

Clearstream

ClearstreamXact connectivity

Product information

Access our ICSD and CSD worlds via a single gateway

Key benefits

Built upon existing strengths

- Proven, reliable architecture
- Constant high performance
- Robust, state-of-the-art security

Forward-looking

- Cutting edge, modern technology
- Easy installation and maintenance
- Intuitive, user-friendly design
- Full compliance with industry standards
- Minimised customer impact

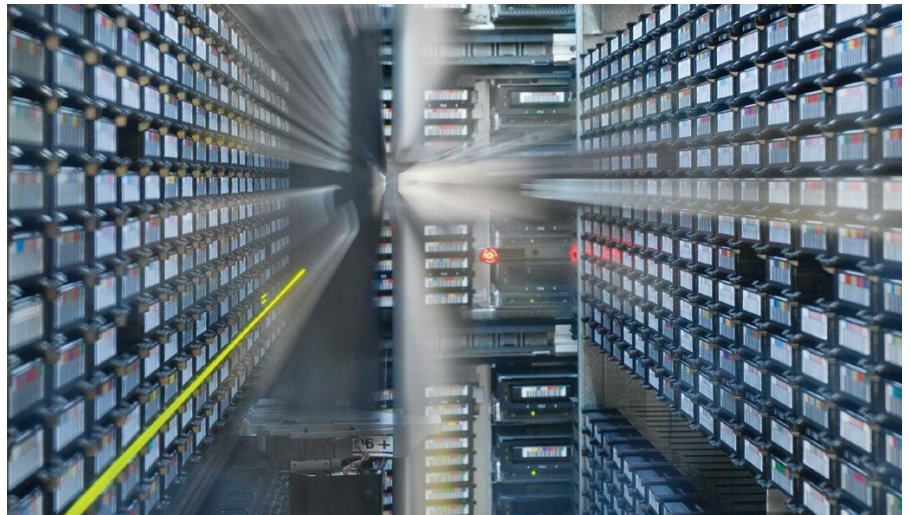
Flexible

- Mix and match the connectivity options and formats you need
- Scalable to the size of your organisation and transaction volumes
- Change at your own pace

Global

- Web-based services accessible worldwide
- Multilingual support

ClearstreamXact, our new connectivity framework, allows you to access our full range of ICSD and CSD services either on an automated basis or via Xact Web Portal, our new graphical user interface (GUI). ClearstreamXact serves as a single point of access to all our markets and asset types, thereby offering you multiple opportunities for asset consolidation.



The financial industry is transforming, with both global and local regulations being mapped out and enforced. New market infrastructure projects are also advancing, such as the realisation of TARGET2-Securities (T2S) for the centralised settlement of securities on a single platform, that is fundamentally changing the whole EU settlement landscape.

These new regulations may bring challenges but there are also many opportunities to be gained and, in order to bring these advantages to our customers, Clearstream has built a completely new, harmonised connectivity solution.

ClearstreamXact enables customers to send or receive information on all their assets regardless of where they are held within Clearstream. This applies to securities settlement, asset servicing, cash management, etc.

Access these services either by:

Xact via SWIFT or **Xact File Transfer** that encompass all message types, formats and related delivery channels that are primarily automated.

Xact Web Portal providing the same functionality but offered via a GUI. A single sign-on opens the door to consolidated query and reporting for our entire range of services, regardless of whether the assets are held in our ICSD or CSD.

From many connectivity solutions...

Our connectivity solutions have long been appreciated by our customers for their robustness that ensures business continuity. However, in today's financial world where access to maximum

liquidity and asset consolidation is crucial, our customers need a comprehensive overview of their assets across all our entities. With the array of past fragmented

connectivity channels, this possibility was limited, which is why we now offer our new ClearstreamXact connectivity suite.

ICSD and LuxCSD connectivity

Creation via SWIFT

Exchange ISO 15022 instruction messages and reports via the SWIFT FIN network.

CreationOnline

Continuous, real-time access to Clearstream's range of services.

CreationDirect

Retrieve reports and transfer large volume instruction files in ISO 15022 via CreationDirect via internet, VPN or SWIFTNet File Act.

Triparty Collateral Services (CmaX)

Access to our triparty collateral services for the safekeeping and monitoring of securities held as collateral to cover exposures of any triparty contract.

Vestima

Access to Vestima, our suite of investment fund services that support the cross-border distribution needs of the global investment funds industry.

LuxCSD connectivity

Offers a selection of our ICSD connectivity options.

LIMA via SWIFT

Exchange ISO 15022 instruction messages and reports via the SWIFT FIN network.

CASCADE

Access to the CASCADE platform via CASCADE-Host in German or CASACADE-PC in German or English.

LIMA

Retrieve reports and transfer large volume instruction files in ISO 15022 via CASCADE's Link Manager (LIMA).

Xemac

One-stop-shop for all your collateral needs in the German market.

Non-collective safe custody (NCSC)

Securities can be managed by CSD customers via the Creation platform and accessed via the ICSD suite of connectivity options.

German CSD connectivity

...To new, integrated connectivity – simple, efficient, secure

ClearstreamXact is the new framework for accessing our range of ICSD and CSD services across all our markets and business areas – settlement, cash

management, asset servicing, collateral management; and in the future, securities lending and investment fund services. This new solution harmonises

our entire connectivity offering, giving our customers a comprehensive and transparent overview of their business activities.

ClearstreamXact connectivity for ICSD, CSD and LuxCSD

Web-based access

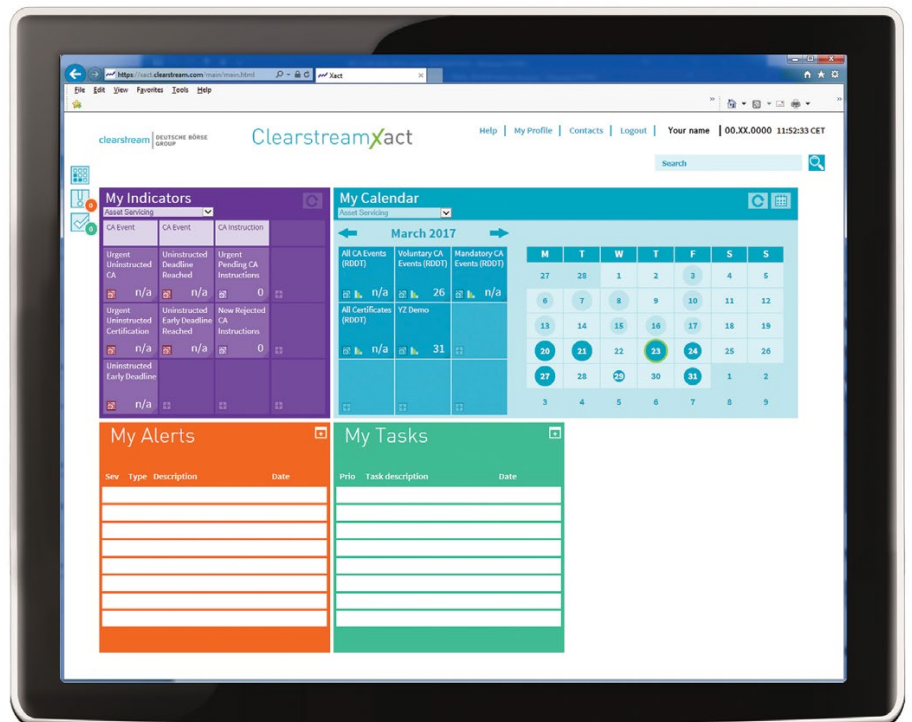
The **Xact Web Portal** offers online access for customers with low to medium volumes and for exception management or back-up purposes.

Customers benefit from consolidated instructing and reporting via a single sign-on GUI. The portal also offers harmonised security and user management and will serve as the customer's gateway to our full range of asset types and domestic markets.

Automated access

Xact via SWIFT and **Xact File Transfer** make up our application-to-application connectivity solution. The automated transfer of standardised messages and files enables straight-through processing and is an ideal solution for high-volume customers.

This automated access is available in ISO 15022 and ISO 20022 via SWIFT Net FIN/Interact and in ISO, PDF, XML and XLS via Xact File Transfer.



The Xact Web Portal Dashboard shows all your business activities at a glance.

Gaining access to T2S via OneClearstream

ClearstreamXact allows all our customers to gain access to the full range of T2S services.

A major factor for the development of ClearstreamXact – and the Xact Web Portal in particular – is the post T2S-implementation settlement landscape. Following migration of Clearstream CSDs in February 2017 to the T2S settlement platform, Clearstream is rolling out its enhanced value proposition to customers – our OneClearstream service, which brings together Clearstream (I)CSDs with

one single interface. Our aim is to maximise choice for our customers and to provide single sign-on access to the full range of our services.

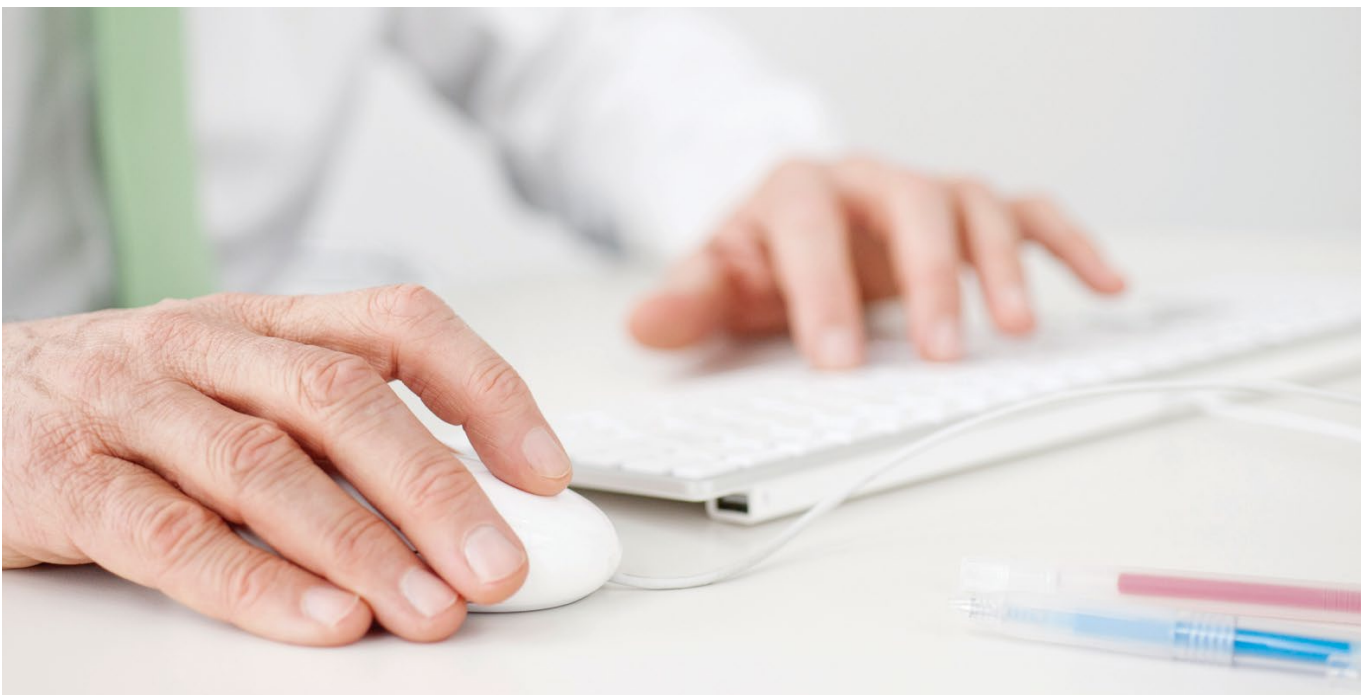
CASCADE and CreationOnline will continue to run in parallel, enabling customers to manage the migration to our new connectivity interface at their own convenience.

Single gateway to CSDs and ICSD

Regardless of whether customers hold their assets in our ICSD or CSD, they can access T2S through this single

gateway, thus giving them the choice to settle in either in central bank or commercial bank money.

ClearstreamXact connectivity provides a seamless customer experience while maximising service options and providing a single, comprehensive view of all positions, allowing utmost efficiency in liquidity and collateral management.



Contact information

The Connectivity helpdesks are available for any questions on connectivity related issues.

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