

ASTS Bridge Changelog

(+ – new feature, o – changes, ! – bug fix)

4.4.2 (build 1215)

- + Added support for OpenSSL gen. 3 via the TaurusTLS library to enhance reliability and ensure compatibility with modern encryption standards.

4.4.2 (build 1214)

- + Java API (v1.6.3):
 - Optimized data bit-width detection logic: server queries are now made only when local cache lacks required data;
 - Added method to retrieve exact error codes from the trading system: now displays a specific error code rather than a generic error message.

4.4.2 (build 1213)

- + Added a debug version of the bridge, ASTSBridge_Eurekalog.exe, for Win64.
- o Improved error logging on the server.
- o Updated the libmustang.so library to version 5.0.1.3:
 - Removed limitation on the maximum number of queried network interfaces;
 - Modified logic for detecting network interface IP addresses: search for secondary IP addresses is now performed without requiring a label.
- ! Fixed synchronization for multi-threaded access to the list of log files.

4.4.2 (build 1211)

- ! Fixed an Access violation error that occurred when the log file could not be created.

4.4.2 (build 1210)

- + Support for Memo field type in transactions with variable number of fields on the Standardised OTC derivatives market.
- ! Fixed a connection error when specifying a small bridge buffer size.

4.4.2 (build 1208)

- + astsbridge_linux supports the work with Validata Client L.

4.4.2 (build 1203)

- + astsbridge_linux with support of server application for linux-based OS. It is required to install openssl package of version 1.1.
- + The new MEMO (varying-length string) field type is added. The field format in the tsmr/mustang

buffer: <Length: Char(N)><String_Characters>.

- + Java API (v.1.6):
 - Support for new Memo field type
 - New connection method Client.connect(...) returns extended result report (trailers)
 - New transaction performance method Client.perform(..), returns extended performance report.
- + .NET (v.1.4): Support for new Memo field type.
- + TEClient: USER_HEARTBEAT transaction may be performed repetitively.
- o The "network read error 10054" error is not logged in the process of client balancing.
- ! Error fixed for SEC_CHANGE fields that are starting with '+' symbol.
- ! Fixed error of possible mutual blocking of bridge threads.

4.4.1 (build 1198)

- + MTEGetServInfo function may return new value in Connected_To_ASTS field: -1 – connected to production environment while test trading session is in progress.
- + Added support for digital signature validation by Validata crypto servers and feature to choose using of local cryptography.
- ! Java API: fixed formatting error for values of ftFloatPoint type in transactions.
- ! Fixed "Access violation error" while adding different Validata profile for connected clients.

4.4.0 (build 1195)

- + Added support for Validata CSP version 6.
For new profiles created in this version prefix zpki: should be specified in the *Signing.ProfileName* parameter of the *MTEConnect()*.
Validata CPS version 6 does not support channel encryption anymore.
- + Added support for TLS 1.2 channel encryption.
To turn on TLS 1.2 channel encryption pass the new *Encrypt=Any* parameter to the *MTEConnect()*.
- o "Reject unsecured connections" option may be enabled without "Secure connections with OpenSSL" option while adding or editing connection profile if specified "Validata" profile supports xpki / rpki encryption.
- ! Fixed XSS vulnerabilities in HTTP monitoring.
- ! Java API: fixed error causes unexpected crush of ASTS Bridge.

Attention: the JNI library mtejni.dll/libmtejni.so must be upgraded.

4.3.7 (build 1187)

- + Maximum size of tables transmitted between mtesrl.dll and ASTS Bridge has been increased twice to 2000 Mb.
- o The "Send LOGOFF for idle clients" checkbox has been added to the "Advanced" tab of the BridgeConfig main window. Checkbox is set to "Yes" by default.

4.3.7 (build 1185)

- + The new JumboSize parameter added to the MTEConnect() for Mustang transport only, that allows to receive enlarged data packets from Trading System.
- o Client library .NET API v.1.2.1.16 updated: MessageSet field added to Client class.

4.3.6 (build 1180)

- + "Transport library" and "Direct connect" options are added to the bridge settings.
- + The bridge can work in tech.center mode with RFS and AGRO trading systems.
- o HTTP-monitoring:
 - average full processing time is logged (Avg. full time);
 - the list of all today clients is available by the /allclients URL.
- o ASTSClient:
 - connection to the TS takes less time: the Securities table is loaded with *complete=false* mode;
 - transaction entry dialog:
 - negative values are enabled in numeric fields;
 - alternating field coloring added;
 - only unique security codes are listed in Security combobox (without board), all boards are listed in Board combobox;
 - "Price" fields are marked with red if no decimals can be determined for the security.
- ! Fixed slowdown at the stock market opening in tech.center mode.
- ! Fixed incorrect AVGDLL/MAXDLL timings in mtesrl-stats log file.

4.3.6 (build 1176)

- + Extended key usage control is turned off for certificates issued after 07/01/2020.
- o Client libraries updated: Java API v.1.3.5, .NET API v.1.2.1.
- o Linux 32-bit shared libraries are removed from the package.
- ! Fixed loading of client codes table for all firms.

4.3.5 (build 1167)

- + Validata list of recalled certificates is updated at bridge start and at midnight, when date is changing. Use --nocrlupdate command line argument to disable the recalled certificates list update.
- + New MsgSetNumber field is added to MTEStructureEx function reply (with Version=4) to indicate Message Set number in Trading system.
- + Java library updated:
 - new option to process received buffer directly without copying. To enable feature upgrade **mtejni.dll** library.
- + .Net libraries updated:

- new Index field is added to Meta.Field;
- new mode to read mtesrl buffer directly when parsing a message. To enable directly reading mode set Parser.AutoDetach=false option. To force copying buffer use Parser.Detach function.
- + New 'Host name' parameter is added to the BridgeConfig monitoring settings. When specified then access to monitoring page will be granted only if HTTP-header "Host" contains the specified server name.
- o Connection settings for FX market UAT environment Clearing system are added to the default configuration file.
- o TEClient: new option to switch on/off automatic SYSTIME table request (heartbeat emulation) to Trading system.
- ! Bug fixes in Java library:
 - fixed NullPointerException error when connection is lost.
- ! Fixed loading of profiles created with Certificate Store 6.0 software.
- ! Fixed high memory consumption on high-level logging in mtesrl.dll (LOGGING>=5) and when opening huge tables (e.g. RM_INDICATIVE).
- ! EXCHANGETURNOVER table now loads correctly if more than 99 boards have been selected.

4.3.4 (build 1156)

- + Connects to the trading and clearing systems, made with the same user ID, are considered as a single client session. Thus, you can establish 8 connects to the trading system plus 8 connects to the clearing system through one instance of ASTSBridge.

4.3.3 (build 1155)

- + Access to server log files through web interface.
- + New extended Java example – asts-export.
- + When the cancel on disconnect function is set for a user in the trading system, in order to avoid disconnection while opening large tables it is now possible to send a USER_HEARTBEAT transaction before calling the MTEOpenTable function. The function will then keep connection alive while loading a table.
- + Binary files are now signed with a Symantec certificate.
- + Support of the new encryption algorithm (RSA) SHA-2.
- o The '0:00:00' value of the Bridge shutdown time now means shutdown at midnight instead of the earlier 'not specified' interpretation.
- o .NET libraries are compiled for both Framework 4.5.1 and .NET Standard 2.0.
- o Changes in search path for TSMR transport library:
 - Windows: tsmr.dll should be in the same folder as mtesrl.dll
 - Linux: search for libtsmr.so is first performed in LD_LIBRARY_PATH, then in the same folder as libmtesrl.so.
- ! If the Bridge shutdown time specified in settings is less than the time when it is started then the Bridge will shut down at this time on the next day (in earlier versions it could not be started in this case).
- ! Fixed bug with MICEX Trade terminal autoupdate when connected through the bridge.
- ! Fixed counter of user connections when multiple users send simultaneous connection requests.
- ! Improvements and fixes related to electronic certificates.

- ! If a Validata profile has leading or trailing spaces in its name then it cannot be loaded. Double quotation marks can now be used to fix that: ProfileName="xpi my profile ".
- ! Bug fixes and improvements in Java libraries:
 - error when opening empty orderbooks;
 - support for Cyrillic characters in transactions;
 - exception when processing FloatPoint fields containing NULL;
 - support for transactions with variable number of fields;
 - Meta.Messages object instances can now be iterated;
 - setSnapshot() call restores internal list of tables, that should be updated in refresh() call;
 - new getSnapshotInfo() call returns list of tables, stored in the given snapshot.

Attention: when upgrading the mte-client and moex-utils libraries the JNI library (mtejni.dll/libmtejni.so) must be upgraded too.

4.3.2 (build 1144)

- + 64 bit version of ASTSBridge.exe added to the package (Windows only).
- + .NET library and example.
- o All logs are now in UTF8 character encoding.
- o Updated Java library.
- o Support of up to 128 network interfaces on a single server, including IP aliases, instead of 32.
- o The new Validata.Type parameter added to the MTEConnect() function to specify the cryptography provider when using the Validata.BasePath and Validata.LdapPath parameters (refer to documentation for more details).
- o End of support of the old 'mtesrl' libraries. The oldest supported version is 4.1.1.1119.
- o When ASTSBridge.exe is started as a service changes in configuration are no longer applied on the fly.
- o If a trading system gives several replies to one transaction sent with the MTEExecTransEx function then the individual return code is specified for each reply. In previous versions each reply returned the same code that reflected the function processing result. For example, the rejected ORDER_AMEND transaction will now look like: REJECTED "(900) Amend not allowed for partial matched orders" and OK "(210) 1 order(s) with total balance 49 withdrawn, 0 order(s) not withdrawn".
- ! Internal multithreading optimization in ASTSBridge.exe to improve system resources consumption.
- ! Bridge server can now be registered as a Windows service with arbitrary name, including the name with hyphens.
- ! When registering the Bridge server as a Windows service now it is not required to give the full path to the configuration file. If the path is omitted then the current folder is used.
- ! The DirectConnect option in tsmr.ini did not work in the embedded version of the client library.
- ! Wrong date was written to log files after the midnight.
- ! The error message "[055] Transaction sent time differs more than a minute from the bridge local time. Transaction is rejected." no longer appears after the server time adjustment.