FIX Antenna C/C++/.NET Release Notes

⚠ FIX Antenna ANSI C is discontinued starting version 2.18.1.

FIX Antenna 2.27.1

January 30, 2020

The major features of this release are Scheduler component and flexible affinity mask setup, see below. Scheduler component allows user to build and execute flexibly defined schedules and override actions execution if required, see the documentation

This is the last release that supports Centos 6 and Visual Studio compilers prior to Visual Studio 2015. So, please be informed that centos 6 configurations along with Visual Studio prior 2015 will be discontinued starting next release. Windows configurations will be reduced to only one - Visual studio 2015 in particular since starting 2015 studio ABI compatibility is maintained across compilers versions, So library built with 2015 studio can be used with 2015 /2017/2019. Linux configurations will be reduced to only three: Centos 7 gcc4.8, Centos 7 gcc5.2, Ubuntu gcc6.1

Breaking changes

- (SD4906754) Port accepted the connection is passed to the public API method:

```
virtual bool onIncomingConnection( const FIXMessage& logonMsg, const IPAddr& remoteAddr, int remotePort,
int localPort )
```

B2BITS_Events.h:

The following methods signatures have been changes:

B2BITS_Events.h

```
NewIncomingConnection( const std::string& address, int port );
NewIncomingConnectionError( const std::string& address, int port, const std::string& msg );
SessionLogonError( const SessionId& sessionId, const std::string& address, int port, const std::string&
aReason );
SessionLogonWarning(const SessionId& sessionId, const std::string& address, int port, const std::string&
aReason);
SessionWasRejected( const SessionId& sessionId, const std::string& address, int port, const std::string&
aReason );
```

with

B2BITS_Events.h

```
NewIncomingConnection( const std::string& remoreAddress, int remotePort, const std::string&
localAddress, int localPort );
NewIncomingConnectionError( const std::string& remoreAddress, int remotePort, const std::string&
localAddress, int localPort, const std::string& msg );
SessionLogonError( const SessionId& sessionId, const std::string& remoreAddress, int remotePort, const
std::string& localAddress, int localPort, const std::string& aReason );
SessionLogonWarning(const SessionId& sessionId, const std::string& remoreAddress, int remotePort, const
std::string& localAddress, int localPort, const std::string& aReason);
SessionWasRejected( const SessionId& sessionId, const std::string& remoreAddress, int remotePort, const
std::string& localAddress, int localPort, const std::string& aReason );
```

> ⓘ Since the methods signatures were changed, user's application modification is required.

- Type MessageStorageType has been changed to class. So MessageStorageType can't be used as a key in 'switch' anymore. User should use 'if.. else if ...' instead of 'switch'. User application may require minor changes.

Features and improvements

- Scheduler component is implemented.
- SSLCACertificate is mandatory if peer certificate validation is enabled.
- Improve logging of errors for unhandled exceptions generating business rejects during processing the message.
- Parameter Session.Default.SocketTcpMaxSeg is added. It configures the TCP_MAXSEG parameter of the session's TCP/IP connection. It is applicable to initiator sessions only,
- Added callbacks onAfterMessageIsParsed and onBeforeMessageIsSerialized to FA.NET
- Improved FIX message parser scalability in a multi-threaded environment.
- Improved performance and reduced response time of the Session::put method in aggressive_send mode in case if the message can't be sent on spot(engine overload, broken connection, etc).
- CPU resources consumption is optimized while receiving in even mode(using threads pool) that causes response time decreasing on message path from input to Session::process method.
- Session parameter "Role" is case insensitive in engine.properties now,
- New timestamp formats %date{FIXus}, %date{FIXns} %date{ISO8601us}, %date{ISO8601ns} with micro and nano precisions are added for application log output. see: Format of log entries in the log file
- FIX Antenna accepts Hexadecimal values as a CPU affinity mask.
- Affinity mask for CPU cores can be specified as comma-separated, semicolon-separated lists or as a range see details (Core binding and affinity mask usage in FIX Antenna C++ products).

> ⓘ NOTE: The curly braces should be used in case of a single number configuration in order to keep backward compatibility. By default affinity parameter values are treated as affinity mask in decimal format. It the value is set in curly braces than cores number is used instead of the mask.

- Improve description of AggressiveReceiveDelay parameter
- EchoServer sample is redesigned to utilize new Engine::SessionsManager::onSessionTerminated callback.

API improvements

- Engine::SessionsManager callbacks sink is extended with onSessionTerminated that is called when a session termination happens. This allows user application to react and force the session to reconnect if desired. See documentation.

API changes

- Engine::SessionExtraParameters::cpuAffinity_ and friends type has been changed to TriAffinity64 that is compatible with the previous one. So no changes to the existing user code are expected.

Logging improvements

- (SD4906754) Extended logging of incoming connection event

text has been changed:	
Previous message	<severity> <timestamp> <thread> [Engine] - New incoming connection was detected (from <target ip>:<target port>).
Current message	<severity> <timestamp> <thread> [Engine] - New incoming connection was detected (from <target ip>:<target port> **to <local ip>:<local port>**).

- Improved logging of errors for unhandled exceptions generating business rejects during processing the message.

text has been changed:	
Previous message	[ERROR] <timestamp> <thread> [Engine] - Session <session> : Exception in Application::process() - "<exception text>"
Current message	[ERROR] <timestamp> <thread> [Engine] - Session <DEF, ABC> : Exception in Application::process() - "The message 'New Order - Single' (D) with sequence number 4 can't be processed properly because it causes an exception '<exception text>' at the application level. A business level reject message (j) will be sent to the counterparty."

- Improved text of FIX Dictionary load warnings

text has been changed:	
Previous message	[WARN] <timestamp> <thread> [Engine] - Found duplicate in c:\Downloads\FIX_Antenna_Cpp_2.25.1_274\samples\EchoServer\bin\.\.\.\.\.\./../data/fixdic40.xml: / 6
Current message	[WARN] <timestamp> <thread> [Engine] - Found duplicated value = '6' for node 'fielddef' with attributes { name='TrdRegPublicationReason' tag='2670' type='int' } in the dictionary fixdic40.xml

- Improved exception in the logs for loading dictionary failure

text has been changed:	
Previous message	[WARN] <timestamp> <thread> [Engine] -
Current message	[ERROR] <timestamp> <thread> [Engine] - FixEngine::init: Cannot load message '<msg>' in the protocol '<version>'. Duplicated tag in the message is found. Possible reason is field used outside the block. Tag: <tag>

- A WARN record is logged in case when affinity configuration can't be applied
- FIX Antenna prints the resulted affinity configuration in the log.

Fixed bugs

- (SD4016506) Fixed a bug when session keeps disconnected state for several minutes after disconnection.
- ConnectToGateway sample segfaults on Linux if the target endpoint is not available.
- Fixed a typo in the thread name: was 'dispacher', replaced with 'dispatcher'.
- Fixed a bug when SSL Ciphers list can't be passed to **SSLContextConfigurator**.
- Fixed a bug when additional dictionary adds repeating groups incorrectly if leading tag is already present in the message.
- Fixed a bug when additional dictionary adds repeating groups incorrectly if leading tag of the nested group becomes starting tag of the parent group.
- Session's storage files occupy unnecessary large space in certain cases.
- Certificate path was passed into SSL context instance setup routine instead of ciphers list in some cases.
- FIX Antenna postpones the creation of dedicated sending threads for aggressive send mode instead of creating them on session get connected.
- EPMBFIXSUP-3642, An initiator doesn't reestablish connection after receiving logout.

- Fixed incorrect session state transition to WaitForConfirmLogout causing delays on Engine shutdown if DelayedProcessing.MaxDeliveryTries property was configured.
- Fixed a bug when SourceIPAddress parameter works incorrectly via administrative session

Connectivity updates

- CME iLink DropCopy dictionaries includes all changes till 31th of December 2019
- FIX 5.0 SP2 dictionary has been updated with 248-252 Extension Packs

Documentation

- Added the article: Multi-Language CJK (Chinese-Japanese-Korean) characters support in FIX Antenna/FIX-Protocol
- Added the article: Core binding with affinity mask and threads management in FIX Antenna C++ products

FIX Antenna 2.26.0

January 23, 2019

New Features and improvements

- Log4cplus introduced as logging system backend for writing logs to a log collector via TCP (See Log4Cplus Usage for details).
- The new naming scheme specifies the target OS and target C++ ABI.
  C++ 98 ABI builds are compatible with GCC 4.4 - 4.9 and above and C++98, 11 modes, C++11 ABI builds are compatible with GCC 5.1 and above and C++98/11/14/17 modes. (See How to build your application with FIXAntenna C++ on Linux for more information).
- Updated iLink FIX dictionary for CME
    - Added NumOrdersInMatchStep(9700) tag
    - Added repeating group for Fill Reason
  See https://www.cmegroup.com/confluence/display/EPICSANDBOX/Consolidated+iLink+Fill+Messages for details.

SSL support changes:

- An initiator can use a certificate signed by counterparty's CA certificate for authentication
- FIX Session configuring API improved to support loading SSL certificates of types : pfx files, .pem encoded files, .der - binary encoded files in ASN1 standard. SSL certificates with and without passwords are supported.
- API was extended with the class **SSLContextConfigurator** for getting certificates and passwords from the user.
- API was extended with **SSLContextConfiguratorConverter** interface to serialize/deserialize class SSLContextConfigurator to/from string. If user uses custom **SSLContextConfigurator implementation,** user should implement **SSLContextConfiguratorConverter** in order to avoid information loss.
- SSLRequireClientCertificate property was replaced by SSLValidatePeerCertificate.
- Settings SSL, SSLCertificatePassword and SSLPrivateKeyPassword were introduced.
- SSLCheckPrivateKey property was removed. Correspondence between the key and certificate will be checked automatically. FIX Antenna does not establish session if the key doesn't correspond to the certificate.

For more information see:

- Migration to version 2.26.0 FIX Antenna C++
- Migration to version 2.26.0 FIX Antenna .NET
- Create SSL sessions with properties file

Fixed critical bugs

- AGGRESSIVE* (see SocketOpPriority) SSL FIX session sometimes stops message sending for long time.
- A flag Q (for queued FIX messages, see OutOfSequenceMessagesStrategy) is not replicated in FIX logs replicator
- Missing timestamps in session logs after corrupted storage recovery

FIX Antenna C++/.NET Market Data Adapters:

- MICEX Market Data Adapter
- MOEX Spectra Market Data Adapter
- MIT Adapter
- Bovespa MD Adaptor

will be removed from the package starting next release.

Market Data Adapters will be delivered as a separate package to simplify release process, speed up delivery of updates including bug fixes and to improve its integration with customer code.

FIX Antenna 2.25.1

October 9, 2018

FIX Antenna C++/.NET v2.25.1

New Features and improvements

- Windows x32 platform support is discontinued starting from this release.
- Role, Host, Port, HBI, version and custom logon message can be configured in engine.properties (see How to configure FIX Sessions with engine.properties file#Createpre-configuredsessionsfromapropertiesfile.)
- Function for getting list of pre-configured sessions from engine properties has been introduced to API: **ConfiguredSessionsMap getConfiguredSessions(const Engine::SessionRole filterInRole = NA_SESSION_ROLE) const;**
- Property SSLCiphersList has been added to configure ciphers for SSL connections.

FIX Client Simulator (former Simple client):

- Tags names have been added to message details window
- Ability to save session parameters has been added (see FIX Client Simulator#Savesessionconfiguration)

FIX Antenna C++ samples:

- MICEX_MD_Scanner sample has been decommissioned from FA package
- Script for preparing sources and libraries has been added for Decorator sample (Linux only). Sample Decorator uses Societe Generale dictionary as an example.
- List of parameters passing to decorator-generator tool has been slightly changed: output dir for the headers has been added and transport layer dictionaries should be passed with -f flag, e.g.:

```
buildwin.bat vs100 x64 ..\..\headers ..\..\lib -s FIXT11 -a FIX50SP2 -f ..\..\data\fixdic50sp2.xml -f ..
\..\data\fixdict11.xml
```

Logging improvements:

- Logging due to SSL ciphers changes has been changed

engine.log	
Previous message	[INFO] <timestamp> [thread] [Engine] - Session <TargetCompID, SenderCompID> : Connecting to 127.0.0.1: 9017 using SSL (SSLv2, SSLv3, TLSv1, TLSv1_1, TLSv1_2)
Current message	[INFO] <timestamp> [thread] [Engine] - Session <TargetCompID, SenderCompID> : session with 127.0.0.1: 9017 was established using SSL (SSLv2, SSLv3, TLSv1, TLSv1_1, TLSv1_2) with ciphers configuration: AES+aRSA:AES+aECDH:AES+aECDSA:@STRENGTH

Critical bugs and fixes

- Tag number of the repeating group is invisible in message details window in FIX Client Simulator
- Replication tool is unable to be created and started as a service.
- Sequence numbers are processed incorrectly in certain cases when DeliverAppMessagesOutOfOrder=true
- ProhibitDuplicatedTags is always enabled in FIX Antenna C++/.NET for Repeating groups since 2.17
- Log Replicator doesn't work with growing log files.

FIX Antenna 2.24.0

May, 18, 2018

FIX Antenna C++/.NET v2.24.0

New Features and improvements

API improvements

- API for activate/deactivate engine listening sockets has been introduced. Refer to How to pause listening incoming connections for more information.

Protection from abnormal user behavior

- The property for limitation of number of incoming simultaneous connections that haven't sent logon message yet from one host has been added (no limitation by default).
- The property for limitation of connection time for an incoming connection that hasn't sent logon message yet has been added (no limitation by default).
- The property for limitation of the maximum size of the buffer of incoming messages has been added (no limitation by default).
  Refer to How to configure TCP protection for more information

Other improvements

- Obsolete dictionary fixdic50sp1cme.xml has been removed from the package
- lone() method has been implemented for FIXMessage passed to Bovespa::InstrumentListener callbacks

Logging improvements

- Logging for getaddrinfo failure has been changed:

Previous message	`... getaddrinfo(<hostName>) failed: <error code>`
Current message	`... Nodename-to-address translation in protocol-independent manner failed - getaddrinfo (<hostName>) failed:  <error code>. Please check DNS configuration. Most likely this error means DNS configuration issue.`

Critical bugs and fixes

- PersistentMM storage is cleaned after Windows reboot
- FIX Antenna Decorator doesn't support set(Tag, value) method at least for repeating groups

Known Issues

- Decorator for fixdic50sp2 EP is not generated.

FIX Antenna 2.23.0

February 19, 2018

FIX Antenna C++/.NET v2.23.0 (r241)

New Features and improvements

- CME Globex API Secure Logon support has been added. Refer to How to connect to CME Globex using Secure Logon for more information;
- A new threading mode has been added (SocketOpPriority = DIRECT_SEND). Refer to SocketOpPriority description for more information;
- Queuing strategy for handling gaps has been added. Refer to How to set strategy for processing out-of-sequence messages.

Documentation

- New article Bovespa Market Data Adaptor: How to use TCP Replayer has been published

Extension Packs

- FIX 5.0 SP2 dictionary has been updated with 237-240 Extension Packs.

Critical bugs and fixes

- IntradayLogoutTolerance=false is ignored when SocketOpPriority is AGGRESSIVE_SEND_AND_RECEIVE;
- MIC codes are outdated in FIX/FIXML dictionaries;
- Engine::TZTimeHelper::nowUTCDateOnly() function returns an incorrect year;
- Bovespa MD Adapter - chunked messages are processed incorrectly;
- Bovespa MD Adapter - memory leak during the recovery procedure;
- Bovespa MD Adapter - TCP Replay works incorrectly.

FIX Antenna C++ samples:

Samples: Throughput2, Parser, EncryptionQuickStart, iLink , CMEGlobexClient have been decommissioned.

FIX Antenna .Net samples:

Samples: CMEGlobexClient, HelloWorld have been decommissioned.

FIX Antenna 2.22.0

December 22, 2017

FIX Antenna C++/.NET v2.22.0 (r232)

New Features and improvements

<u>New compilers support:</u>

- gcc 6.3 support has been added

API improvements

- Added FIXMessage::apply which takes FixFieldsFunctor. This can be used for iterating over fields of a FIX message without copying them to a temporary container.
- API for accessing fields of prepared message has been added to allow extension of prepared message.

Extension Packs

- FIX 5.0 SP2 dictionary has been updated with 229-236 Extension Packs.

Critical bugs and fixes

- MIT Adapter: issue with multiple replays in LSE adapter

FIX Antenna 2.21.0

October 23, 2017

FIX Antenna C++/.NET v2.21.0 (r221)

New Features and improvements

<u>New compilers support:</u>

- Library for Visual Studio 2017 has been added to Windows package

<u>Session-level improvements:</u>

- An ability to limit the reply volume on resend request has been introduced (using <u>setBeginSeqNo</u> and <u>setEndSeqNo</u> of ResendRequestEvent in on ResendRequestEvent call-back method)
- The default value of ResendMessagesBlockSize has been changed to 1000 to improve reliability of FIX connectivity

<u>Simple Client:</u>

- MSVC 2010 Redistributable Package has been added to Simple Client package

<u>Logging improvements:</u>

- Logging category has been changed for a number of cases:

Message	Old category	New category
`Session <sender, target> : Error during processing Logon message from 127.0.0.1: 62358: Session is not waiting for connect: current state is <XXX>`	ERROR	WARN

<u>Other improvements:</u>

- MIT Adapter has been updated to support LSE MIT 303 Level 2 - MITCH Specification 11.8.2
- Public methods FAProperties::getListenPorts() and FixEngine::getListenPorts() have been added

Critical bugs and fixes

- FIXICC incorrectly handles FIX sessions with symbols < , > and & in either targetCompID or senderCompID.

Documentation

- FA C++ programmer's Guide Protocol customization section has been actualized

FIX Antenna 2.20.2

August 31, 2017

FIX Antenna C++ v2.20.2 (r214)

MOEX Spectra Market Data Adapter:

- New FAST gate v1.4.2 is now supported:

    - Spectra adapter dictionary fixdic50sp2spectra.xml has been updated based on the new templates.xml.
    - Support of Sequence Reset messages has been added.
    Refer to Steps to migrate from the version 1.3.2 of Spectra adapter to version 1.4.2 for more information.
  - Article "How to use multiple Security Definition feeds for instrument subscription in MOEX Spectra MD Adapter" has been added.

Fixed bugs:

- SpectraClient Sample processes snapshots incorrectly.

FIX Antenna 2.20.1

July 7, 2017

FIX Antenna .NET v2.20.1 (r204)

MIFID II support

- Timestamps with increased precision can be validated in incoming messages (in UTCTimestamp, UTCTimeOnly, TZTimestamp, TZTimeOnly)
- Timestamps in SendingTime (52), OrigSendingTime (122) are filled with configurable precision (per-session configurable property)
- Public API is extended to operate timestamps with additional precision

Extension Packs

- FIX 5.0 SP2 dictionary has been updated with 217-228 Extension Packs.

Other improvements

- More precise API for getting timestamps is used for MS Windows 10 and higher.

Critical bugs and fixes

- Engine processes message after session is disconnected

FIX Antenna 2.20.0

June 7, 2017

FIX Antenna C++ v2.20.0 (r195)

MIFID II support (FIX Antenna C++)

- Timestamps with increased precision can be validated in incoming messages (in UTCTimestamp, UTCTimeOnly, TZTimestamp, TZTimeOnly)
- Timestamps in SendingTime (52), OrigSendingTime (122) are filled with configurable precision (per-session configurable property)
- Public API is extended to operate timestamps with additional precision

Logging improvements

- *Logging format is changed for a number of cases:*

    Validation Errors

Old Category	Old Format	New Category	New Format
ERROR	Required tag missing [RefSeqNum: 1148, RefTagID: 55, RefMsgType: 6]	WARN	Required tag Symbol (55) is missing in message Indication of Interest (6) with sequence number 1148.

ERROR	Incorrect field data format. Incorrect integer value: '1000000.23' [RefSeqNum: 399, RefTagID: 27, RefMsgType: 6]	WARN	Incorrect integer value in tag IOIQty (27): '1000000.23' in message Indication of Interest (6) with sequence number 399.
ERROR	Incorrect field data format. Incorrect float value: '1.3060876925930742E36' [RefSeqNum: 2412, RefTagID: 44, RefMsgType: 6]	WARN	Incorrect float value in tag Price (44): '1.3060876925930742E36' in message Indication of Interest (6) with sequence number 2412.
ERROR	Tag specified without a value [RefSeqNum: 2691, RefTagID: 699, RefMsgType: 6]	WARN	Tag BenchmarkSecurityID (699) is specified with no value in message Indication of Interest (6) with sequence number 2691.
ERROR	Incorrect field data format. Incorrect field size: 8 [RefSeqNum: 2, RefTagID: 52, RefMsgType: B]	WARN	Incorrect field value size in tag SendingTime (52): [expected between 17 and 30, actual 8] in message News (B) with sequence number 2.
ERROR	Incorrect field data format. Field value does not meet ValBlock conditions. Value: 'X' [RefSeqNum: 2, RefTagID: 54, RefMsgType: D]	WARN	Field value 'X' does not meet ValBlock dictionary conditions in tag Side (54) in message New Order - Single (D) with sequence number 2.
ERROR	Tag specified without a value [RefSeqNum: 2, RefTagID: 115, RefMsgType: 1]	WARN	Tag OnBehalfOfCompID (115) is specified with no value in message Test Request (1) with sequence number 2.
ERROR	Incorrect field data format. [RefSeqNum: 2, RefTagID: 52, RefMsgType: 1]	WARN	Incorrect field data format in tag SendingTime (52) in message Test Request (1) with sequence number 2.

Parsing Errors

Old Category	Old Format	New Category	New Format
ERROR	Tag not defined for this message type. Parsing stopped at column: 63 [RefSeqNum: 2, RefTagID: 11, RefMsgType: B].	WARN	Tag 11 is not defined for this message type. Parsing stopped at column: 63 in message B with sequence number 2.
ERROR	Tag not defined for this message type. Parsing stopped at column: 240 [RefSeqNum: 129, RefTagID: 10, RefMsgType: 6].	WARN	Tag CheckSum (10) must not be present inside repeating group with leading tag 100, but found there. Parsing stopped at column: 240 in message 6 with sequence number 129.
ERROR	Tag appears more than once. Parsing stopped at column: 42 [RefSeqNum: 3, RefTagID: 34, RefMsgType: B].	WARN	Tag MsgSeqNum (34) appears more than once. Parsing stopped at column: 42 in message B with sequence number 3.

General improvement for all other Validation and Parse Errors

Old Format	New Format
[RefSeqNum: *<seqNum>*, RefTagID: *<tag>*, RefMsgType: *<msgType>*]	in tag *<tagName>* (*<tag>*) in message *< msgTypeName>* (*<msgType>*) with sequence number *<seqNum>*.

Other Errors

Old Category	Old Format	New Category	New Format
ERROR	Error during processing Logon message from *<host>*:*<port>*: Cannot find the acceptor for the <<*targetCompID>*, <senderCompID>, <sessionQualifier>> session.	WARN	Error during processing Logon message from *<host>*:*<port>*: Session with SenderCompID=*<senderCompID>*, TargetCompID=*<targetCompID>*, SessionQualifier=*<sessionQualifier>* is not found.
WARN	Incoming message is received which was previously handled. Message is ignored. [RefSeqNum: 3798, RefMsgType: 6]	INFO	Ignoring Incoming message Indication of Interest (6) with sequence number 3798. The message was processed earlier.
INFO	Message was received with SeqNum that was proceed earlier. Message was skipped.	-	*The message was removed since it duplicates the message above*
ERROR	The incoming message has a sequence number (1) less than expected (2) and the PossDupFlag is not set. This indicates a serious error. [RefSeqNum: 1, RefMsgType: D]	ERROR	The incoming New Order - Single (D) message has a sequence number (1) less than expected (2) and the PossDupFlag is not set. This indicates a serious error.

Critical bugs and fixes

The following bugs have been fixed:

- *FIXAntenna fails to restart with persistent session storage with error "Invalid record in index file" (regression)*
- *Decorator-generated code has portability issues on Linux platform*
- *PreparedMessage can have uninitialized memory for the reserved fields*

FIX Antenna 2.19.0

May 4, 2017

FIX Antenna C++ v2.19.0 (r186)

New Features and Improvements

Extension Packs:

- FIX 5.0 SP2 dictionary is updated with EP217 - EP222 Extension Packs

MOEX ASTS Market Data Adapter:

- Access to tag LastUpdateTime (779) of Incremental Refresh (X) message is supported in user-level callbacks.
- Source-specific multicast feeds is supported for Myricom DBL connectivity mode.

Logging improvements

- High-resolution timestamps are supported in session logs as a part of MIFID II requirements. Please see FIX Engine parameters - Storages for details.
- Log level about connection attempt without logon are changed from ERROR to WARN.
- Thread names logging is supported. Please see FIX Engine parameters - Log.File.Format for details.

API improvements

- Public API is extended for Repeating Groups in FIXAntenna C++. Please see How to work with Repeating Groups for more details.

Critical bugs and fixes

The following bugs have been fixed:

- Decorator-generated code has linker issues on Windows platform.
- Tag DeliverToCompID(128) should be populated with value of OnBehalfOfCompID(115) tag of original message in case of session-level reject.
- Recovered orders log increments appears twice in user callbacks in MOEX ASTS Market Data Adapter.

FIX Antenna 2.18.1

February 22, 2017

FIX Antenna C++ v2.18.1 (r154)

New Features and Improvements

MOEX Spectra Market Data Adapter:

- Field SecurityId in messages Security Definition, Security Status of streams FUT-INFO and OPT-INFO now contain instrument ID value, equal to that transmitted via the PLAZA II gateway.

Critical bugs and fixes

The following bugs have been fixed:

- *MOEX Spectra Market Data Adapter* and *MOEX ASTS Market Data Adapter* have compatibility issues.

FIX Antenna 2.18.0

February 20, 2017

FIX Antenna C/C++ v2.18.0 (r149)

New Features and Improvements

MOEX Spectra Market Data Adapter:

- Support of new version of FAST Gate **1.3.0** for Derivatives Market functionality has been added.
- Ability to bind data feeds to specific NIC has been added.

MOEX ASTS Market Data Adapter:

- Support of new version of FAST udp multicast marketdata **4.5** functionality has been added.

Performance:

- Serialization of FAST message has been optimized, performance has been increased 2 times.

Environment Variables:

- Ability to utilize environment variables in configuration files has been added.

Please see How to configure properties with environment variables article for more details.

Other:

- GCC 4.4 (x86) support will be discontinued starting from the next release.
- ANSI C support will be discontinued starting from the next release.

Critical bugs and fixes

The following bugs have been fixed:

- Fixdic50sp2ep.xml dictionary works incorrectly.
- Rounding works incorrectly for very large double price values.
- FIX Engine works incorrectly in case of logs moving.
- Memory leak for transient storage type occurs in the case of non-gracefully terminated session.
- Asynchronous connection for Initiator doesn't work in some cases.

FIX Antenna 2.17.3

December 20, 2016

FIX Antenna C/C++ v2.17.3 (r121)

New Features and Improvements

MOEX Spectra Market Data Adapter:

- Encoding format for SecurityID field for new order log feed has been changed.

Protection:

- Compile- and run-time checks to detect buffer overflows (FORTYFY_SOURCE option of gcc compiler) had been enabled.

Other improvements:

- Affinity mask support in FIXAntenna has been extended for the systems with 64 cores.

Critical bugs and fixes

The following bugs have been fixed:

- Adding a user with a subnet range of IP's within the "Source IP Address" field under the "Security" tab doesn't work in FIXICC.

FIX Antenna 2.17.2

November 25, 2016

FIX Antenna C/C++ v2.17.2 (r108)

Extension Packs:

- FIX 5.0 SP2 dictionary has been updated with 209-216 Extension Packs.

Other improvements:

- FIX session properties HiddenLogonCredentials and MaskedTags have been added to Admin protocol.
- FIX Engine now detects and recovers broken storage on startup.
- Boost symbols have been hidden in Linux .so to avoid compatibility issues.

MOEX Market Data Adapters:

- Dictionary and FAST template have been updated for Spectra FAST gate (supported from version 1.2.3).

FIXAntenna Samples:

- Config and templates have been updated in CmeMdp sample.

Critical bugs and fixes

The following bugs and vulnerabilities have been fixed:

- FIXAntenna won't start when disk space runs out.
- DBL session can't be destroyed in some cases.
- FIX connection reject reason is not logged in some cases.
- Incoming message is considered as garbled in specific conditions.

- [MOEX ASTS Market Data Adapter](#) opens port on only one interface in DBL mode.
- Incorrect path to dictionary in BatsClient configuration file.
- [MOEX Spectra Market Data Adapter](#) can't read initial snapshot.

FIX Antenna .NET v2.17.2 (r108)

Critical bugs and fixes

SimpleClient:

- Send batches doesn't work for FIX 5.0 protocol.

FIX Antenna 2.17.0

August 15, 2016

FIX Antenna C/C++ v2.17.0 (r62)

New Features and Improvements

New compilers support:

- Library for Visual Studio 2015 has been added to Windows package.
- Library for gcc 5.2 has been added to Linux CentOS7 package.
- Library for gcc 6.1 has been added to Linux CentOS7 package.

Extension Packs:

- [FIX 5.0 SP2](#) dictionary has been updated with [197-208 Extension Packs](#).

Performance:

- Performance of massive resend requests has been improved for the case when [persistent storage type](#) is used (1 million messages is resent up to 180 times faster).

[MOEX Spectra Market Data Adapter](#):

- Dictionary and FAST template has been updated for Spectra FAST gate (supported from version 1.2.3).

Other improvements:

- Ability to provide session statistics (number of received messages and outgoing queue size) has been added to FIX Antenna API.
- Platform name has been added to Linux libraries.
- Error description for fast mapping has been improved.

Critical bugs and fixes

The following bugs have been fixed:

- MIT adapter goes to Recovery mode twice on start
- MIT adapter doesn't use the Replay channel
- MIT Adapter leaves TCP sockets open until all ports are busy
- Tag 122 in Sequence Reset (4) message should be same as tag 52 (including milliseconds)
- Property Validation.ProhibitDuplicatedTags = true wasn't applied.

Documentation

- [Engine.properties](#) example was added to /doc directory to the package.

FIX Antenna .NET v2.17.0 (r62)

Critical bugs and fixes

SimpleClient:

- Issue with usage of TLS v1.0 for SSL connection in FIX Client Simulator has been fixed.

FIX Antenna 2.16.0

January 27, 2016

FIX Antenna C/C++ v2.16.0 (r78431)

New Features and Improvements

- CME iLink MSGW support has been added and certified
- CME Drop Copy 4.0 support has been added and certified
- MIT Adapter has been updated to support LSE MIT 303 Level 2 - MITCH Specification 11.6
- ertification for Borsa Istanbul FIX Order Entry and FIX Reference Data interfaces of BISTECH Trading Platform has been passed

Bugfixes

- rash during receiving some invalid FIX messages

Documentation

- CME iLink MSGW and DropCopy 4.0 interfaces support in FA C++

FIX Antenna .NET v2.16.0 (r78402)

New Features and Improvements

- Extended options for "Reset sequence numbers" checkbox in Simple Client have been added

FIX Antenna 2.15.1

December 18, 2015

FIX Antenna C/C++ v2.15.1 (r78090), FIX Antenna .NET v2.15.1 (r74001)

Bugfixes

- Presence of required fields in the message is not checked when using additional.xml
- Bovespa MD Adaptor fails to process chunks when unordered

FIX Antenna 2.15.0

November 3, 2015

FIX Antenna C/C++ v2.15.0 (r77262)

New Features and Improvements

- Support of the updated MOEX FAST feeds for Derivatives (SPECTRA) v.1.2 was added. Note: The new version of Spectra adapter is incompatible with the previous version, more info in the article
- Support of new low latency socket option available in RHEL 7.1 was added to reduce the latency of message receiving
- MOEX FIX/FAST Market Data Adaptor functionality was extended with support of Instrument Status Feed (ISF). New sample allowing subscription to ISF feed is now available in the package
- Enabled support of TLS v1.1 and TLS v1.2 protocols
- New session parameter MaskedTags was added for masking Username and Password values in in/out log files for the messages types A, BE, BF, n

Bugfixes

- The properties in engine.properties file (SSLCertificate = cert.pem; SSLCACertificate = certCA.pem) uses EngineRoot as base if relative path is used
- CQG MD Adaptor: converting CQG FAST 'Y'/'N' values to boolean was fixed
- Reconnection of FIX Initiator session is allowed if SSL is used
- Obsolete Currency tag(15) value for Turkish Lira in FIX dictionaries was excluded
- 1128 tag will be placed to the position right after the tag 35 in case of parsing FAST message to Fix Message

Documentation

- Spectra Market Data Adapter migration guide
- How to use Spectra Application Listener callbacks in FIX Antenna

FIX Antenna .NET v2.15.0 (r77262)

New Features and Improvements

- MOEX FIX/FAST Market Data Adaptor functionality was extended with support of Instrument Status Feed (ISF)

Bugfixes

- MOEX FIX/FAST Market Data Adaptor: onError callback is called in case of the crashes caused by exceptions in callbacks

New Features and Improvements

- Ability to specify application protocol version to parse FIXMessage was added

- Property Session.SenderSubID was added

SimpleClient

- Session rejects (35=3) are visible in EventViewer
- Added an ability to send FIX 5.0+ messages via simple client even if tag1128 is absent

FIX Antenna 2.14.1

July 3, 2015

FIX Antenna C/C++ v2.14.1 (r71668)

New Features and Improvements

- Separated port for admin session in FIX Antenna - administrative sessions will be accepted on this port only
- MOEX MD Adapter can apply partial snapshot

Documentation

- Separated port for admin session in FIX Antenna

Bugfixes

- DynamicFixMessage object should serialize the field 1128 in the position right after tag 35
- The value of id attribute of the block <connection id="<XXX>" > should be used to identify a connection in MOEX MD adaptor
- MOEX MD Adapter should allow recovery from early snapshots which has the tag 83=0

FIX Antenna .NET 2.14.1 (r71644)

Bugfixes

- Support all session states in FA.NET

FIX Antenna 2.14.0

April 9, 2015

FIX Antenna C/C++ 2.14.0 (r70487)

New Features and improvements

- The API for assigning CPU affinity masks for working threads has been introduced

Documentation

- How to Configure FIX Sessions with engine.properties File
- How to configure Micex MDApplication for April templates

Bugfixes

- Broken symlink libV12.so in FIX Antenna packages (Linux)
- MICEX Market Data Adapter: TCP Replay request is rejected with the error "Requested range is invalid"
- Typos and broken links in online documentation has been fixed
- Cyclic switch to backup/primary connection has been fixed
- Sending reject for garbled message has been fixed
- MICEX Market Data Adapter: onRecoveryStarted/onRecoveryStopped are called in the wrong order
- FIX Session latency degradation in aggressive mode against 2.12 version
- SpectraClient and FortsClient: "_10" suffixes in binaries filenames has been removed
- Throughput/Sender: unexpected error has been fixed
- Throughput: bad allocation in case 3+ sessions has been fixed
- Fast_QuickStart: segmentation fault has been fixed
- MDP 3.0 Sample: Red Hat 7 is supported now

FIX Antenna .NET 2.14.0 (r70479)

New Features and improvements

- SimpleClient: SSL support
- SimpleClient: in case there is only one session connected, all messages will be sent to it by default

Documentation

- How to use SSL with FIX Antenna C++ and FIX Antenna .NET (the section for FIX Antenna .NET has been added)

Bugfixes

- SimpleClient: the sample can't handle Logon response if ForceSeqNumReset option is on
- SimpleClient: the possibility of copy text from the Events Viewer has been fixed
- SimpleClient: "Batch Send" button has been fixed if more then one session is used
- SimpleClient: characters in the utf-8 encoding is translated incorrectly
- MDP 3.0 .NET: the "open channel_id" command doesn't work

FIX Antenna 2.13.1

March 23, 2015

FIX Antenna C/C++/.NET 2.13.1 (r70228)

Bugfixes

- FIX Session latency degradation in aggressive mode against 2.12 version
- Crash when switch to FIX session backup connection
- Broken symlink libV12.so in FIX Antenna packages (Linux)
- SimpleClient sample can't handle Logon response if ForceSeqNumReset option is on (.Net)
- MICEX Market Data Adapter: TCP Replay request is rejected with the error "Requested range is invalid"

FIX Antenna 2.13.0

February 24, 2015

FIX Antenna C/C++/.NET 2.13.0 (r69667)

New features and improvements

- SSL support
- Packaging: FastCodec has been packaged into main FIX Antenna package. We will not release a separate package for FastCodec any more.
- New OS support:

  - CentOS/RedHat 7
- New compilers support:

  - Libraries for MS Visual Studio 2013 (x32&x64) in Windows package
  - Libraries for gcc48 and gcc49 (x32&x64) in Linux CentOS7 package
- New Market Data Adaptors:
  - Book management API for CME MDP 3.0 Handler
  - MOEX Spectra FAST gateway adaptor
- Myricom DBL emulator
- FIX Sessions:

  - Session::put now can handle multiple FIX messages at a time
  - Compatibility with FixAntenna 2.8 dictionaries
- FAST Sessions:
  - "bool->string" conversion is now configurable
- New API have been added:
  - Method: Engine::PreparedMessage::initField
  - Method: Engine::PreparedMessage::setMsgSize
  - Method Engine::PreparedMessage::setMsgStart
  - Class: System::Thread
  - Class: System::HRTimer
  - Class: Utils::RefCounter
  - Class: Engine::FastCodec

Changes

- Exe installer is not available from this version. Package is redistributed as zip or gzip archive
- Password in Logon messages in.in/.out log files are now masked with asterisks

New features and improvements in Market Data Adaptors

- Bovespa: onSecurityStatus callback
- MDP 3.0: Myricom DBL UDP support
- MDP 3.0: Book Management API
- Millenium IT ITCH Adaptor: InstrumentID is passed to the user in onItchMessage callback
- Millenium IT ITCH Adaptor: Ability to configure periodic replay/recovery timeouts has been added (disabled by default)

- **MICEX Market Data Adapter**: Support for changes in the Market Data streams, which are planned to be launched in April 2015 (RUS_Market_Data_Multicast_User_Guide_Ver_4_0_2.pdf)

Documentation

- Documentation for Millenium IT ITCH Adaptor
- Documentation for CME MDP 3.0 Handler
- Description for log record format in sample engine.properties file
- Description for 'Trace' log severity in sample engine.properties file

New in the Samples

- New FAST Codec samples were added to FixAntenna distribution package in folder "FastCodec":
    - BovespaDecoder
    - CmeQuickStart
    - CqgQuickStart
    - FastCodecBenchmark
    - FastCodecQuickStart
    - FastDecoder
    - RtsQuickStart
    - SWXFastDecoder
- MDP 3.0 low-level API sample - C++ and .NET

Bugfixes

- Millenium IT ITCH Adaptor: Incorrect run recovery process if a message was missed in a channel
- MDP 3.0: Incorrect outright book
- MDP 3.0: CmeMdpClient crashes after the second subscription on the same instrument
- ConnectToGatewayEx sample: incorrect tag value in test messages
- Missed "logs" and "backup" folders from samples in zip packages
- Some samples .sh files doesn't have X permissions (Linux)
- MitClient sample .sh files contains bad symbol (Linux)
- "Tag is not defined" error for FIX group with large tag number
- Typo in error message "Sender/Target differs from expected in recieved message"
- Millenium IT ITCH Adaptor: Relpay recovery is triggered every hour by time out
- SWXFastDecoder sample "integer in the stream does not fall within the bounds" error on Linux
- Log.File.Recreate property doesn't work

FIX Antenna .NET 2.13.0 (r69612)

Changes

- Exe installer is not available from this version. Package is redistributed as zip or gzip archive

Bugfixes

- Wrong default values in sample engine.properties
- Garbled message inside iLink sample
- Incorrect templates for Bovespa sample
- SimpleClient can't handle Logon response with seq num reset
- Missed x86 samples for Benchmarks
- Missed "logs" and "backup" folders from samples in zip packages
- Bovespa sample: Attempted to read or write protected memory

New in the Samples

- CmeMdpClientHighLevel was removed as obsolete
- CmeMdpClient was removed as obsolete
- CmeMdpMessageClient was added

FIX Antenna 2.12.0

October 20, 2014

FIX Antenna C/C++/.NET 2.12.0 (r68047)

New features and improvements

- Packaging: many separate platforms were combined in a single package. Now there are only one Windows (x32&x64, VS 10&11) and one Linux (x32&x64) pakages
- New Market Data Adaptor have been added:
    - CME MDP 3.0 Handler
    - Millenium IT ITCH Adaptor (http://www.millenniumit.com/)
        - Implementation for London Stock Exchange (LSE)
        - Implementation of Johannesburg Stock Exchange (JSE)

- FIX Sessions:
    - Ability to send ResetSeqNumFlag field in the custom Logon message has been added
    - Method MsgStorage::getCreationTime has been added (C++ only)
    - Method UTCTimestamp::dayOfWeek has been addded (C++ only)
- FAST codec:
    - New class 'FastMappingOptions' has been introduced to provide customization of types conversion rules; customization of conversion 'char'/ 'bool' has been implemented

Changes

- FIX XML Dictionary file validation: check for unknown fields inside 'update' section has been added
- Property **Log.File.Backup.Dir** is now set to **%BackupDirectory%** if empty or not defined in engine.properties file
- Empty tail of persistentMM message storage file (for incremental file mode) is shrunk now after session termination.

New in the Samples

- MICEX_MdScanner config files location has been fixed (Linux)
- MICEX_QuickStart config files location has been fixed (Linux)
- FastCodecBenchmark executable filename has been fixed
- Bug with "pure virtual call" in the Session Qualifier sample has been fixed
- Default values of options have been set to more appropriate values in the default 'engine.properties' configuration files
- BovespaClient
    - The 'bovespa.properties' configuration file has been added
    - Parameters for TcpReplay can be configured in the 'bovespa.property' file
    - BovespaClient executable, missing in BovespaClient sample, has been added (Linux)
- BovespaDecoder
    - Decoding large messages (>140 000 symbols) into FIX has been fixed

Documentation

- Documentation for MessageStorageType and UnderlyingProtocol has been corrected
- Documentation of the Persistents.LogIncrementSize and Persistents.IdxIncrementSize parameters has been extended
- Documentation for UTCDateOnly and UTCTimeOnly has been extended
- Session state chart has been updated
- Requirements page has been updated

Bugfixes

- Memory access violation in the FIXMessage::toRaw and toString methods has been fixed.
- Reading corrupted storage file when last stored messages is allocated at the end of file has been fixed. Now restoring after failure is more safe.
- Log messages backup delay was calculated incorrectly. Integer value overflow has been fixed
- Crash during verification empty 'DayOfMonth' value has been fixed

FIX Antenna .NET

New featuress and improvements

- Add the method GetReceivedMessages into Session interface, update for vs 2012
- Add Session.StorageCreationTime, Session.IsStorageExpiredUtc, and Session.ResetStorageIfExpiredUtc methods/properties
- Check version of the V12.dll and raise exception if FIX Antenna .NET assembly version is different.

Bugfixes

- Pin FixMessage object in the Session callbacks to prevent GC to destroy them.

New in the Samples

- Support of all message storage types has been added to SimpleBenchmark sample
- Support of command line parameters in run.bat has been added to SimpleBenchmark
- ForceSeqNumReset is set to ALWAYS in all benchmarks to fix issue related to recoveries on test restart start.
- Startup of MICEX sample has been fixed
- BovespaClient: the fast templates file has been updated
- Paths in 'run.bat' and 'engine.properties' files have been corrected for samples

Documentation and Samples

- Documentation for AfterMessageIsReceivedEventArgs::Msg field has been fixed
- Documentation of the Statistics class has been extended.
- Documentation for methods Session::Put() and Session::connect() as initator has been extended
- Documentation of the ConstFieldValue has been extended

FIX Antenna 2.10.16.4

August 21, 2014

FIX Antenna C++/.NET 2.10.16.4 (r66359)

The update 4 to version 2.10.16.0. Main updates are:

- Added support of LME session: password encryption according to LME requirements has been implemented.
- When creating FIX logs file names, special characters in sessions Target/Sender CompIDs are replaced with their ASCII codes. All characters except letters and numbers are considered as special ones.
- Improovements in custom FIX parsers handling
  - Added a method for getting list of registered custom FIX parsers and protocols.
- Market Data Adapters:
  - MICEX
    - The issue with arbitrary recovery starting has been fixed.
  - Bovespa
    - The issue with incorrect prices parsing in Equity snapshots / increments has been fixed.
  - CQG
    - Subscription by SecurityID has been added

FIX Antenna 2.10.16.3

July 24, 2014

FIX Antenna C++/.NET 2.10.16.3 (r65944)

The update 3 to version 2.10.16.0. Main updates are:

- Allow user to send ResetSeqNumFlag field in the custom Logon message.
- The properties 'ProhibitTagsWithoutValue' and 'VerifyTagsValue' are now supported for repeating groups.
- Bugfix: Crash when creating an Unregistered Acceptor has been fixed.
- FIX message format extension: allow 0 in Raw Data Length field if Raw Data field is empty.
- Market Data Adapters:
  - MICEX
    - Bugfix: TCP replay cannot start.
  - Bovespa:
    - Bugfix: BovespaClient doesn't display order book correctly

FIX Antenna 2.10.16.2

July 10, 2014

FIX Antenna C++/.NET 2.10.16.2 (r65772)

The update 2 to version 2.10.16.0. Main updates are:

- Crash in sessions dispatcher has been fixed.
- additional.xml files in samples have been corrected (duplicated items have been removed)
- MMFileMsgStorage::retrieveLocal() has been fixed (failure when index file is full)
- CQG Market Data Adaptor:
  - MDApplication::unsubscribeBySecurityID method has been added
  - onSecurityDefinitionListComplete() now called after all SD feeds completed security definitions loading
  - Hang when one feed is unavailable has been fixed
  - Feed ID in SDResolver log messages has been added
  - Crash when multiple feeds are used has been fixed

FIX Antenna 2.10.16.1

June 4, 2014

FIX Antenna C++/.NET 2.10.16.1 (r65111)

The update 1 to version 2.10.16.0. Main updates are:

- Samples have been updated:
  - FastCodecBenchmark sample (project name has been fixed)
  - BovespaQuickStart (dictionary has been updated to the latest venue's spec)
  - MICEX_QuickStart (post-build xml files copying has been fixed)
  - FastCodecBenchmark (dictionary has been updated)
  - b2b_bovespa_client sample for Linux has been added

- MICEX_MdScanner sample has been fixed: config files have been moved to /bin folder
- CQG Market Data Adaptor:
  - MDApplication::subscribeBySecurityID method has been added
  - Bugfix: MDApplication cannot re-subscribe to instruments after book reset
  - Bugfix: OnSubscribed event should not be called on Resubscription after book reset
  - Bugfix: CqgChannelProcessor::unsubscribeAll should clear instruments set
- FIX Antenna .NET:
  - Session::GetReceivedMessages method has been promoted to .NET API
  - Check version of the V12.dll and raise exception if FIX Antenna .NET assembly version is different.

FIX Antenna 2.10.16.0

May 21, 2014

FIX Antenna C++/.NET 2.10.16.0 (r64792)

New features and improvements

- Session Qualifier has been added to provide the possibility to create several sessions with same Sender/TargetComID pairs.
- New sockets dispatcher on Linux to minimize latency spikes in messages sending/receiving. (see Threads configuration::Linux) documentation for details. (C++ only)
- Performance of `PreparedMessage` class has been improved
- New session parameters:
  - `UseBlockingSockets`. If true, session will use blocking I/O. This mode is usefull for OpenOnload and enabled if aggressive mode is ON. `Engine::SessionExtraParameters::aggressiveReceiveDelay_` is used as timeout parameter.
  - `LogonMessageSessionQualifierTag`. Defines field which would be used by Dispatcher to bind incoming connection with registered Acceptor session.
  - `EnableFastScp`. Defines either FAST SCP should be used by FIX-over-FAST TCP session.
- New Engine parameters
  - `EnableDnsEntrySpoofingDetection`. When it's set to true there is being enabled backward resolve based DNS entry spoofing detection mechanism in DNS related functions
  - `Dispatcher.SendWorkersCount`. Defines number of workers to handle outgoing messages.
  - `Dispatcher.RecvWorkersCount`. Defines number of workers to handle incoming messages.
  - `Dispatcher.SendWorkersTimeout`. Defines number of milliseconds to wait for readiness of the socket to send data.
  - `Dispatcher.RecvWorkersTimeout`. Defines number of milliseconds to wait for readiness of the socket to receive data.
- New API (only in C++):
  - `Session::parse`
  - `Session::waitForTerminated`
  - `PreparedMessage::getMsgSeqNum`
  - `PreparedMessage::getCheckSum`
  - more operators have been added to Engine::Decimal class
- New config-file parameters:
  - nicConfig for MOEX MICEX adapter
- Market Data Adapters:
  - Bovespa:
    - `BovespaApplicationListener` class has been published in `B2BITS_BovespaApplicationListeners.h` (C++ only)
  - CME
    - templates.xml file has been updated according to the latest spec
  - MICEX
    - The issue with NIC teaming has been fixed
  - The description for `RR_PACKET_ORDER` and `RR_OVERFLOW_REASON` enumeration values for Bovespa, CQG, and CME Market Data Adaptors has been added (C++ only)
- Add `B2B_LIKELY` and `B2B_UNLIKELY` macros. Macro allows programmer to mark most possible hive of the if/else statement to let compiler improve branch prediction (C++ only)

Changes

- `persistentMM` storage has been changed to close mapped region before reopening new one
- `Session::putAsIsNoLock(PreparedMessage)` does not update CheckSum field anymore
- Utils::bind now accepts const and ancestors (C++ only)
- Conversion constructor from StringEx has been removed (C++ only)
- B2BITS_FIXEnums.h: CS enumeration value value has been replaced with B2B_CS (C++ only)
- Statistics class methods have been marked as deprecated. Statistics is disabled because of performance impact.
- `FIXMessage::isEmpty/hasValue` for RawDataLength now returns true if corresponding RawData field is not empty

New in the Samples

- Bovespa C++ sample: The support of DeleteThru and DeleteFrom instructions has been added
- New SessionQualifier sample
- Now user can pass command line parameters to CMEGlobexClient via run.bat file
- Latency C++ sample: session settings have been moved to the engine.properties file
- Fix incorrect type of argument to `printf` in the `Thread.cpp`

Documentation

- Search has been added to FIX Antenna C++ documentation
- Some sections have been improved
- Update requirements to compiler and OS (FIX Antenna .NET, FIX Antenna C++)
- Add Threads configuration section
- Add Session configuration section
- Improve documentation of `NumberOfWorkers` parameter.

Bugfixes

43 bugs have been fixed. See VersionHistory.txt for the complete list.

FIX Antenna .NET

- The following APIs of FIX Antenna C++ now available in .NET as well:
    - `Session::LocateSentMessage` method
    - `Session::LogoutEventArgs::ReconnectFlag` fileld
    - `SessionExtraParameters::UseAsyncConnect` field
    - `Session.LogonEventArgs.LogonAction`: Add option to reject incoming connection with Logout message.
- Dependency on boost_thread library has been removed
- FIX Engine core is now linked to FIX Antenna .NET dynamically.
- Fix documentation error for Bovespa, Micex, Globex namespaces
- for 5% of Bovespa Equity the snapshot comes wrong (i.e. bid/ask/last could be evaluated at 23000 when true price is 10.25). This issue occurs with or without DBL.

FIX Antenna 2.10.15.6

April 1, 2014

FIX Antenna C++/.NET 2.10.15.6 (r63622)

Improvements:

- SessionQualifier field in Logon Message has been made not obligatory for sessions with Session Qualifier

FIX Antenna 2.10.15.5

March 19, 2014

FIX Antenna C++/.NET 2.10.15.5 (r63380)

New features:

- FIX Antenna .Net: Session::LocateSentMessage(int msgSeqNum) method has been added
- SessionId structure which includes Session Qualifier has been added
- Session Qualifier sample has been added in FA C++ package
- MICEX Market Data Adapter:
    - NIC teaming isues has been fixed

FIX Antenna 2.10.15.4

March 7, 2014

FIX Antenna .NET 2.10.15.4 (r63043)

Bugfixes:

- SessionExtraParameters.SocketPriority getting wrong params has been fixed

Improvements:

- [FA-NET] Fix warning "FixEngine::CreateSession(...) "MessageStorageType storageType"

    parameter is deprecated. Please use SessionExtraParameters::storageType instead."

FIX Antenna 2.10.15.3

December 30, 2013

FIX Antenna C++/.NET 2.10.15.3 (r60027)

New features:

- MICEX Market Data Adapter:
    - Ability to specify NIC for feed subscription for DBL.

FIX Antenna 2.10.15.2

November 28, 2013

FIX Antenna C++/.NET 2.10.15.2 (r59512)

New features:

- MICEX Market Data Adapter:
    - Ability to specify NIC for feed subscription.
    - Feed reset detection by seqnum's order.

Documentation:

- MICEX Market Data Adapter:
    - Recovery modes have been described

Bugfixes:

- Daylight saving time offset has been fixed.
- Exception in Admin application has been fixed (array index out of range)
- Resend requests have been fixed

Improvements:

- MICEX Market Data Adapter:
    - Filtering MDEntries has been optimized

FIX Antenna 2.10.15.1

October 17, 2013

FIX Antenna C++/.NET 2.10.15.1 (r58020)

New features:

- CBOE CMi2: Converting of session error codes to string description has been implemented.

Bugfixes:

- 100% CPU usage on Linux in the AGGRESSIVE_RECEIVE mode has been fixed
- Memory access violation in the MarketDataStorage in Bocespa sample has been fixed
- Performance fix for RecorsdStorage

FIX Antenna 2.10.15.0

September 23, 2013

FIX Antenna C++/.NET 2.10.15.0 (r56916)

Improvements:

- Latency of the incoming message processing is improved
- FIX-parser performance has been improved
- FIX Session logging has been improved

New Features:

- PreparedMessage::set(int, AsciiString) method is added
- Engine::String class is added which extends std::string with some useful methods.
- Engine::StringRef typedef is added. Synonym of the AsciiString
- Engine::WStringRef typedef is added. Synonym of the WideString
- FixEngine::getSession() method is added
- SequenceGapEvent::requestLostMessagesFlag_ field is added
- Option to call Session::put in any state (for some cases rejecting does not work) is added
- Option to split resend request (SessionExtraParameters::resendRequestBlockSize_) is added
- Support of VS2012 in Decorator has been added
- Samples solution files is updated to VS2012
- ConnectPort session parameter is added
- FixEngine::createFastCoder with SCP parameter is added
- Support of the FIXT11, FIX50, FIX50SP1, FIX50SP2 protocols to the FAST session is added
- MICEX Market Data Adapter:
    - Feed identifying parameters is added to OnCompleteMessageProcessing callback
    - TargetCompId is added to application parameters
    - Myricom DBL support
    - Board support in callbacks
- CME Market Data Adapter (Globex):
    - Option to receive data for feeds A and B on separated network cards (Sockets) is added
- Bovespa Market Data Adapter:
    - A call to AppListener::process on all non "X" "W" messages from increment channel is added
- CQG Market Data Adapter
    - Loading UseTCPRecovery property from config is added
    - Calling OnError for non exists instruments is added

Changes:

- Session is changed to Send Logout message instead of connection closing on critical error
- Parameter "localPort" is added to SessionsManager::onIncomingConnection handler
- It is forbidden to call Session::disconnectNonGracefully withing Application::onLogonEvent callback. Behavior is not defined. LogonEvent::logonAction_ should be used to reject connection (for Acceptors only).
- Engine::String is renamed to StringEx
- MockDataReader is renamed to GlobexMockDataReader
- pushPCAP method is now a template function in public header: B2BITS_MockDataReaderPushPcap.h
- FIXMessage::type now returns empty value if message is not defined in the FIX dictionary
- Session does not send Resend Request message in case of gap after reconnect
- HeartBtInt field is made optional

Bugfixes:

- "Send Message" command in Admin protocol
- Session incorrectly processes Logon with 141=Y
- Session does not switch to the NON_GRACEFULLY_TERMINATED state if connection is rejected by user
- Memory access violation caused by FD_SET function on Linux
- Exception in the FIXSessionsMgr if session is destroyed
- Decorator: Field::isSet and Field::isEmpty methods return incorrect result
- Message storage is reset incorrectly when IntradayLogoutTolerance is on
- MICEX Market Data Adapter:
    - Snapshot processing.
    - Tag 336 value acquisition in heavily multi-threaded environment
- CQG Market Data Adapter
    - Incorrect empty seqNum detection
    - Parsing of messages from incremental channel
    - Applying log dir for binary files

Critical bugs and fixes

- Engine processes message after the session is disconnected