

Appendix 1: Configuration specification for MQ A2A connections

This appendix describes the parameters required to establish an MQ connection as part of A2A communication with the KDPW and KDPW_CCP services, indicating changes compared to the previous configuration and covering modifications made in the first stage of the project. Elements requiring changes compared to the previous parameters have been highlighted in bold print and underlined.

Establishing A2A connections

- Issued and downloaded certificates for A2A communication will be used to communicate with all services where A2A communication is foreseen and where the entity is acting under the institution code assigned to the certificate. The certificate will enable the establishment of encrypted TLS communication and authentication within the MQ communication channels dedicated to the institution code.
- At A2A communication level, communication will be separated by service supported by the KDPW Group's dedicated IT solutions. This means that dedicated MQ queues will be created for each service (separately for each direction of information exchange).
- The separation of communication under an institution code will involve separate queues for A2A communication for the following services where A2A communication is available (queues will be configured only for entities actually acting and using A2A communication in the service):
 - EMIR – EMIR Trade Repository reporting services (until REFIT deployment)
 - ETR – EMIR Trade Repository reporting services (after REFIT deployment)
 - ARM – ARM reporting services
 - SFTR – SFTR Trade Repository reporting services
 - LEI – LEI issuance automation services
 - CSD – services provided within the depository and settlement system
 - ICS – Compensation System services
- The separation of communication within the services of the KDPW Group companies, particularly the separation of KDPW_CCP services based on a separate electronic certificate and connection parameters, including separate queues for A2A communication for the KDPW_CCP services:
 - CCP – KDPW_CCP clearing services

Technical connection parameters

- The following minimum requirements are expected as the security standards for telecommunications connections using VPN/IPSec technology:
 - Communication protocol – **IKEv2/IPSec (ESP)**
 - Integrity (Hashing Algorithm) – SHA-256
 - Encryption Algorithm – AES-256
 - Key exchange – Diffie-Hellman Group 19
- Parameters of MPLS network (unchanged from the previous settings):
 - Network type – L3
 - Routing – BGPv4

MQ connection and communication parameters used for connection based on ESDK protocol

- MQ manager name for A2A communication with KDPW services:
 - Name for PRD and BCM environments – **A2AEPRD**
 - Name for EDU and TST environments – **A2AETST**
- MQ manager name for A2A communication with KDPW_CCP services:
 - Name for PRD and BCM environments – **CCPA2AEPRD**
 - Name for EDU and TST environments – **CCPA2AETST**
- TCP/IP addressing **will differ from currently used** - IP addressing and port numbers will be indicated later.
- MQ manager configuration attributes different from the IBM default values:
 - CCSID – 819
 - MAXMSGL – 104 857 600
 - VERSION – **09030015**
- MQ channel name schema - **prefix.senv.code.con**:
 - prefix – MQ channel name prefix:
 - A2AE – KDPW services with ESDK protocol
 - CCPA2AE – KDPW_CCP services with ESDK protocol
 - senv – environment name (PRD, EDU, TST, BCM)
 - code – participant code
 - con – connection type:
 - C – server connection (*SVRCN) for client-to-server,
 - KP – KDPW-Participant for server-to-server, receiver (*RCVR) on Participants' end,
 - PK – Participant-KDPW for server-to-server, sender (*SDR) on Participants' end
- MQ channel configuration attributes different from the IBM default values:
 - COMPMMSG – ZLIBFAST
 - DISCINT – 6000
 - MAXMSGL – 104 857 600
 - SSLCIPH – **TLS AES 256 GCM SHA384**
 - SSLPEER – Common Name (CN) of the certificate of the other party in the connection
 - PRD environment – CN=**A2AEPRD** (for KDPW_CCP services CN=**CCPA2AEPRD**)
 - EDU environment – CN=**A2AETST** (for KDPW_CCP services CN=**CCPA2AETST**)
 - TST environment – CN=**A2AETST** (for KDPW_CCP services CN=**CCPA2AETST**)
 - BCM environment – CN=**A2AEPRD** (for KDPW_CCP services CN=**CCPA2AEPRD**)
- MQ configuration attributes different from the IBM default values (unchanged from the previous settings):
 - DEFPSIST – YES
 - MAXMSGL – 104 857 600
- MQ queue name schema - **srv.env.code.direction**
 - srv – service (available services: EMIR, ETR, ARM, SFTR, LEI, ICS, CSD, CCP)
 - senv – environment name (PRD, EDU, TST, BCM)
 - code – participant code

- direction – MQ direction:
 - KP – messages from KDPW to the Participant
 - PK – messages from the Participant to KDPW
- MQ name schema for additional services - **srv.env.code.direction.postfix**
 - srv – service code
 - senv – environment name
 - code – participant code
 - direction – MQ direction (KP, PK)
 - postfix – function code according to the service regulation
- Message encoding parameters for client applications (unchanged from the previous settings):
 - CodedCharSetId = 1208