

CreationOnline Technical Requirements and Installation

CreationOnline is a component of Clearstream Banking's CreationConnect total connectivity solution. The CreationOnline channel is Clearstream Banking's web-browser based, integrated workstation running in a secure Virtual Private Network (VPN) environment or over the internet.

It is assumed that you have already performed the following tasks:

- Established connection with the internet or connected a suitable ISDN modem and telephone or communications line (as described in the documentation supplied with your modem and PC) to communicate on a Wide Area Network.
- Ensured that you have access to the <https://www.creationconnect.com/plug-in.html> page¹ in order to find the necessary files.

N.B.: Before starting the installation process, you must ensure that your workstation meets the necessary hardware and software requirements as recommended in this guide.

Scope of this document

This document covers the following activities:

- [“Technical requirements”](#) on page 2, including the hardware, software and communication requirements;
- [“Installing and configuring dial-up networking for the VPN”](#) on page 4, to establish your connection with the CreationOnline gateway on Clearstream Banking's Virtual Private Network (VPN);
- [“Configuring your web browser”](#) on page 4, to enable you to use CreationOnline;
- [“Installing and configuring the Java™ Runtime Environment \(JRE\)”](#) on page 5;
- [“The smart card reader”](#) on page 6, to enable user access to CreationOnline via smart card (optional);
- [“Activating the initial Administrators”](#) on page 7, to authenticate the two initial Administrator users and establish their credentials;
- [“Accessing CreationOnline”](#) on page 9, to perform the initial tasks required to make CreationOnline available to users.

1. If you are connecting via the VPN, access address: <https://creationonline.clearstream.banking/plug-in.html>.

Technical requirements

CreationOnline supports the following types of workstation:

- Standalone PC using an ISDN line
- Standalone PC using an internet connection (xDSL);
- LAN-based PC using a router;
- LAN-based PC using a corporate internet access.

Workstation hardware specifications

The following table shows the minimum and recommended hardware required for CreationOnline:

Resource	Recommended provision
PC	Pentium 4 - 2.4 GHz or above (or PC-compatible equivalent)
RAM	1GB
Free space on hard disk	200MB ^a
PC ports for modem ^b	USB
Screen resolution	1280 by 1024 pixels or above
Printer	Any Microsoft Windows-compatible laser printer with latest postscript drivers
Network connection speed	<ul style="list-style-type: none">• LAN-based internet connection proportional to the number of concurrent users, incremented by 128 kbps per user^c• Single PC connection at 128 kbps
Smart card reader	Datakey DKR 731 - USB or Athena ASEDive IIIe

- a. The CreationOnline application requires only a small amount of hard disk space (30-40MB) to store the java applet. However, you are strongly recommended always to keep 20-30% of the original disk space free (independent of CreationOnline) in order to prevent significant performance degradation when the operating system swaps virtual memory.
- b. For a standalone PC only.
- c. For asynchronous lines (for example, DSL) the available download bandwidth should be 128 kbps per user. Upload bandwidth can be lower.

Technical requirements and installation

Workstation software specifications

This section lists the software required as a prerequisite to installing and using CreationOnline. It also provides appropriate installation and configuration information.

The following table shows the minimum and recommended software required for CreationOnline:

Resource	Recommended provision
Operating system (OS)	Windows 7 SP1 Windows 8.1 Windows Server 2008 r2 SP1 Windows Server 2012 r2
Browser	Internet Explorer 11
Plug-ins	Java™ Runtime Environment 7 or 8
Smartcard Drivers	SafeNet Authentication Client 10.2

Communication hardware and software specifications

CreationOnline supports the following connectivity options:

- VPN dial-in access using ISDN terminal adapter (standalone PC only)
- VPN dial-up access using ISDN router (for LAN-based PC only)
- VPN using Deutsche Börse router over a leased line
- Any high-speed internet connection

The following table shows the minimum and recommended hardware and software required for CreationOnline for customers wishing to connect via VPN:

Resource	Recommended provision
Dial-in access using an ISDN terminal adapter:	
ISDN adapter	Any ISDN compliant adapter
Dialer application	Any Windows Dial-Up networking
Dial-up access using a router:	
Router Model	Cisco 1841 or above
Router IEEE 802.3 (Ethernet)	ISDN Basic Rate Interface (BRI) with extra WAN card Connection speed 128 kbps or higher when using multiple BRIs
IOS software	15 or above

Installing and configuring dial-up networking for the VPN

Clearstream Banking recommends using Windows Dial-up Networking, however any Windows compatible dial-up networking software may be used.

The access telephone number and user name are provided by Clearstream Banking on request.

Configuring your web browser

CreationOnline requires that certain options are set in your Microsoft Internet Explorer web browser.

To configure Microsoft Internet Explorer web browser:

1. Start your Microsoft Internet Explorer web browser and select Tools-Internet Options to display the Internet Options dialog box.
2. On the Security tab, select Internet, click on Custom Level and do one of the following:
 - If your company's policy allows ActiveX controls and plug-ins to be run, ensure that the "Run ActiveX controls and plug-ins" is set to Enable; or
 - If your company's policy does not allow ActiveX controls and plug-ins to be run, ensure that the "Run ActiveX controls and plug-ins" is set to Administrator Approved.

Note: If you set this parameter to Administrator Approved, you will have to enable the appropriate components used by the Java™ plug-in. For more details, please refer to the CreationOnline Security Guide or contact the Clearstream Banking Connectivity Support Help Desk.

3. Click on OK to apply the configuration.
4. Select the Advanced tab and ensure that at least one of the following Security options is selected:
 - ✓ Use TLS 1.2
5. Select OK to apply the configuration.
6. Close Microsoft Internet Explorer.

Additional steps

- Add www.creationconnect.com to the pop-up blocker exceptions (Tools/Pop-up Blocker/Pop-up Blocker Settings).
- Add <https://www.creationconnect.com> to the Trusted sites (Tools/Internet Options/Security) so that files may be written to medium integrity file system locations.

Installing and configuring the Java™ Runtime Environment (JRE)

You must have Windows Administrator access rights to install the JRE.

Installing the JRE

To install the Java Runtime Environment:

1. On the <https://www.creationconnect.com/plug-in.html> page, locate and download the corresponding Java™ Version.
2. Double-click on the downloaded file to start the installation process.
3. Follow the instructions of the installation software to install the JRE.

Configuring the JRE

To configure the Java Runtime Environment:

1. In Windows, select Start-Settings, Control Panel to display the Control Panel dialog box.
2. Go to the tab Advanced Security Settings.
3. Ensure that at least one of the following settings is enabled:
 - ✓ Use TLS 1.2

Configuring Java plug-in properties

With the correct version of JRE installed on your workstation, you may need to add a runtime parameter to the Java plug-in properties to allow for the handling of large reports.

To add the runtime parameter:

1. In Windows, select Start-Settings, Control Panel to display the Control Panel dialog box.
2. Double click on the Java™ Plug-in icon to display the Java™ Plug-in Properties dialog box.
3. In the Java Run Time Parameters field, enter the following text:
`-Xmx256m`
where 256 is the quantity of RAM allocated to the application (minimum recommended: 196). This value depends on the available memory in the PC. For further information please contact Connectivity Support.
4. Select Apply and close this dialog box.
5. Restart your web browser.

The smart card reader

You can establish user access to CreationOnline via a P12 credentials file or via smart card.

Installing the smart card reader

If you decide to connect to CreationOnline using smart cards, please contact Clearstream Banking's Connectivity Help Desk or your Clearstream Banking Relationship Manager for assistance.

To install the smart card reader:

Perform the installation procedures for the smart card reader and the smart card reader driver, as described in the proprietary documentation.

Note on service name resolution

CreationOnline requires DNS resolution (back and reverse) of the following IP addresses:

For internet:

194.36.230.101 www.creationconnect.com

For VPN:

194.235.205.65 creationonline.clearstream.banking

If you use a proxy server, your network configuration may prevent reverse name resolution from working. This can be overcome as follows:

1. Allow external DNS resolution within your internal network.
2. Create CreationOnline entries in your internal DNS.
3. Modify the host file of the PC (located in %systemroot%\system32\drivers\etc\hosts) to allow name resolution.

Note on computer loopback

For report rendering, CreationOnline uses the loopback IP address of the PC (127.0.0.1). This address must not be redirected.

Note on proxy servers

CreationOnline does support a variety of proxy servers and proxy server authentication. However, if you find that your proxy is not supported you can bypass the issue by either:

- Creating a specific rule for the CreationOnline URL to not pass via the proxy:
- For Microsoft ISA server, Microsoft does provide a ISA client which could be used to bypass the issue.

CreationOnline establishes a 2-way SSL link between the Java applet and the CreationOnline web server. Therefore any kind of SSL interception or deep packet inspection on the customers proxy server must be disabled for the above specified URL or IP address.

For further information concerning proxy server or firewalls configuration, please refer to the CreationConnect security guide.

Note on terminal servers/Citrix

CreationOnline is supported under Windows terminal server. It is mandatory to follow all recommended provisions.

Activating the initial Administrators

Before members of your Organisation Unit can use CreationOnline, you must create the certificates for two initial Administrator users who will, in turn, be able to create users and user groups; schedule reports and create report groups; assign accounts and report groups to business users and so on.

The tasks after installing CreationOnline are:

- Optional: to configure CreationOnline for a proxy server;
- Mandatory: the creation of valid credentials files (the certificates) for each of these two initial Administrator users.

Note: Before you begin, make sure that your system security officers have received the two separate authentication code letters¹ from Clearstream Banking and are ready to enter the details.

To configure CreationOnline for a proxy server:

Note: This configuration is valid for a proxy server that uses No authentication or Anonymous / Basic authentication. For details of configuring a proxy server with NTLM, please refer to the CreationOnline Security Guide.

1. On the <https://www.creationconnect.com/plugin.html> page², locate the “Activation of Administrators” link.
2. On the OURegistration page, click on the Proxy Settings button to display the Proxy Settings dialog box.
3. Ensure that the Proxy Settings Used checkbox is checked and enter the appropriate information:
 - Direct connection: for a direct connection without a proxy server; or
 - Manual: details provided by your Network Administrator or retrieved via the Internet Explorer Tools menu: Internet Options, Connections tab, LAN Settings button, Address and Port field values; or
 - Automatic: Java will read the proxy server port and name from the Java control panel. If a user name and password are required they must be entered manually in the proxy dialogue box.

Click on Save to establish the proxy settings and return to the OURegistration page.

To activate the initial Administrators:

1. On the <https://www.creationconnect.com> page², locate the “Activation of Administrators” link.
2. Enter the following in the first field (to define the **first** initial Administrator):
 - the **first** part of the authentication code for the **first** initial Administrator, as supplied by Clearstream Banking in System Access Definition (Part 1), followed immediately (no space) by
 - the **second** part of the authentication code for the **first** initial Administrator, as supplied by Clearstream Banking in System Access Definition (Part 2).

Note: Authentication codes are case-sensitive. Please be sure to enter them exactly as provided.

3. Type the same composite entry again in the second field to confirm the authentication code.
4. In the third field, enter the identifier code supplied in both System Access Definition letters.
5. Click on the Proceed button to display the User Credentials page.

1. System Access Definition (Part 1) contains two “part one” codes (one for each of the first and second initial Administrators); System Access Definition (Part 2) contains the two “part two” codes that complete each of the “part one” codes respectively).
2. If you are connecting via the VPN, access address: <https://creationonline.clearstream.banking>

Note: If, after three attempts, you are unsuccessful, you will receive an alert stating that the permitted number of registration attempts has been exceeded and that consequently your authentication code is now inactive. In this event, please contact Clearstream Banking Customer Services for a new set of authentication codes.

6. On the User Credentials page, sweep your mouse pointer in any/all directions at random across the open entropy field until the associated progress bar reaches 100%.
7. Enter the password for the user whose credentials you are creating and confirm this by entering it again in the next field.

User passwords must be between 8 and 24 characters long and include characters from 3 of the following 4 character sets:

- Punctuation (including special symbols)
- Numbers.
- Alphabetic (upper-case)
- Alphabetic (lower-case)

8. Select Submit to display the Credentials - Save As dialog box.
9. Specify a unique file name and suitable location in your file system for the credentials that you have defined and click on Save.

Note: The Administrator will need to employ these credentials on each access to CreationOnline.

The **first** initial Administrator is now defined. You can now repeat this procedure from step 2, using the appropriate "part one" and "part two" codes to define a **second** initial Administrator.

Possible problems

If the system does not allow you to save the file, please first of all ensure that you have full read/write access to the storage location.

You will receive an alert identifying the problem. This could be one of the following:

- "Authentication code is invalid. Please re-enter." - You have input the Authentication code twice identically but the Authentication code is itself not correct.
- "The Authentication codes you typed do not match. Please re-enter Authentication codes in both text boxes." - The two Authentication codes that you have entered are not identical.
- "The user is not yet authorised to create credentials. The authentication code is now invalid. Please contact Clearstream Banking Customer Services."
- "The Organisational Unit of this administrator is not yet activated. The authentication code is now invalid. Please contact Clearstream Banking Customer Services."
- "Identifier does not exist. Please re-enter." - Either you have not entered an identifier or the identifier that you have entered is not valid.
- "Your authentication code has expired. Please contact Clearstream Banking Customer Services."

Accessing CreationOnline

The final step in the installation process is to make CreationOnline available to users. This consists of the following tasks:

- Optional: configuring CreationOnline for the use of a proxy server;
- Mandatory: accessing CreationOnline (to be able to create the necessary users, reports etc.).

To configure CreationOnline for the use of a proxy server:

This step must be performed for each user of CreationOnline.

Note: This configuration is valid for a proxy server that uses Anonymous or Basic authentication. For details of configuring a proxy server with NTLM, please refer to the CreationOnline Security Guide.

1. Access the CreationOnline secure web site (see above).
2. On the Logon page, click on the Proxy Settings button to display the Proxy Settings dialog box.
3. Ensure that the Proxy Settings Used checkbox is checked and enter the appropriate information:
 - Direct connection: for a direct connection without a proxy server; or
 - Manual: details provided by your Network Administrator or retrieved via the Internet Explorer Tools menu: Internet Options, Connections tab, LAN Settings button, Address and Port field values; or
 - Automatic: Java will read the proxy server port and name from the Java control panel. If a user name and password are required they must be entered manually in the proxy dialogue box.
4. Click on Save to establish the proxy settings and return to the Logon page.

To access CreationOnline:

1. Restart your web browser and do one of the following to access the CreationOnline secure web site:
 - If you are connecting via the VPN, connect to:
https://creationonline.clearstream.banking
 - If you are connecting via the public internet, connect to:
https://www.creationconnect.com
2. Select Browse, find the folder containing the previously created credentials files (see "[Activating the initial Administrators](#)" on page 7) and select the appropriate file.
3. Enter the corresponding password that was defined for these credentials.

Note: The password is case sensitive and may contain one or more period (.) characters, which must be entered as part of the password.

The installation and configuration process is now complete.