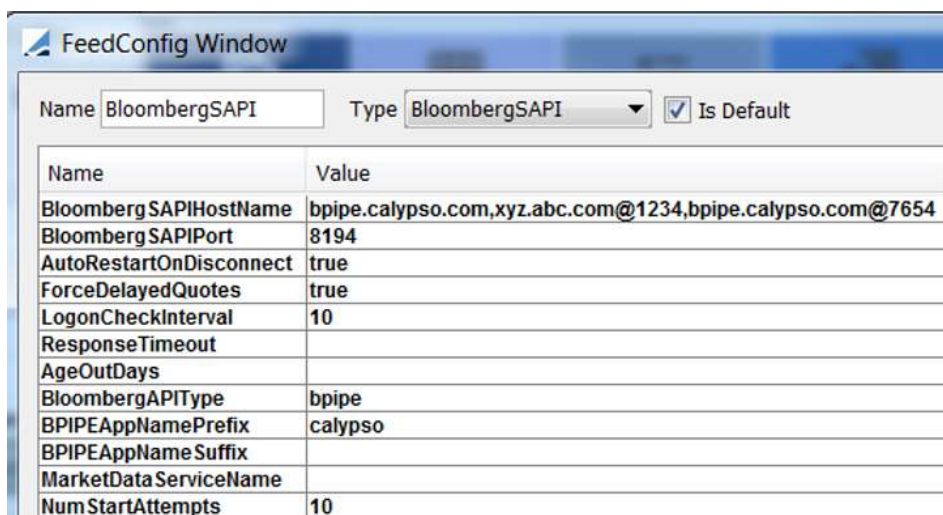
The screenshot shows the 'FeedConfig Window'. The 'Name' field is set to 'BloombergSAPI' and the 'Type' dropdown is set to 'BloombergSAPI'. Below this is a table with configuration fields and their values.

Name	Value
Bloomberg SAPIHostName	10.1.0.111
Bloomberg SAPIPort	7309
AutoRestartOnDisconnect	
ForceDelayedQuotes	
LogonCheckInterval	10
ResponseTimeout	
AgeOutDays	
BloombergAPIType	
BPIPEAppNamePrefix	
BPIPEAppNameSuffix	
MarketDataServiceName	
NumStartAttempts	

Set the following fields. The other fields re not needed for SAPI.

Fields	Description
Type	Select BloombergSAPI .
BloombergSAPIHostName	The IP address of the machine where the Bloomberg system is running. This is the location of your Server-API server installation.
BloombergSAPIPort	(Optional) The port on BloombergSAPIHostName that the Bloomberg system is configured to accept client connections. The default port is 8194.

3.2.2 Bloomberg B-Pipe



The screenshot shows the 'FeedConfig Window' with the following configuration:

Name	Value
BloombergSAPIHostName	bpipe.calypso.com,xyz.abc.com@1234,bpipe.calypso.com@7654
BloombergSAPIPort	8194
AutoRestartOnDisconnect	true
ForceDelayedQuotes	true
LogonCheckInterval	10
ResponseTimeout	
AgeOutDays	
BloombergAPIType	bpipe
BPIPEAppNamePrefix	calypso
BPIPEAppNameSuffix	
MarketDataServiceName	
NumStartAttempts	10

The fields Type= **BloombergSAPI**, BloombergSAPIHostName, BloombergSAPIPort are the same as Bloomberg SAPI. BloombergSAPIHostName supports multiple host names with port numbers. Multiple IP addresses are comma separated. Host name and port are @separated. If the port number is not specified, it will use the port configured in BloombergSAPIPort.

The following are examples of valid formats:

- bpipe.calypso.com@8194
- bpipe.calypso.com@8194,xyz.abc.com@1234,bpipe.calypso.com@7654
- bpipe.calypso.com,xyz.abc.com@1234,bpipe.calypso.com@7654

Set the following fields.

Fields	Description
ForceDelayedQuote	(Optional) This option is turned off by default. Set this option to True if the feed only provides delayed quotes. Enable this option if users of this feed either do not require, or are not eligible for, real-time data from Bloomberg.

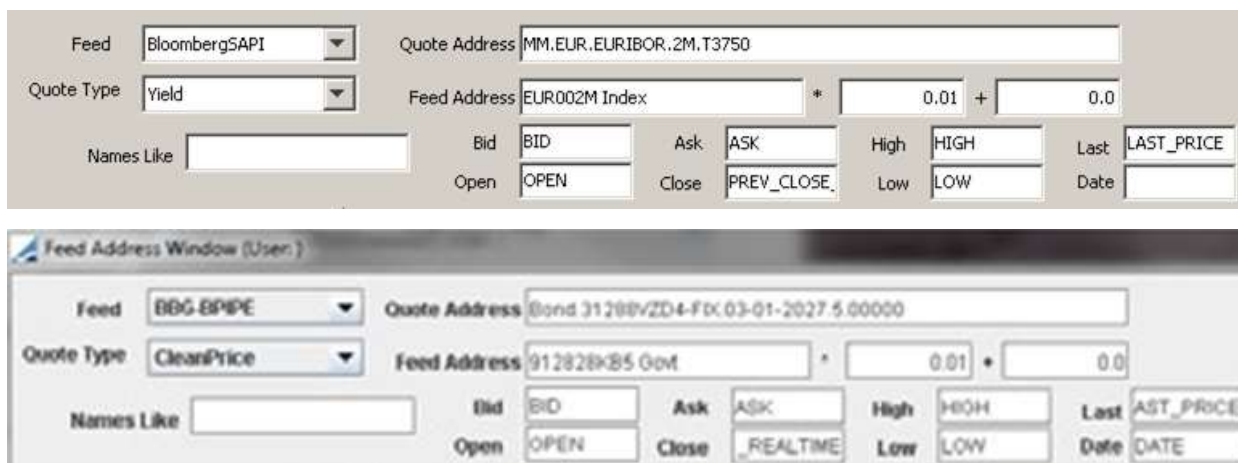
Fields	Description
LogonCheckInterval	(Optional) If there is no Calypso user logged on to Bloomberg when the application requests Bloomberg quotes, the Server-API authentication fails. Calypso periodically checks the logon status of the Calypso user associated with the subscribed quotes based on the number of seconds specified in this field. The default period is 5 seconds.
AgeOutDays	The number of days after which data from the particular exchange is available to all Bloomberg users without regard to entitlement restrictions. Data remains subject to Bloomberg user authentication. The default (and minimum) period is one day and can vary by exchange. For further information refer to the Age-Out Policy of the particular exchange.
BloombergAPIType	(Mandatory) Enter "Managed B-PIPE" .
BPIPEAppNamePrefix	The exact prefix as entered in the Name Format Prefix field of the Name Format screen of Bloomberg EMRS. If a name is entered in EMRS, then that name must be used here.
BPIPEAppNameSuffix	The exact suffix as entered in the Name Format Suffix field of the Name Format screen of Bloomberg EMRS. If a name is entered in EMRS, then that name must be used here.

3.3 Feed Addresses

The Feed Address window allows mapping Calypso quote names to Bloomberg ticker names.

From the Calypso Navigator, navigate to **Configuration > Market Data > Feed Address Mapping** to open the Feed Address window.

Defined feed address mappings for Bloomberg SAPI and Bloomberg B-Pipe.



The image displays two screenshots of the 'Feed Address Window (User)' in Calypso. The top screenshot is for the 'BloombergSAPI' feed, showing a 'Quote Address' of 'MM.EUR.EURIBOR.2M.T3750' and a 'Feed Address' of 'EUR002M Index' with a multiplier of 0.01 and an add value of 0.0. The bottom screenshot is for the 'BBO-BPIPE' feed, showing a 'Quote Address' of 'Bond 31288VZD4-FIX.03-01-2027 5.00000' and a 'Feed Address' of '312828K85 Govt' with a multiplier of 0.01 and an add value of 0.0. Both screenshots include fields for 'Names Like', 'Bid', 'Ask', 'High', 'Low', 'Last', and 'Date'.

To Add a New Mapping

i NOTE: It is possible to map multiple assets to a single feed address.

Step 1 – From the Feed field, select a Feed configuration previously defined.

Step 2 – Select a Calypso quote name from the Addresses list.

Step 3 – Enter the corresponding Bloomberg quote name in the Feed Address. Enter a multiplier value and spread value as applicable.

Step 4 – Enter Bloomberg real-time field names. The default date that the system saves with the quote is Today. See samples below.

Step 5 – Click **Add**.

Step 6 – Repeat for other quote names.

Sample Instance Names Mapping

Calypso	Bloomberg	Description
BID	BID	Latest bid price
ASK	ASK	Latest ask price
LOW	LOW	Today's lowest trade price
HIGH	HIGH	Today's highest trade price
OPEN	OPEN	Today's opening price
CLOSE	PREV_CLOSE_VALUE_REALTIME	Previous day's closing price
LAST	LAST_PRICE	Last price

3.4 Zero Footprint B-Pipe Setup

The following setup in Calypso is needed to configure Zero Footprint (ZFP) B-Pipe.

Installer

In the Common Third Party Libraries & Extension panel > Libraries (Jar files) area, add the `blpjavaapi-3.11.1.x.jar` (or later), which is available from Bloomberg.

► See [Installation](#) for more details on using the Calypso Installer.

Environment Properties

Set the following environment properties:

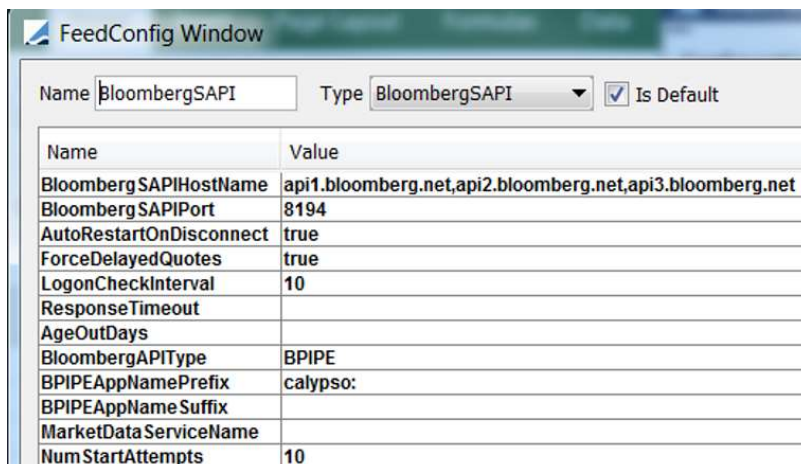
- **BLOOMBERG_ZFP_CREDENTIAL_FILENAME** – Filename with path to DER encoded PKCS#12 file with client credentials.
- **BLOOMBERG_ZFP_CREDENTIAL_PASSWORD** – Password for client credentials file.
- **BLOOMBERG_ZFP_CERTIFICATE_FILENAME** – Filename with path to DER encoded PKCS#7 file with trusted certificates.

The client credentials file, password, and trusted certificates are provided by Bloomberg.

NOTE: When you modify an environment property, you need to deploy the changes to your application servers. Please refer to the *Calypso Installation Guide* for details.

Feed Configuration Window

The Feed Configuration window should be configured to use the IP address of the ZFP B-Pipe server hosted by Bloomberg.



Name	Value
BloombergSAPIHostName	api1.bloomberg.net,api2.bloomberg.net,api3.bloomberg.net
BloombergSAPIPort	8194
AutoRestartOnDisconnect	true
ForceDelayedQuotes	true
LogonCheckInterval	10
ResponseTimeout	
AgeOutDays	
BloombergAPIType	BPIPE
BPIPEAppNamePrefix	calypso:
BPIPEAppNameSuffix	
MarketDataServiceName	
NumStartAttempts	10

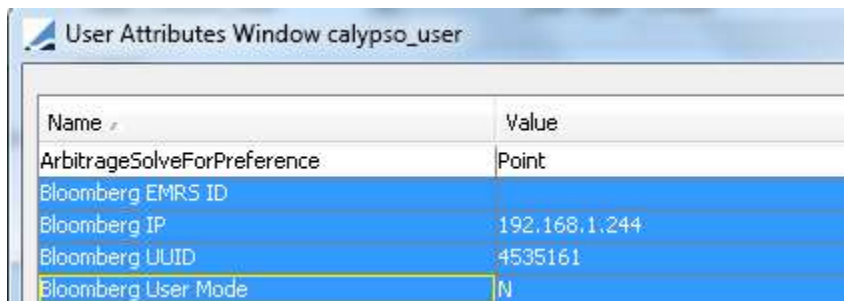
► See [Feed Configuration](#) for more details on using the Feed Configuration window.

3.5 User Configuration

To access Bloomberg Server-API, the Calypso user must have the Bloomberg terminal or BBA login information specified in the user defaults setting. Bloomberg requires the user to log in to Bloomberg using same desktop that will access the Bloomberg Server-API.

Likewise, access using Bloomberg B-Pipe requires login information for a B-Pipe feed or for a B-Pipe appliance. Contact your Bloomberg representative for assistance with Bloomberg credential information.

- » From the Calypso Navigator, navigate to **Configuration > User Access Control > User Defaults**.
- » Select a user and click on **Attributes**.



Name	Value
ArbitrageSolveForPreference	Point
Bloomberg EMRS ID	
Bloomberg IP	192.168.1.244
Bloomberg UUID	4535161
Bloomberg User Mode	N

- » Set the following attributes (click **...** to add them if they are not available):

Bloomberg IP (Optional) - The user must be logged on to Bloomberg from the desktop where Calypso is running. Therefore, in most cases, the Bloomberg IP defaults to the local host. When running Calypso in a Citrix environment, where Calypso runs on a remote host and displays via Citrix on the user's desktop, the Bloomberg authentication process will validate if the user is accessing the Citrix app and Bloomberg terminal from the same IP address/host. So the three possible values are:

- IP address of the local desktop/laptop
- Hostname of the local desktop/laptop
- "Dynamic" — See [BPS Users Using RDS Machine](#) for details.

Bloomberg UUID (for local desktop access) - The UUID of the Bloomberg user.

Bloomberg EMRS ID (for Citrix desktop access) - The EMRS ID of the Bloomberg user.

Bloomberg User Mode - Set to N for server mode and Y for non-server mode. Default behavior is as Y if not set. Bloomberg server mode permissions are enforced. Calypso applications will handle content-based permission checks for all subscribing end-users.

BPS Users Using RDS Machine

Using “MainEntry.Startup” Domain

When value ClientIPAddress is added to the domain “MainEntry.Startup”, the IP addresses defined in domain “AddClientIPInUserDefaultAttribute” are fetched when the Calypso Navigator is started. They are stored as User Defaults attributes.

Example:

Domain = AddClientIPInUserDefaultAttribute

Value = Bloomberg IP

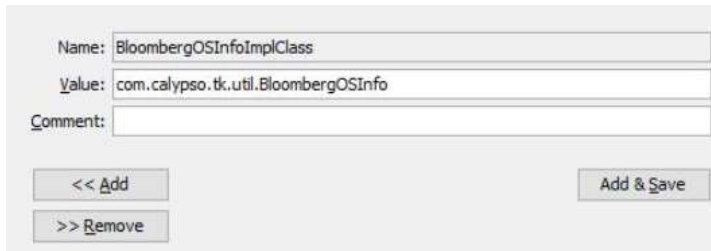
When the Calypso Navigator is started on a given machine, Bloomberg IP is populated with the IP address of the machine.

Using Custom Class

When using Bloomberg EMRS ID, the IP address of the host (where Bloomberg terminal is running) will be fetched dynamically from the session that is established. If the Bloomberg IP is provided then this takes precedence.

You need to implement the interface `com.calypso.tk.util.BloombergOSInfoProviderI`, and provide your dynamic IP by implementing the method `getIPAddress()`.

You also need to specify this implementation class with its fully qualified name in the `BloombergOSInfoImplClass` domain.



The screenshot shows a configuration window with three input fields: "Name:" containing "BloombergOSInfoImplClass", "Value:" containing "com.calypso.tk.util.BloombergOSInfo", and "Comment:" which is empty. Below the fields are four buttons: "<< Add", ">> Remove", and "Add & Save".

3.6 Data Entitlement

To block unauthorized access to Bloomberg data saved in the Calypso database and market data derived from Bloomberg quotes, the Bloomberg SAPI engine / Entitlement server is used from the various access points to check user entitlements. The following steps must be taken to configure Calypso for this feature.

3.6.1 “EntitlementCheckFeed” Domain

Add the Bloomberg SAPI Feed configuration name to the “EntitlementCheckFeed” domain.



After adding the feed to this domain, all access to saved or derived data sourced from the feed must pass the following permission checks via the Bloomberg SAPI engine / Entitlement server in order to be allowed:

- The User must be logged on to either a Bloomberg Professional or Bloomberg Anywhere terminal from the IP host and using the UUID specified in the Calypso User Defaults attributes.
- The User must be eligible for the Entitlement ID of the Bloomberg data or the underlying Bloomberg quote for the requested market data.

3.6.2 Entitlement Server

If you are using the Operations Dashboard / Calypso DevOps Center, you need to create an Entitlement server of type ENTITLEMENTSERVER, and start it from the Operations Dashboard / Calypso DevOps Center.

If you are not using the Operations Dashboard / Calypso DevOps Center, start the entitlement server using “<calypso home>/deploy-local/<environment>/entitlementServer.bat\ .sh”.

Subscribing to Quotes

You can subscribe to real-time quotes using the Market Data Server.

The market data server distributes market data updates to one or more end-user applications. In this scenario the Calypso server application subscribes to any real-time data available from the Server-API process, and then uses content-based permissions to restrict access by unauthorized applications. Calypso stores the Bloomberg Entitlement ID with each quote and uses the Bloomberg Server-API to check the end-user's Bloomberg entitlements. If the permission check fails, the data is nullified and the client application generates a data access error.

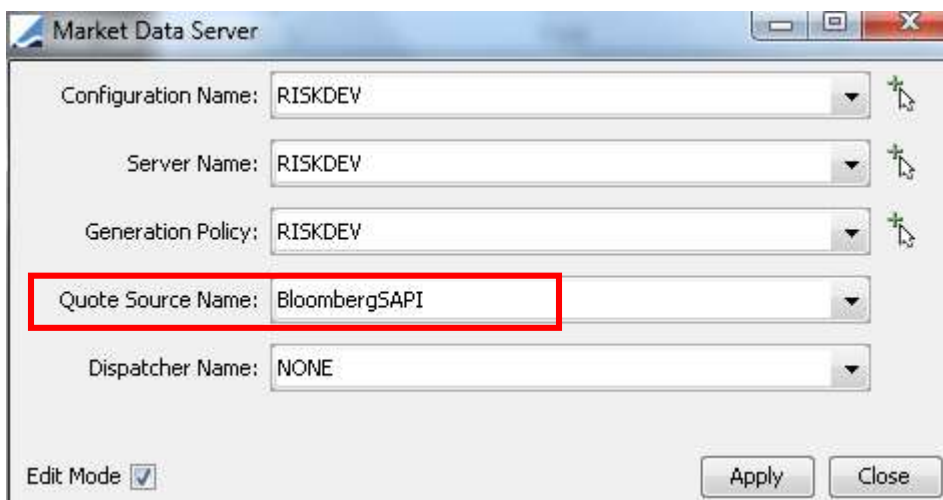
Access to the real-time data is limited by the user permissions of Server API default user. This default user is typically a dedicated Bloomberg Anywhere account specifically set up for the Server-API installation, and has a name beginning with DEFAULTS, for example, user DEFAULTS316. To support the real-time data access by all end-users, Bloomberg must enable the Server-API default user for the superset of all user data entitlements.

To support users who are not permissioned for real-time quotes, but subscribe to delayed streaming quotes, create a separate feed having the Force Delayed Quote feed attribute turned enabled, as described in Feed Configuration. When running an application that subscribes to this feed, all streaming data is delayed. Most delayed data is unrestricted for Bloomberg users.

4.1 Market Data Server Setup

You need to define a Market Data Server based on the feed that you have setup.

Sample market data server:



You can then select the Market Data Server in the User Defaults attribute "Market Data Server Config", and start the corresponding Risk Server to subscribe to the quotes.

Please refer to the *Calypso Installation Guide* for details on defining and starting risk servers, and refer to the *Market Data Server User Guide* for details on using a Market Data Server.

4.2 Saving Real-time Quotes

You can save real-time quotes to the database using the scheduled task SAVE_QUOTES.

▶ Please refer to the *Calypso Scheduled Tasks User Guide* for details.