Technical Information on the Neurological Data Platform Analysis Environment

The Neurological Data Platform (NDP) Dementias Hub infrastructure allows approved researchers to access multimodal datasets through a virtual desktop environment. To connect to the NDP infrastructure, users must install VMware Horizon Client on their local device. Access is protected by two-factor authentication, using a mobile authenticator passcode as the first step, followed by a username and password.

Desktop Specifications

The infrastructure offers a range of desktop specifications to support different research requirements. All desktops are pre-loaded with commonly used research software, including R, RStudio, SPSS, SAS, Stata, Anaconda Navigator for Python, Jupyter Notebook, Eclipse, MATLAB, SQL Server Management Studio, Microsoft Office and GitLab.

Statistical software, such as R and Python, can connect to the relevant official library, package or index repositories, enabling software to be configured on a per-user basis. As standard, the NDP Dementias Hub infrastructure will endeavour to provide up-to-date versions of software within the analysis environment.

If you require software that is not currently available on the infrastructure, please contact the NDP team at helpdesk@chi.swan.ac.uk using the subject line "Software/Hardware Requirements for NDP". We will review your request and advise whether the software can be provisioned and whether any additional cost applies.

You may also install your own software within the NDP environment, including software that requires a licence. If this applies, please notify the NDP team using the contact details above.

If you require an older version of any software for your analysis, please contact the NDP team using the same contact details.

Depending on the requirement, it may be necessary to provide a dedicated user desktop with the required software. Where appropriate, the NDP team will instead seek to make the software available within the shared desktop suite.

Desktop options:

Desktop Options	RAM (GB)	CPU
Standard Windows 10	8	4

Large Windows 10	32	8
XLarge Windows 10	128	16
Standard Linux (Ubuntu)	8	4
XL Linux (Ubuntu)	128	16

Access to High Performance Computing (HPC) and GPU resources is available for analyses across a range of domains. If required, please specify this within the hardware/software requirements section of the Technical Specification form. Access to HPC and GPU resources may be subject to additional cost recovery charges.

High Performance Computing (HPC) Access

Access to the 3,000-core HPC cluster is chargeable at a rate of £0.038 per core, per hour.

All prices are net and subject to VAT.

For information regarding costings, please send details of your requirements to helpdesk@chi.swan.ac.uk.

Technical Specification Section of the Application Form

The NDP Application Form includes a Technical Specification section. Applicants should outline the type of study planned, select the desktop specification they expect to require and identify any bespoke technical requirements, such as software that is not provided as standard. Providing this information at an early stage allows the NDP technical team to assess any additional requirements and tailor the environment to the needs of the project team.

macOS

macOS users may need to adjust their connection settings when logging in. After completing two-factor authentication, you will be presented with the available desktop options. Before opening a desktop, select the cog icon in the top right of the window and review the “Connect via” setting. Choose from Microsoft RDP, PCoIP or VMware Blast to determine which connection method works best for your device.

To address the Ctrl+Alt+Delete function on macOS devices, use “Send Ctrl+Alt+Delete” from the floating menu bar at the top of the virtual desktop.

Please note that simply closing the virtual desktop disconnects your session but does not shut down the desktop. Selecting “Disconnect and Log Off” will end the session.

Data Storage

General storage is scalable according to project requirements. Any specific storage needs should be identified during the application process. Research teams accessing approved data will have a shared project folder, identified by study number and name, to support collaborative working. Each researcher will also have a personal directory for their individual files.

As part of each NDP project, file storage of up to two and a half times the size of the project source data is provided as standard. This allocation supports analysis of the approved datasets and, where relevant, the storage of project-specific data. The project team is responsible for ensuring that all stored data remains within the agreed storage allowance.