

OpenDXM GlobalX FROM THE CLOUD: **SECURE DATA EXCHANGE WITH NO INSTALLATION EFFORT**

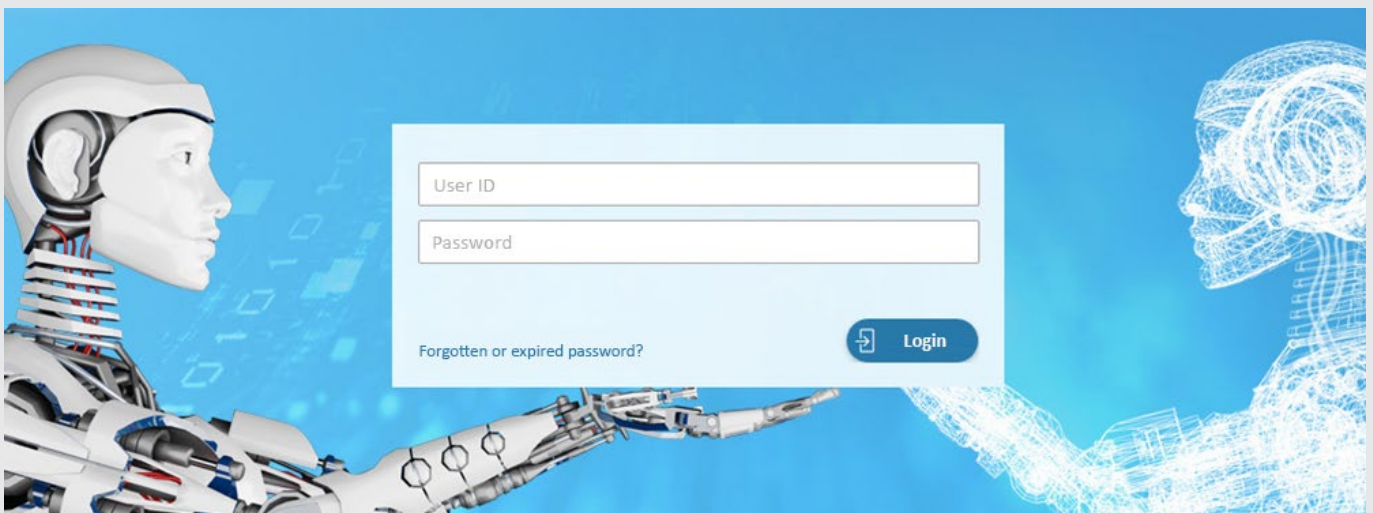
Companies in all sectors of the manufacturing industry exchange large amounts of confidential product data with customers and suppliers, and they want to do this safely, reliably, and with as little effort as possible. PROSTEP therefore offers them the proven OpenDXM GlobalX data exchange platform as a service in a highly secure cloud infrastructure. Users save the effort of purchasing, installing, maintaining their own managed file transfer solution (MFT), and are able to exchange it right out of the box.

 |  <https://cloud.glxservice.com>



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Preamble

Companies in the automotive, mechanical, plant engineering, shipbuilding, and other industries must be able to seamlessly trace data communication with customers and suppliers while at the same time protecting their intellectual property. It is now possible for them to avoid the effort involved with installing and maintaining a suitable managed file transfer (MFT) solution. PROSTEP provides them with the OpenDXM GlobalX data exchange platform in a highly secure cloud environment, thus making secure data exchange available to an even larger group of users.

PROSTEP's software-as-a-service (SaaS) model takes account of the fact that the cloud is also becoming increasingly popular in engineering environments. The solution is of particular interest to companies that want to move their data generation and management applications to the cloud but do not want to set up their own IT infrastructure for data exchange. Thanks to standardized interfaces to leading PDM/PLM and ERP systems, OpenDXM GlobalX can also easily be used in hybrid on-premise/cloud scenarios.

As a cloud service, OpenDXM GlobalX minimizes installation and operating effort and can be used practically from the word go. During the initial setup, the system is configured in such a way that all that is left for customers to do is set up their users and data exchange partners. Software updates that maintain the high level of security or make new functions available are, of course, included in the price of the cloud service. This means that smaller companies can also enjoy the benefits offered by the world's leading data exchange solution, such as secure transfer, a high level of availability, and end-to-end traceability at attractive conditions.



Secure, stable, and easy to use



OpenDXM GlobalX from the cloud means that companies can now use the platform even more flexibly for a wide variety of application scenarios. Users in any department can use it to exchange data and documents with customers, suppliers, and partners regardless of data volume, source system or format. The software supports the fast and interruption-resistant transfer of large quantities of data and logs all transfer operations. It also makes it possible to automate the transfer of data between the portal and local file servers. This makes it easier for companies to integrate their global partners in development projects, speed up data communication, and shorten development cycles.

OpenDXM GlobalX offers outstanding scalability and is therefore also of interest to smaller companies. The application runs in all the most commonly used web browsers without any need to install client software, and can also be integrated directly into the user interface of PDM/PLM systems, MS Outlook or Windows Explorer. As a result, it offers maximum ease of use and maximum security. The data is encrypted both during storage and during transfer via the Internet to ensure that it can only be opened by authorized recipients. The integration of blockchain technology also prevents manipulation of the transfer operations and ensures legally verifiable traceability.

New, intuitive web interface

The development of the new browser-based user interface was an important step on the way to the cloud. It provides all basic data exchange functions using HTML5 and without Java applets or Java Web Start applications, which means that users do not require any additional software. Redesigning the user interface and the underlying GUI framework allowed PROSTEP to take account of new technical requirements, on the one hand, and feedback from thousands of users who work with the solution every day, on the other. The aim was to create a purely browser-based application that is easy for both users and administrators to use which can be made available in the cloud as a SaaS model.

The web interface not only has a new, more modern layout, but also a much more ergonomic design. This makes it easier for occasional users to use without subjecting so-called power users to any limitations to the functionality that the data exchange solution provides. PROSTEP expects this to result in a wider use of the cloud-based data exchange solution in non-engineering departments and throughout the entire supply chain. Ease of use has also improved for administrators as they can now perform tasks like creating user accounts and web spaces or managing groups in the web interface.

The screenshot shows the OpenDXM GlobalX web interface. The browser address bar displays 'globalx.prostep.com/globalx-ui/gui/#quickview[outgoingView[outgoingTableView]'. The interface includes a navigation sidebar on the left with options like 'New', 'Inbox', 'Outbox', 'WebSpaces', 'Favorites', 'Messages', and 'Transfer'. The main content area shows a table of outgoing tasks with columns for Item, Task ID, Vers., File Size, Creation time, Recipient, Recipient's Email, Download time, and Description.

Item	Task ID	Vers.	File Size	Creation time	Recipient	Recipient's Email	Download time	Description
> Schiff 16.jpg	1092784	1	2.5 MB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...		Hallo Richard, hier sind die neuen Fotos. Gr...
> motor.png	1092783	1	150.61 KB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...	02.04.2020 10:39	Hallo Richard, hier sind die neuen Fotos. Gr...
> Fotolia_67949700_XL.jpg	1092782	1	4.49 MB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...	02.04.2020 10:39	Hallo Richard, hier sind die neuen Fotos. Gr...
> Flugzeug 09 88.jpg	1092781	1	507.1 KB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...	02.04.2020 10:39	Hallo Richard, hier sind die neuen Fotos. Gr...
> BG-Modul3_18.jpg	1092780	1	1.15 MB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...	02.04.2020 10:40	Hallo Richard, hier sind die neuen Fotos. Gr...
> BG-Modul3_13.jpg	1092779	1	2.7 MB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...		Hallo Richard, hier sind die neuen Fotos. Gr...
> BG-Modul3_9.jpg	1092778	1	1.04 MB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...		Hallo Richard, hier sind die neuen Fotos. Gr...
> BG27.jpg	1092777	1	747.14 KB	02.04.2020 10:33	Schmidt, Richard	richard.schmid...		Hallo Richard, hier sind die neuen Fotos. Gr...
> Auto 01.jpg	1092776	3	416.38 KB	02.04.2020 10:32	Schmidt, Richard	richard.schmid...		Hallo Richard, hier sind die neuen Fotos. Gr...
> Schiff 01 88.jpg	1092775	1	851 KB	02.04.2020 10:29	Schmidt, Richard	richard.schmid...		Hello Richard, here are the latest fotos. Req...
> Flugzeug 12.jpg	1092774	1	321.78 KB	02.04.2020 10:29	Schmidt, Richard	richard.schmid...		Hello Richard, here are the latest fotos. Req...
> BG10.jpg	1092773	1	649.16 KB	02.04.2020 10:29	Schmidt, Richard	richard.schmid...		Hello Richard, here are the latest fotos. Req...
> Auto 01.jpg	1092772	2	416.38 KB	02.04.2020 10:29	Schmidt, Richard	richard.schmid...		Hello Richard, here are the latest fotos. Req...
> Auto 12.jpg	1092771	1	350.54 KB	02.04.2020 10:02	Hering, Udo	Udo.Hering@p...		

Modular software architecture



No fundamental adaptation of the software architecture was necessary for use in the cloud since the solution was designed from the start for distributed deployment of the individual components across network boundaries. Operation in a cloud infrastructure, however, places particular demands on the browser-based user interface, which must be able to make secure interaction via the Internet possible. Cross-network communication between the client-server components is performed via web service interfaces based on the HTTPS protocol. An integrated file encryption mechanism with hybrid encryption technology based on the asymmetric cryptographic RSA algorithm makes true end-to-end encryption possible.

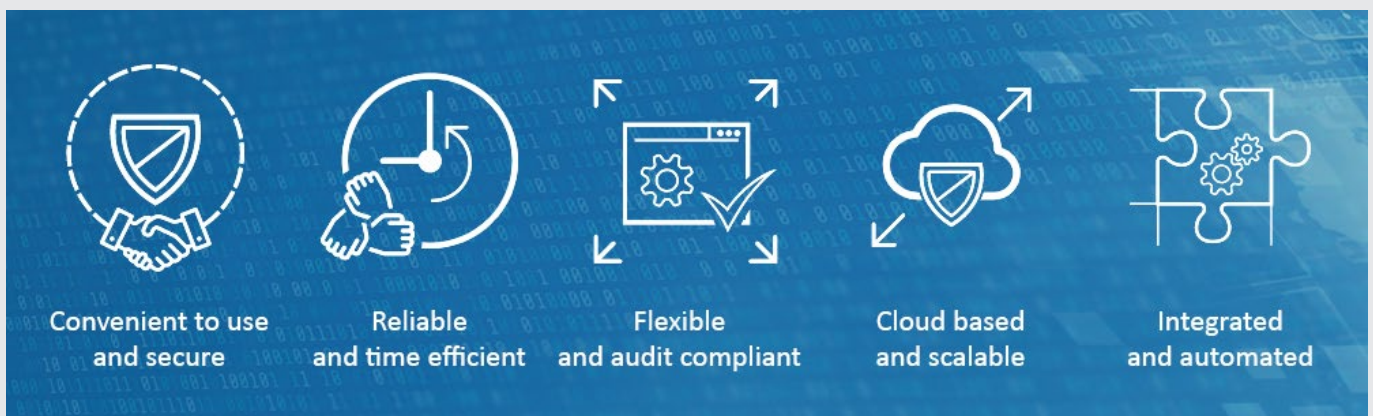
The software is subject to regular security checks, in the form of external penetration testing, to ensure the highest possible level of application security for the cloud service. Another important component for the secure operation of OpenDXM GlobalX in a cloud infrastructure is its comprehensive, finely tuned rights, and role management capability, which enables precise control of file accesses and administration rights. We are working on architecture-specific concepts for the use of microservices, virtual containers based on Docker technology, and the option of orchestrating cloud platforms with, for example, Kubernetes to ensure that we are able to provide optimal support for any cloud infrastructure in the future.

Use in hybrid scenarios



OpenDXM GlobalX's modular architecture makes it possible to seamlessly integrate the software in existing IT landscapes with on-premise applications or other cloud-based applications and to operate it in hybrid on-premise/cloud scenarios. The existing standard integration modules allow it to be connected to, for example, existing PDM/PLM systems, which are usually still installed locally or operated in a private cloud. This means that users can send and receive data directly from the user interface of their PDM/PLM system. It also means that MS Windows integrations can be distributed over a company's internal computers in such a way that the sending and receiving of data can be controlled using MS Outlook or Windows Explorer. In both cases, however, actual data and user management is performed in OpenDXM GlobalX's cloud infrastructure.

The use of a remote FileVault is another option for implementing and using OpenDXM GlobalX in a decentralized manner. This is a software component that enables local data provision, collaboration with centralized administration, and logging of the data exchange processes in the cloud. The remote FileVault can be installed in the customer's own system environment or with another cloud service provider ensuring efficient data management and faster data availability when collaborating with local exchange partners, especially in the case of global companies with locations that are distributed around the world.



Highly secure cloud infrastructure

OpenDXM GlobalX can be used on the cloud stacks of any provider. Unlike global players such as Amazon, Google, IBM, Microsoft, and Telekom, smaller local providers often offer better control over where data is stored and better protection against a government's right to demand that data be handed over, which is very broadly defined in some countries. PROSTEP therefore uses the highly secure cloud infrastructure provided by the DARZ data center (<https://www.da-rz.de>) in Darmstadt. The main reasons for choosing a local provider were data security, availability, the extensive range of services, and the cost. The DARZ is a high-security data center that has been certified by the Federal Office for Information Security (BSI) in accordance with CIP (Critical Infrastructure Protection) and is located in the building that once housed the Hesse Central Bank's vaults. Multilevel access controls, automatic fire protection systems with multiple fire protection zones, air-conditioning technology, uninterruptible power supplies, redundantly designed server systems, and a direct connection to the Internet backbone ensures the highest possible level of protection and availability of data. The processes and methods used by PROSTEP and DARZ are subject to the strict requirements stipulated within the framework of ISO 9001 and 27001 certification and the European General Data Protection Regulation (GDPR).

Better protection against cyberattacks

The SaaS model is still met with skepticism by many companies due to security concerns – and wrongly so: spectacular cyberattacks on high-profile companies prove that the data in their own data centers is often more likely to be at risk than it would be in the cloud infrastructure of a trusted provider, who often employs dozens of security experts. At the beginning of the 2020, a leading German automotive supplier was forced to shut down all of its IT systems following a massive hacker attack in order to avoid the failure of its entire IT infrastructure. The company is now using the data exchange platform OpenDXM GlobalX in the cloud infrastructure provided by the DARZ data center to ensure that the exchange of data with customers and suppliers remains uninterrupted.

Cyberattacks are increasingly becoming a serious threat to German companies. Deutsche Telekom registered an average of 31 million attacks per day in April 2019 – over seven times as many as two years before. Hackers are making greater use of artificial intelligence in their attacks and are becoming increasingly aggressive. Of late they have threatened to make internal data public with the aim of forcing their victims to pay a ransom. Smaller companies with limited IT resources in particular should therefore give thought to whether the use of cloud services offers a more secure alternative to their own IT infrastructure.



Cost-effective usage model

PROSTEP offers customers a usage model for OpenDXM GlobalX from the cloud that can be adapted flexibly to meet their needs. They can use the data exchange platform either as their own SaaS instance in a private cloud environment or as a multi-tenant application. In both cases, customer-specific branding of the user interface is possible. The private cloud solution also allows the use of additional options and value-added services such as integration in the internal PDM/PLM system or the OFTP/ENGDAT function for automated data transfer frequently used in the automotive sector. It can also be adapted more flexibly to meet individual customer requirements.

Interested parties can use the SaaS solution free of charge, albeit with a restricted range of functions and a maximum of ten users. With the commercial model, the annual service fee to be paid then depends on the number of users, the scope of services used, the storage requirements, and how long the data is stored. The entry-level model with 25 active users can gradually be increased to 50, 100, 200 or more accounts and, depending on the level of use, can also be reduced again. There is also a one-time set-up fee for individualized customer configuration, e.g. adding a company logo or adapting user templates, which is charged for both the single-tenant and the multi-tenant application.



Maximum flexibility and security

OpenDXM GlobalX from the cloud offers numerous advantages. The SaaS solution can be used practically from the word go, it can be scaled up or down as demand grows or declines, and it reduces initial capital expenditure by eliminating the need to invest in hardware and software. The solution is particularly suitable for companies that want to use a secure IT infrastructure for data exchange without needing their own IT team to implement and operate it. Cloud deployment makes it possible for the data exchange platform to go live quickly at a reasonable and clearly calculable cost.

As a SaaS solution, OpenDXM GlobalX minimizes installation and operating costs, regardless of the number of users using the system. It is also very easy to scale up or down as the number of users increases or decreases. During the initial set-up, PROSTEP's experts configure the SaaS solution in such a way that customers are able to use it "as-is", all that is left for them to do is set up their users and data exchange partners. Neither the multi-tenant nor the single-tenant solution incurs additional costs for software updates – they are included in the annual service charge.

The data exchange service is available to customers around the clock. Both the cloud infrastructure and the OpenDXM GlobalX application are subject to continuous monitoring to ensure maximum availability. If problems occur, the support team, which is also responsible for providing 2nd level support in the event of administrative problems, is immediately called in. If necessary, customers can outsource all administrative tasks to PROSTEP at an extra charge. Utilization of the cloud service offers them maximum flexibility when it comes to organizing their data exchange processes and the highest possible level of data security with a relatively small investment with little risk.

The OpenDXM GlobalX SaaS solution is already in productive use by a number of customers. One of the first to decide to use the data exchange platform from the cloud was the automotive supplier Valeo Siemens eAutomotive. You will find a report about the e-mobility specialist's experience [here](#).





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Do you have any comments or questions?

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