ULTRAESB USED TO INTEGRATE ENTERPRISE SYSTEMS FOR CORPORATE ACTIONS DISTRIBUTION
As part of SGX’s plans to improve the online transactional experience for issuers and to increase its operational efficiency, a new issuer portal system was implemented. A critical building block of this entire architecture was an Enterprise Service Bus (ESB) that seamlessly integrates multiple enterprise systems, to receive the corporate actions from the upstream system and deliver these in parallel to multiple downstream systems.

The overall solution required integration over multiple transports and protocols, using different transformed payloads, and a delivery mechanism that could be monitored through a central dashboard, customized to the needs of SGX. In addition, the solution should ensure a 100% delivery rate with no loss of messages, and be highly available while being deployed over multiple data centers.

1. SGX and its affiliates make no representation, warranty, guarantee or endorsement whatsoever (whether express or implied) regarding, and hereby expressly exclude all responsibility and liability for, any and all products, services, processes, solutions and/or other information set out herein or in any ancillary documentation.
SGX deployed the first UltraESB based integration solution in production use in March 2014 and subsequently engaged AdroitLogic for the implementation of a solution to report derivatives trading information to an external regulator.

The solution integrated one upstream system - the portal, with multiple downstream systems, with retry capabilities in case of failures. JMS was used to receive and acknowledge messages, which were XML payloads, with additional attachments such as other XML payloads, ISO 20022 payloads, SWIFT payloads and binary attachments such as PDFs. These messages would then be stored by the ESB, filtered as per various sets of rules and transformed into different formats, based on the target downstream systems.

The downstream systems were integrated over mechanisms such as SFTP, Relational Databases, and IBM MQ.

The complete solution could be monitored and managed through a custom built dashboard and interface, in addition to the UConsole of the UltraESB which would monitor and manage the core ESB components.

The UltraESB based solution introduced much flexibility to accommodate changes to filtering rules, transformations and the overall message processing flows between different enterprise systems. This flexibility resulted in shorter cycles to introduce changes. The overall distribution dashboard provided a clear view of the system functionality and message flows, which provided easier monitoring and troubleshooting capabilities against the Corporate Actions distribution.

SGX selected the AdroitLogic’s UltraESB as the Enterprise Service Bus (ESB) of the solution, and engaged AdroitLogic to design, build, test and deploy the UltraESB solution.

The solution integrated one upstream system - the portal, with multiple downstream systems, with retry capabilities in case of failures. JMS was used to receive and acknowledge messages, which were XML payloads, with additional attachments such as other XML payloads, ISO 20022 payloads, SWIFT payloads and binary attachments such as PDFs. These messages would then be stored by the ESB, filtered as per various sets of rules and transformed into different formats, based on the target downstream systems.

The downstream systems were integrated over mechanisms such as SFTP, Relational Databases, and IBM MQ.

The complete solution could be monitored and managed through a custom built dashboard and interface, in addition to the UConsole of the UltraESB which would monitor and manage the core ESB components.

The UltraESB based solution introduced much flexibility to accommodate changes to filtering rules, transformations and the overall message processing flows between different enterprise systems. This flexibility resulted in shorter cycles to introduce changes. The overall distribution dashboard provided a clear view of the system functionality and message flows, which provided easier monitoring and troubleshooting capabilities against the Corporate Actions distribution.

SGX deployed the first UltraESB based integration solution in production use in March 2014 and subsequently engaged AdroitLogic for the implementation of a solution to report derivatives trading information to an external regulator.