WHO ARE WE?

The work of the CECS IT Group is everywhere across the College of Engineering and Computer Science (CECS).

- We work with ANU ITS to ensure that centrally provided infrastructure meets the needs of CECS.
- We provide desktop support across CECS to professional and academic staff, and Higher Degree Research (HDR) students.
- We provide end-to-end support for a number of undergraduate teaching labs.
- We provide IT advice, services and infrastructure to research computing activities in both the School of Computer Science and the School of Engineering.

The CECS IT Group is comprised of:

**IT MANAGEMENT**

- Peter Shevchenko

**IT SYSTEMS AND INFRASTRUCTURE**

- Brendan Mortlock
- Lincoln Smith

**IT PROJECTS AND SUPPORT**

- James Ashton

**TEACHING SUPPORT TEAM**

- Bob Edwards – Teaching Support Manager
- David Guest

**CECS WEB SUPPORT OFFICER**

The CECS Web Support Officer is part of the CECS Marketing Team but also reports to Bob Edwards for purposes of IT infrastructure, continuity and operation.

- Telawat Shafique

**IT SUPPORT TEAM**

- Andrew Wilkinson - Support Coordinator
- James Fellows
- Murtaza Ameer
- Sean McLoughlin
WHAT SERVICES DO WE PROVIDE?

Support functions within CECS can be grouped into five categories:

- IT Infrastructure
- IT Asset Management
- CECS Desktop Support
- Teaching Services and Support
- Research Services and Support

Where possible, CECS IT does not duplicate functions or services which are already provided at an ANU ITS level, where these services are appropriate and of utility for CECS.

This document covers our provisioned services, our vision for these services, and general outlines and expectations for support and services. They aren’t an exhaustive list – please see our Service Catalogue for a more detailed listing of what the CECS IT Group can do.

OUR STANDARDS

WE’RE PART OF THE COLLEGE – The CECS IT Group is part of CECS and works for the best interests of CECS staff and students. We understand the uniqueness of CECS and strive to support that.

WE’RE PROFESSIONAL – The CECS IT Group aims to provide the very best possible in terms of infrastructure and support structures.

WE SUPPORT INNOVATION – The CECS IT Group strives to provide up to date systems and software and to provide support and infrastructure for leading edge technology.

WE SUPPORT EXCELLENCE – The CECS IT Group strives to provide CECS staff, students and visitors with services to enable CECS and ANU to contend on the world stage.

OUR PRIORITIES

Excellence in the Undergraduate Student experience is the CECS IT Group’s highest priority, followed by CECS Managed Operating Environment (MOE) and desktop support, then CECS Research functions.

High impact or wide impact incidents will receive priority with regards to resources and resolution time.

CECS IT Support is focused on enabling new starters with CECS working as quickly as possible and to facilitate computer systems use and continuity for CECS staff and students.

AVAILABILITY

During normal staffing periods, CECS IT Support is available between 8am and 5pm.

During normal teaching periods, CECS IT Teaching Support is available between 9am and 5pm.

CECS IT Group does not provide out of hours or offsite support unless this is arranged beforehand with approvals from the CECS Executive.
FEEDBACK

The CECS IT Group is committed to improving the service framework we provide to CECS. We welcome your feedback on your experience with our support, our infrastructure or our facilities.

Feedback can be e-mailed to:

**IT SUPPORT COORDINATOR** – it.coordinator.cecs@anu.edu.au

**IT TEACHING SUPPORT MANAGER** – it.teaching.manager.cecs@anu.edu.au

**IT MANAGER** – it.manager.cecs@anu.edu.au

If you’d rather the feedback be anonymous to the CECS IT Group or are extremely happy/unhappy;

**CECS FEEDBACK** – feedback.cecs@anu.edu.au.
IT INFRASTRUCTURE

The CECS IT Group believes that a high level of reliability, uptime and usability is vital to ensure that CECS staff are free to pursue their research and teaching activities, and strive to provide a computing environment that enables excellence.

CECS IT does not duplicate systems where ANU ITS provides a similar level of utility.

CECS IT provides the following IT infrastructure services to users within CECS:

- User file shares
- Group file shares
- Personal web space
- Research group web space
- Course/Teaching web space
- Print servers
- Remote SSH logon to CECS systems
- MATLAB and compute servers (cpu1 and cpu2)
- Research backup systems
- Software license servers

In addition, CECS IT provides a number of essential network and operational infrastructure systems.

- Filesystem backups
- Server backups
- Essential network subsystems (DHCP, DNS, Firewalls)
- Active Directory and LDAP authentication and authorisation services.
- PXE/WDS/MDT Deployment systems
- Automated software package management and deployment
- Sophos Antivirus Management system
- IT network security monitoring.
- Server operations and maintenance.
- IT provisioning and planning.

THE INFRASTRUCTURE BEHIND CECS

ANU’s Central Information Technology Services (ITS) section provides the services which are common to all areas and CECS utilises them as much as possible – this is general networking, authentication and e-mail systems as well as room facilities such as projectors.

The CECS IT Group supports academic and research activities and builds from the base ANU ITS infrastructure. The CECS IT infrastructure has a mix of the most appropriate and suitable servers, software and technologies – from providing licenses for the ANSYS Computer Aided Engineering software package to undergraduate Engineering students, to running backups for the multiple terabytes of networked RAID storage used by Research staff, to providing individual and customised Undergraduate Linux exam environments, the CECS IT Group works hard in the background to make sure that our customer-facing systems work as seamlessly as possible, providing a consistent and constant level of service to stakeholders both inside and outside CECS.
IT ASSET MANAGEMENT

The CECS IT Group handles quoting, procurement and lifecycle management of all classes of IT equipment within CECS, providing a standard set of configurations and services while allowing CECS staff a broad freedom of hardware to support specialised teaching and research requirements.

CECS IT provides the following IT asset services to users within CECS:

- Standard Dell desktop systems
- Supply and replacement of IT peripherals (mice, keyboards, cables etc.)
- Quote and purchasing of Dell equipment through Dell Premier program
- Quote and purchasing of Apple equipment through MAC1
- Quote and purchasing of other IT equipment through other vendors as required.
- Quote, processing, purchasing and maintenance of software licenses for CECS.
- Purchasing and supply ordering for MFC print devices.

In addition, CECS IT handles:

- IT asset recording and logging.
- IT asset discovery and inventory.
- Maintaining a stock of standard configured desktop computers.
- Maintaining a stock of common IT components, cables and parts.
- Maintaining a stock of toners and supplies for MFC printing units.

CECS IT is not responsible for electrical safety or Workplace Health and Safety issues with any equipment or setup.
CECS DESKTOP SUPPORT

The CECS IT Group offers Managed Operating Environments (MOE) designed to meet the needs of the majority of academic staff, professional staff, and HDR students. MOE comes with comprehensive support, but is restricted in some aspects and users do not have administrative access. When the MOE does not meet the needs of a staff member or HDR student, they may opt out, and will also receive desktop support, but the level of support we offer is lower, commensurate with the fact that ad hoc systems cannot be supported as efficiently as a MOE.

CECS MANAGED OPERATING ENVIRONMENT AND SUPPORT

The CECS Managed Operating Environments (MOE) are aimed at meeting the needs to the majority of academic, professional and HDR students within CECS. The MOE authenticates against CECS servers and mounts CECS home and group network drives. A standard set of software is installed by default, and a range of other software can be installed as required. Users of a MOE desktop do not have administrative rights – software installation or other tasks requiring administrative rights must be lodged as a support request from CECS IT. Users cannot remote desktop to, or run server software on, a MOE.

CECS IT Group provides a choice of two Managed Operating Environments:

- Windows 7
- Ubuntu 14.04

The software available on these environments is reviewed yearly, and a range of software is available for deployment on these machines through a variety of mechanisms.

The desktops CECS IT provides as part of MOE, where possible:

- Will be under warranty and will not expire while the user is active within CECS.
- The standard hardware specification is of a ‘high-end’ office desktop when purchased.
- New academic and HDR starters can expect a new desktop computer when they start with CECS.
- Staff can expect their desktop to be refreshed every four years.

MOE is provided on standard desktops only. If a customised or specialised desktop or laptop is required for reasons of a customer’s research, then that is covered in CECS IT Research Support, below.

If, for reasons of teaching or research, a customer decides that the MOE is not appropriate, their desktop can be converted to a research workstation (“self-managed”), and support arrangements will be modified in line with that level of support (CECS Self-Managed Desktop and Support, below).

The support and service process for CECS MOE is through ANU ServiceNow. The CECS IT Support team treat MOE support as reasonably high priority.

If a MOE machine is misused or compromised, CECS IT will remove it from the network until the case is resolved.
CECS SELF-MANAGED DESKTOP AND SUPPORT

While CECS IT make every effort to encompass a broad range of utility with the CECS MOE and standard desktop, occasionally it is not suitable for a particular customer’s needs. In this case, the user may opt to self-manage the desktop. This involves a reconfiguration of some settings and the user is given administrative access to the computer.

If their requirements are for an Apple device, a laptop or a differently specified computer (i.e. high-end graphics, extra RAM etc.), CECS IT will provide a pro-rata contribution towards the cost of the hardware, with the remainder to be covered by other means. The computer is considered to be a Self-Managed Desktop (SMD) and limited support arrangements apply.

CECS IT requires that 3 or 4 year hardware warranties are purchased with SMDs and that CECS and ANU purchasing guides are adhered to.

STANDARD SUPPORT: CECS IT provides a limited subset of IT support as standard for Self-Managed Desktops.

The CECS IT Group can provide the following IT services to Self-Managed Desktops as standard:

- Static IP address and .cecs.anu.edu.au DNS name with options on network availability.
- Locked down network access for vulnerable machines.
- Access to a selection of ANU and CECS software.
- Access to a selection of operating system media.
- Access to the CECS home and group shares through SMB.
- Access to the CECS print servers.
- SSH access through cpu1/cpu2.
- Remote access via @cecs VPN.
- Access to CECS2011 domain.
- Access to CECS LDAP authentication.
- Self-service documentation covering most common requirements and configuration steps.
- Complete reformat/reimage where an appropriate CECS image is available.

The CECS IT Group DOES NOT provide the following support or services to Self-Managed Desktops (SMD), unless cost recovery or other arrangements have been made in advanced and formalised in an Organisational Level Agreement (OLA).

- OS support (including installation, upgrades, reinstallaion or repair)
- Software support (including installation, configuration, training or troubleshooting)
- Security (including updates, patching, antivirus or malware removal)
- Data integrity (including local backups or recovery)
- Workstation level networking. (Support ‘to the wall’ is provided as standard.)
- Printer configuration outside of self-service documentation.

NEGOITIATED SUPPORT: CECS IT can provide the three aspects of Research Support (Data, Configuration and Workstation) (See ‘CECS IT Research Services and Support’, below, for details on these aspects) to SMD, but only if all requirements and specifications are provided and an Organisational Level Agreement (OLA) is properly negotiated in advance.

If an SMD machine is misused or compromised, CECS IT will remove it from the network until the case is resolved.

V1.0 - October 2015
SELF-MANAGED DESKTOP CONVERSION

Through the development of their research, some users find that the CECS MOE doesn’t fully match their requirements. In this situation, a user can request that their CECS MOE desktop be converted to a Self-Managed Desktop (SMD). A Self-Managed application form must be completed and signed off by the supervisor (if appropriate). Any extra support OLA should be negotiated at this time.

During processing of the application, the computer will be moved to a different network and the user will be given full administrative permissions over their desktop. The user may need to adjust their usage or desktop configuration to accommodate this.

After being converted, support arrangements will be as per ‘CECS Self-Managed Desktop and Support’, above.

If a user wishes to have their self-managed desktop reverted to being managed by CECS IT, it will be formatted and have a CECS MOE reinstalled before being supported. Any data, software and configurations on the computer at this stage will be removed.
CECS TEACHING SERVICES AND SUPPORT

CECS IT Group supports the following teaching labs:

- CSIT Undergrad labs
- Specialist Teaching labs (STL) in Engineering/Old Chemistry

The CECS IT Teaching Support team provides individual Managed Operating Environments (MOE) for these labs – customised for software and configuration required to perform undergraduate teaching activities throughout the teaching semester.

The CECS IT Group provides the following Teaching Support services:

- CSIT Undergraduate and STL imaging/reimaging.
- CSIT Undergraduate Lab/STL computer support.
- CSIT Undergraduate teaching servers.
- CSIT Lab exam facilities.
- Undergraduate teaching support (Password resets, system access, information etc.)
- Specialised configuration on a per-course basis where appropriate and agreed upon in advance.
- Facilities, configuration and support for one-off teaching events, where agreed upon in advance.

The CECS IT Group provides the following Teaching Support infrastructure and systems:

- CSIT Undergraduate teaching server backups and maintenance.
- License server systems for teaching software.
- Image maintenance and deployment systems.
- Software maintenance and deployment systems.

It is expected that CECS academic teaching staff will be proactive in ensuring that the required teaching facilities, including software, hardware and student capacity, is available well in advance of the beginning of the teaching period.

The support and service process for CECS Teaching Support is through ANU ServiceNow. The CECS IT Teaching Support team have excellence in teaching support as their highest priority.
CECS IT RESEARCH SERVICES AND SUPPORT

Many of the research functions in CECS involve computing at some level – if it’s a HDR student working with MATLAB, a distributed GPU processing project, or a furnace controller, CECS IT provides support services to enable continuity, reliability and excellence in all aspects.

The CECS IT Group can provide the following IT services to Research workstations as standard:

- Static IP address and .cecs.anu.edu.au DNS name with options on network availability.
- Locked down network access for vulnerable machines.
- Access to a selection of ANU and CECS software.
- Access to a selection of operating system media.
- Access to the CECS home and group shares through SMB.
- Access to the CECS print servers.
- SSH access through cpu1/cpu2.
- Remote access via @cecs VPN.
- Access to CECS2011 domain.
- Access to CECS LDAP authentication.
- Self-service documentation covering most common requirements and configuration steps.
- Complete reformat/reimage where an appropriate CECS image is available.

The CECS IT Group also provides the following Research support infrastructure and systems

- Nightly backups of home and group shares located on CECS servers.

The CECS IT Group DOES NOT provide the following support or services to Research workstations, unless cost recovery or other arrangements have been made in advanced and formalised in an Organisational Level Agreement (OLA).

- OS support (including installation, upgrades, reinstalation or repair)
- Software support (including installation, configuration, training or troubleshooting)
- Security (including updates, patching, antivirus or malware)
- Data integrity (including local backups or recovery)
- Workstation level networking. (Support ‘to the wall’ is provided as standard.)
- Printer configuration outside of self-service documentation.
- Legacy support (including documentation, operation of old systems and support for old software)

The CECS IT Group can provide a range of other services to Research groups, but OLA for some functions are required in order to ensure that sufficient CECS IT resources are available to meet the agreed requirements. These Research Support aspects are covered below.
# SELF-MANAGEMENT AND SUPPORT

The CECS IT Group is always available to discuss needs, requirements and support options with research groups in order to assist them in planning research computing.

All Research computing equipment inside CECS is considered to be Self-Managed Desktop (SMD) workstations and configured appropriately, as user administrative access is often vital to their operation and utility. Any OLA for additional support by the CECS IT Group must be negotiated in advance.

# RESEARCH DATA SUPPORT

Where large amounts of data are required to be online, mirrored or backed up, in excess of the CECS Home/Group drives.

In some cases, automatic unattended backups can be arranged for research machines.

Generally CECS IT will cost recover for the hard drives assigned to a group or project, although storage greater than 4Tb or with other requirements will need to be assessed on an individual case basis in order to ensure an excellent level of service and ability to meet service agreements.

# RESEARCH CONFIGURATION SUPPORT

Where Research workstations are attached to equipment, it is desirable for the complete configuration or state of the workstation to be saved and available for reimaging in the case of a hard drive failure or malware infection. CECS IT can provide levels of service allowing for complete ‘states’ to be saved to a network drive, which can be saved manually or automatically as a client-initiated scheduled task. Where the Research workstation is Linux, configuration data can be saved easily.

The CECS IT Group will cost recover for the hard drives used by individual research groups.

# RESEARCH WORKSTATION SUPPORT

Where Research workstations have specialised, specific or extraordinary requirements, CECS IT can provide multiple aspects of support, including expertise in identifying requirements, hardware specifications, installation and configuration, maintenance and operation, documentation and legacy planning, as well as support in the event of a hardware failure.

This level of support will need to be agreed upon and resourcing arrangements made in advance and set out in an Organisational Level Agreement. CECS IT is unable to provide this service on an ad-hoc basis as they are not resourced to provide this as standard to all research areas across CECS.

V1.0 - October 2015
BYO DEVICES AND SUPPORT

The CECS IT Group strives to provide a range of IT services and platforms but we are unable to cover every personal preference. Inevitably, staff or visitors to CECS will choose and bring their own personal platform of preference. This category includes tablet computers, smartphones or personal laptops.

Support provided for personal devices by the CECS IT Group is:

- Directing customers to http://itservices.anu.edu.au
- Directing customers to CECS FAQ and How-to pages
- Providing a hard copy of the most appropriate laptop documentation.
- Providing assistance with configuring e-mail clients.

The IT services available for BYO Devices are:

- Network access via ANU-Secure or EduRoam wireless.
- Connecting to @cecs VPN using Cisco AnyConnect client
- Connecting to CECS printers through the VPN.
- Access to CECS file and group shares through the VPN.

Generally BYO Devices fall into the same category as Self-Managed Desktops and are supported as such. All users should expect to provide their own support for BYO devices and not have an expectation for CECS IT to configure or fix it. Where the device is eligible for software licensing, assistance will be provided.

Unfortunately, the CECS IT Group cannot guarantee that all devices and platforms will work with ANU and CECS systems and while they will endeavour to make their best efforts to provide support, BYO devices are not a priority.