Cass Business School
CITY UNIVERSITY LONDON

# IT Services

## VPN Connectivity Guide

# Introduction

This document briefly covers the remote connection (VPN) service and processes required to connect to Cass Business School via the Juniper SSL VPN solution using Cass provided computer hardware.

The usage of the VPN is intended solely for employees of Cass and is not, presently, designed for student access.

Please note that throughout the document the term ‘VPN’ refers to the Juniper SSL VPN solution and or the technologies behind Virtual Private Networking.

## Cass VPN Service

VPNs are primarily used to provide secure access to internal corporate resources from a private or public internet connection for users when working remotely or from foreign locations. Connectivity generally is not limited to specific hardware although in this case we have secured this service further by allowing only Cass hardware to connect and access internal resources.

Cass SSL VPN connectivity is available to staff at the following URL:

https://cassvpn.city.ac.uk

Connection to this URL requires a current web-browser supporting HTTPS/SSL updated with the latest vendor patches. All web-browsers support the SSL protocol so, should you be using a non-standard browser, connectivity should be available as normal.

Authentication and Authorization (AAA) is provided by our internal network servers requiring your normal network username and password before allowing access to any internal resources.

This AAA process is further secured by checking of connecting hardware and content for Virus scanning software and specific security credentials configured by IT. This ensures only configured users can connect through this service.

The service has been configured to provide 3 levels of access –

- Cass Staff (Basic)
  This profile provides access to E-mail via Outlook Web Access (Web based e-mail offering basic functionality), the Cass Intranet site and the Collage content management system for administering departmental intranet content. Your H:\ drive is also represented by a 'Home Drive H:\' option allowing you to upload/download files between your remote P.C and you home drive on the server[1].

- Cass Staff (Intermediate)
  This profile extends the Basic profile by providing access to the Exchange E-Mail servers using your P.C.'s Outlook application[2]. This enhances the options available to you when working with Outlook and supports all tasks currently only available when working from Bunhill Row such as Outlook Contact management, Calendaring and Task list management.

- Cass Staff (Trusted)
  The Trusted profile provides

[1] Home drive connectivity is a reduced service allowing only basic file operations including upload, download, delete and new folder operations. For full explorer type connectivity please refer to the Cass Staff (Trusted) profile.

[2] You will need to configure a new mail profile on your remote P.C. before using this service.

## Prerequisites

The following components are required before successful connectivity can be established through a full VPN session.

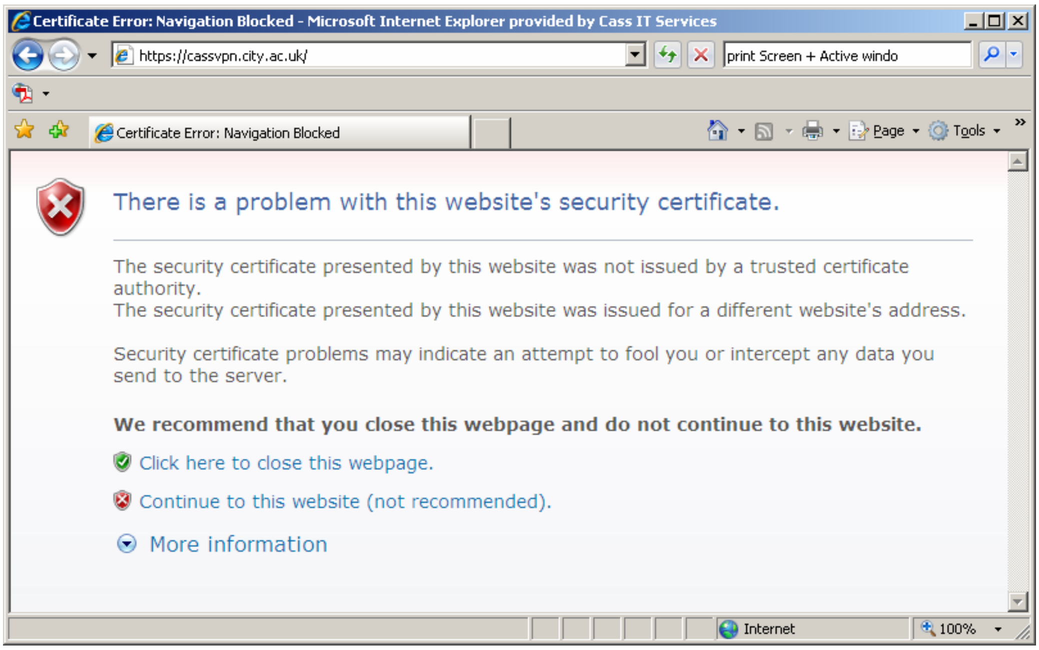
- Current Cass Business School network Username and Password
- Updated and patched Cass Laptop including current Anti-Virus Software with up-to-date antivirus signatures
- Cass specific Security configuration for Host checking processes (**See IT dept for installation**)
- Reliable Broadband connection to the Internet (ADSL, ISDN.. etc)

Once these pre-requisites have been met, secure VPN connectivity can be attempted and used to connect to internal resources such as e-mail, intranet & shared network drives.

# Connectivity process

The following process should be used when connecting to the Cass VPN provided all pre-requisite installations have been completed.

- Using a Web-browser, connect to https://cassvpn.city.ac.uk



Certificate Error: Navigation Blocked - Microsoft Internet Explorer provided by Cass IT Services
https://cassvpn.city.ac.uk/
print Screen + Active windo
Certificate Error: Navigation Blocked
Page
Tools
Internet
100%

There is a problem with this website's security certificate.

The security certificate presented by this website was not issued by a trusted certificate authority.
The security certificate presented by this website was issued for a different website's address.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

**We recommend that you close this webpage and do not continue to this website.**

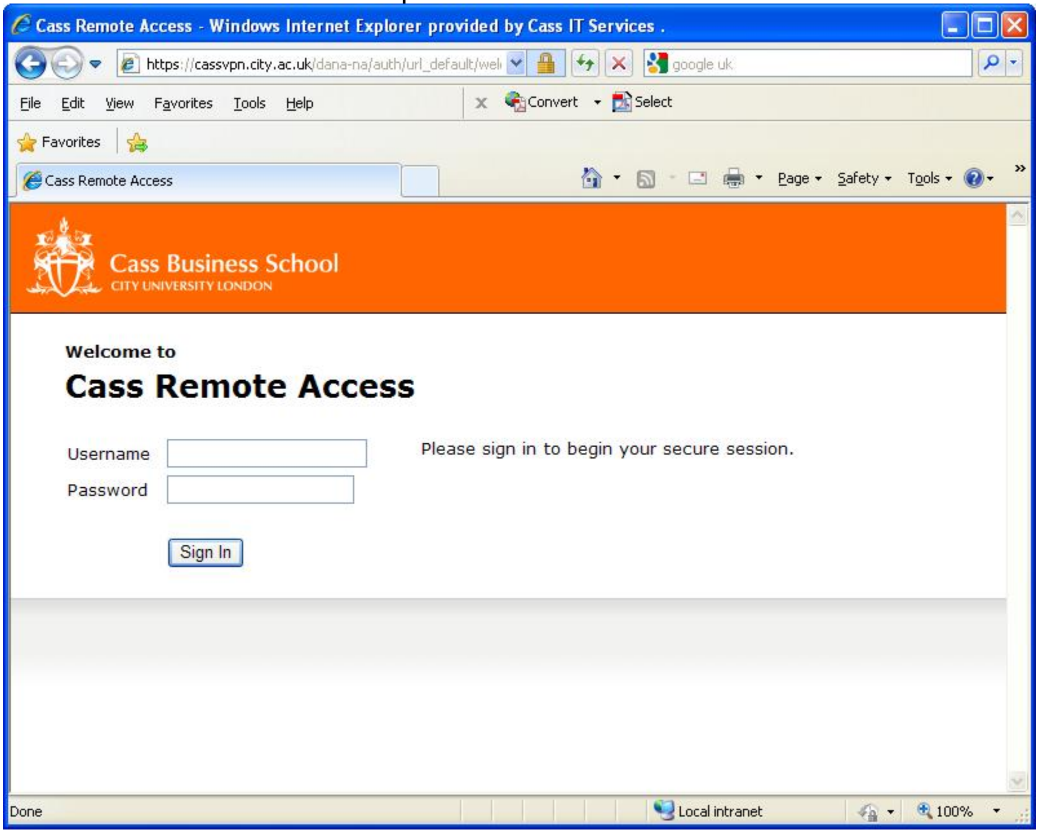
Click here to close this webpage.

Continue to this website (not recommended).

More information

You may see a warning related to the security certificate of this site. Presently, we are working on having the certificate updated to reflect the actual URL above. Click on **Continue to this website (not recommended)**.

- Enter Network username and password



Welcome to

Cass Remote Access

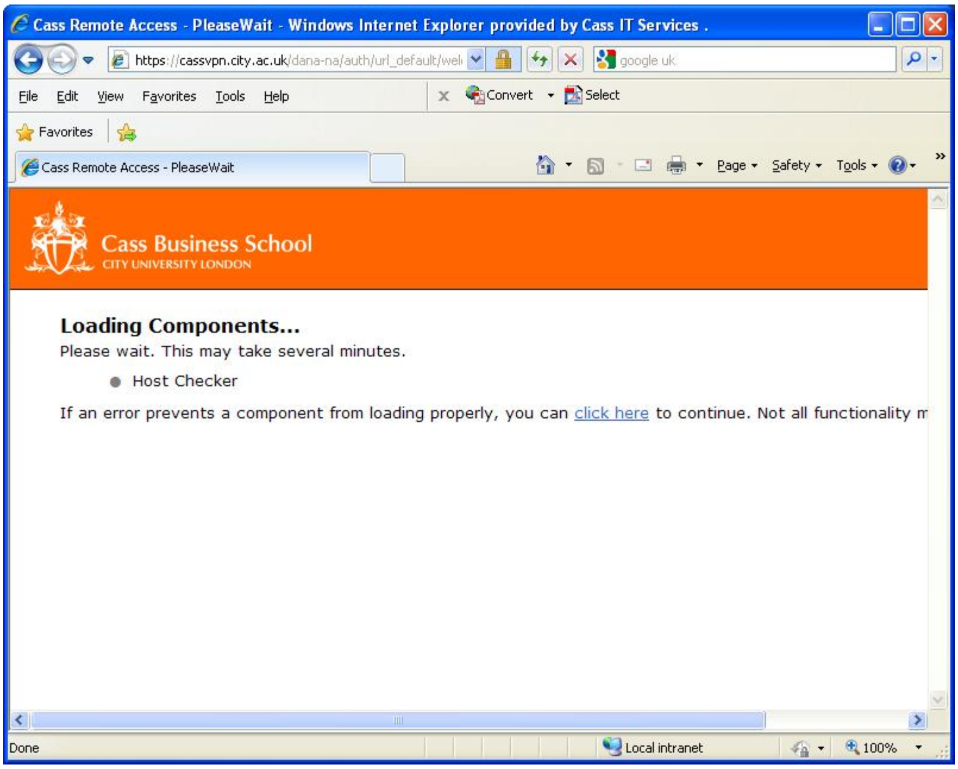
Username

Password

Please sign in to begin your secure session.

Sign In

•# Host Checker and Cache Cleaner will check your hardware conforms to Anti-virus and service pack requirements.


Cass Remote Access - PleaseWait - Windows Internet Explorer provided by Cass IT Services .
https://cassvpn.city.ac.uk/dana-na/auth/url_default/wel
google uk
File Edit View Favorites Tools Help
Convert Select
Favorites
Cass Remote Access - PleaseWait
Page Safety Tools
Cass Business School
CITY UNIVERSITY LONDON
Done
Local intranet
100%

**Loading Components...**

Please wait. This may take several minutes.

● Host Checker

If an error prevents a component from loading properly, you can click here to continue. Not all functionality m

The Host Checker scans your hardware for the presence of a current Anti-Virus installation and checks the date stamp of the virus definitions are within 10 days.
This AV check includes all mainstream AV vendors' offerings and some freeware versions too.
Should you come across any Anti-Virus software not recognized by the Host Checker please send details to cass-helpdesk@city.ac.uk and we'll include the software in the scan.

A check for the presence of Windows XP Service Pack 2 is also performed to ensure the majority of patches and security updates have been applied to connecting hardware.
The third and most critical check performed looks for the presence of specific registry entries on Cass hardware and will refuse full network access if this is found to be missing from any system.

Should any one of these checks fail remedial action will be offered with the opportunity to retry the checks once any updates/patches have been applied (providing no reboot is necessary)

Once your machine has passed the checks you will be taken to the Home page of the VPN where the various applications and methods of connecting to Cass will be displayed.

The Cass SSL VPN home page will present you with information, options and resources available to your logon session.

These resources are grouped into 4 distinct areas.

- Web Bookmarks
  Several Cass Intranet sites will be listed including Outlook Web Access, the main Cass website and the Collage homepage link.
- Files
  A link to your specific Home Drive is listed which provides access, via this session, to your network based files on the server.

- Terminal Sessions
  This option may not appear based on your personal user profile created in this session.

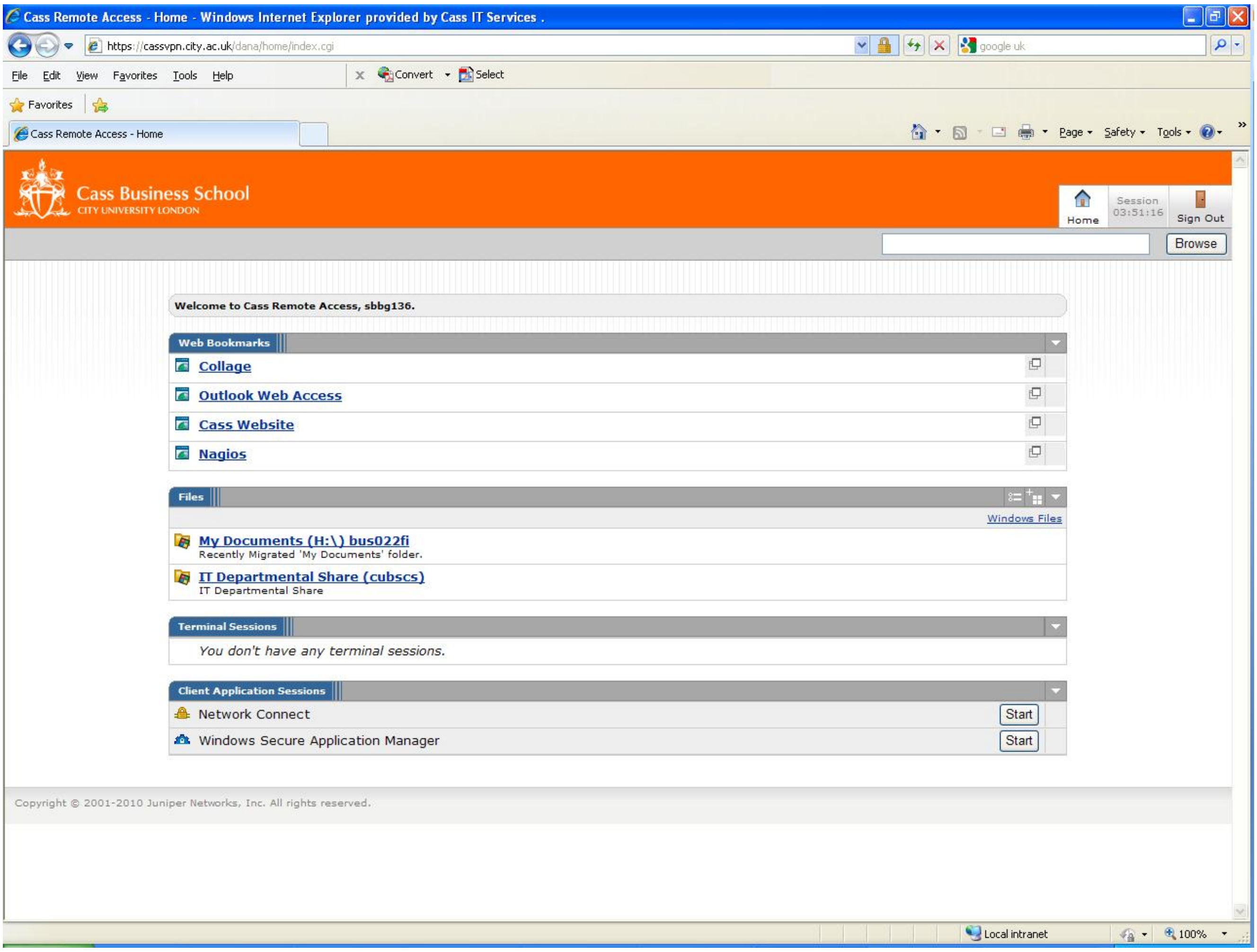
- Client Applications
  Offers two options for enhanced connectivity to Cass.

  - **Network Connect** – This offers full connectivity to Cass networks and effectively installs your P.C. on our internal network as if you were physically connected to the LAN. This is the fully featured option and is only available by prior arrangement and installation of security patches with the IT department.

  - **Windows Secure Application Manager (WSAM)** – This method allows you to connect your Outlook client directly to the E-Mail servers at Cass providing the ability to work with your e-mail, calendar & contacts as if you were in the office.

  Both of these Client Application options will need installing on your machines prior to testing along with security identifiers required for successful authentication with the VPN.

The VPN Homepage is displayed below for reference.



Cass Remote Access - Home - Windows Internet Explorer provided by Cass IT Services .
https://cassvpn.city.ac.uk/dana/home/index.cgi
google uk
File Edit View Favorites Tools Help
Convert
Select
Favorites
Cass Remote Access - Home
Page
Safety
Tools
Cass Business School
CITY UNIVERSITY LONDON
Home
Session 03:51:16
Sign Out
Browse

Welcome to Cass Remote Access, sbbg136.

Web Bookmarks

- Collage
- Outlook Web Access
- Cass Website
- Nagios

Files

Windows Files

- My Documents (H:\) bus022fi
  Recently Migrated 'My Documents' folder.
- IT Departmental Share (cubscs)
  IT Departmental Share

Terminal Sessions

*You don't have any terminal sessions.*

Client Application Sessions

| | |
|---|---|
| Network Connect | Start |
| Windows Secure Application Manager | Start |

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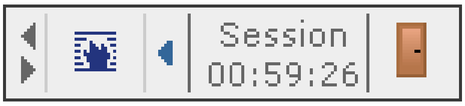
Once you have logged onto the VPN and are presented with the screen shown above feel free to familiarize yourself with the options and resources available from this homepage.   Should you navigate away from here you can always return directly to it by clicking on the session icons 'Home' shown below.



- The 'blue flame' will take you back to the homepage.
- The door symbol will log you out of the VPN
- The Session timer indicates how long your current session has remaining. Standard sessions are currently set at 2 hours after which you will need to log

back into the VPN. This restriction has been set to prevent continuous connection to Cass from remote users.

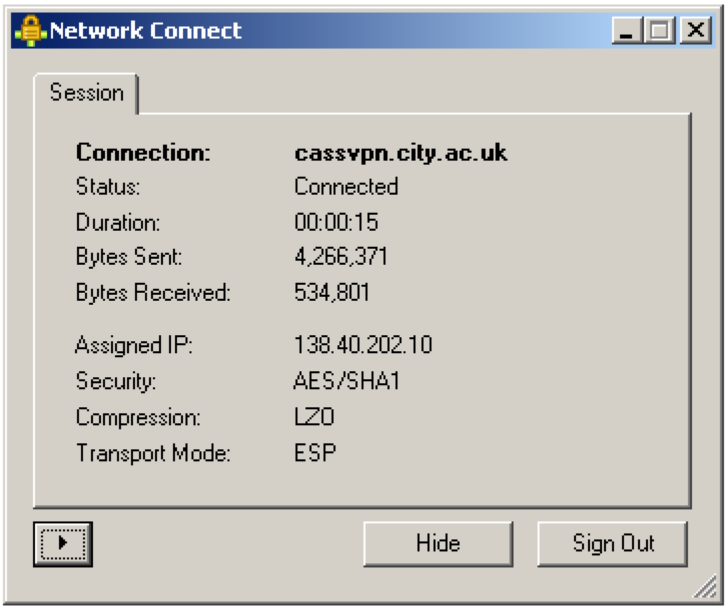
The Network Connect option will invoke the Network Connect application which will negotiate a full connection between the Cass LAN and your laptop.

- Click on the ‘Start’ button to invoke the NC application
- The NC app’ will negotiate with the VPN Server and log your machine onto the internal Cass network
- The NC icon will appear in your system tray indicating you have a current connection to the internal networks.

- Network Connect icon visible in system tray.

This system tray icon can provide more information including an advanced log which will aid troubleshooting and performance testing should you experience difficulty with your connectivity.

The basic view NC application shows you basic information including the status of your connection, the data transmitted/received and addressing information allocated to your computer.



**Connection:** **cassvpn.city.ac.uk**
Status: Connected
Duration: 00:00:15
Bytes Sent: 4,266,371
Bytes Received: 534,801

Assigned IP: 138.40.202.10
Security: AES/SHA1
Compression: LZO
Transport Mode: ESP

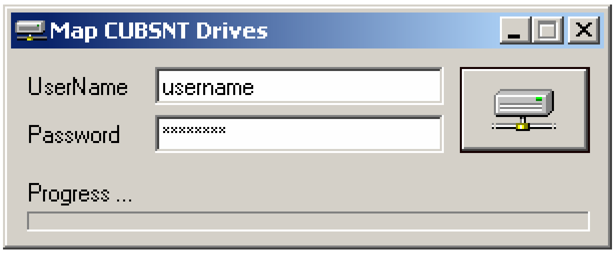
Once you have successfully connected using the Network Connect application you can now begin using your laptop as you would on-site at Cass.

All traffic will be directed over this network connection rather than your internet connection and will be subjected to compression and de-compression as it traverses the VPN.  This may cause a slight delay in the responsiveness of your network based applications. However, this should be slight and cause no operational problems.

- **Mapping Network Drives**

In order to connect your normal network drives whilst working over the VPN you will need to run the **CUSBSNT-Staff.exe** program located on your laptop. This application should be familiar to all laptop users, however, if you have never used this, please follow the instructions below.

- Invoke the CUBSNT_Staff.exe file
  This will open the following application -



Map CUBSNT Drives

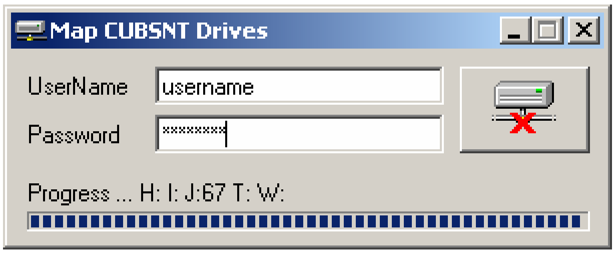
UserName: username

Password: ********

Progress ...

- Insert your network username and password as previously entered into the VPN logon screen and click on the network drive symbol. This will now attempt to connect your drives.

- Once complete, the application will give you a series of status codes relating to the various drives it has attempted to connect. Click on the codes for further explanation.



Map CUBSNT Drives

UserName: username

Password: ********

Progress ... H: I: J:67 T: W:

- You should now be able to see the drives successfully mapped listed in Windows explorer.

- To disconnect the drives before logging out of your network connect session, click on the Network Drive symbol again (this time with a red cross through) and those drives previously connected will be automatically disconnected. Again, providing error codes if this is unsuccessful.

# Feedback

We are relying on feedback from your experiences when using the VPN system to improve and perform any modifications that arise from your ‘real-world’ usage.

Any suggestions, positive or negative, will be considered for this and future implementations and are gratefully received.

You can direct your feedback via any one of the following channels or come down to the IT department and talk to us directly if convenient.

IT Department: Cass Business School
106 Bunhill Row,
Behind the Library

✉ E-mail: ucs-cass-sys@city.ac.uk

With ‘**VPN Feedback’** in the subject field of your mail

☎ Tel: +44 (0) 20 7040 5112 (internal ext. 5112)