

2023 NCSU Computer Science Graduate Student Orientation
Computing @ NCSU and Computer Science
Carlos Benavente – cabenave@ncsu.edu
CSC IT Manager



CSC IT Team

1. Manager (Carlos Benavente)



2. Enterprise Infrastructure Administrator (Trey Murdoch)



3. Linux Administrator (Tim Andrews)



4. System (Mac & Windows) Administrator (Tyler Puckett)



5. Desktop Support Administrator (Trung Dang)



6. Web Programmer (Vacant)

<https://it.csc.ncsu.edu/>

What Do We Support?

- Departmental-owned: Desktops, laptops, server-class equipment, smartphones, tablets, & printers
- OS Support: Linux, Windows, and Mac
- Virtualization & Hosting services on prem (VMWare)
- Computer Teaching Labs Support
- Computer configuration consultation and purchasing
- Network support in CSC Spaces
- Security - provide technical guidance and configuration to protect university data and networks
- Surplus and Hardware Decommissioning
- Management of ALL Departmental email lists

Who to Contact for IT Support?



For CSC-specific IT support, contact
csc_help@ncsu.edu

For all other general IT support: contact OIT: help@ncsu.edu
(919) 515-HELP(4357)

Walk-in Centers see: <https://oit.ncsu.edu/help-support/>

csc_help@ncsu.edu --> ServiceNow

- Campus-wide Incident Response/Tracking System
- Use your @ncsu.edu account when submitting help tickets.

New ✓	In Progress ✓	On Hold	Resolved	Closed
Number	INC4106925		State	On Hold
Caller	Carlos Benavente	✱ On hold reason	Awaiting Caller	
User ID	cabenave		Opened	2023-07-18 10:27:38
Employee number	[REDACTED]		Opened by	Carlos Benavente
Location	Engineering Building II (EB2)	Updated	2023-08-25 10:07:51	
Channel	Email	Updated by	tandrew	
Category	Inquiry / Help	Impact	3 - Low	
Subcategory	-- None --	Urgency	3 - Low	
Business service		Priority	5 - Planning	
Configuration Item		Description		
Assignment group	ENGR_CSC	4000 characters remaining of 4000 characters		
Assigned to	Tim Andrews	✱ Short description		
		deployment of new php 8 and apache services		

Reporting IT Issues

- 1st Search OIT's knowledge Base at https://ncsu.service-now.com/sp?id=kb_view2
- When submitting Help tickets:
 - Use your university email account: UnityID@ncsu.edu
 - Specify: Personal or Departmental-owned computer?
 - Physical location
 - Computer Number/TAG
 - What OS?
 - Error Messages
 - Things you have tried



“My Computer Doesn’t Work”, “I need help with my software installation” It is not very helpful

CSC and Other Campus IT Facilities

- **CSC Server Rooms:** for on-prem server equipment
- **TA offices:** equipped with desktop and scanner (check with your advisor)
- **Poster printer:** (EB2 3rd Floor Mailroom) – See admin staff Carol Allen @ EB2 3320. **Options:** Hunt Library and Fitts Wollard Hall
- **Teaching/Computer Labs:** EB2 1221, Lampe Drive 255, 200, 201, Ventures IV
- **CSC Public Desktops:** EB2 1235 (end of hallway): 2 Windows and 1 Linux
- For additional CSC facilities: <https://it.csc.ncsu.edu/infrastructure/>
- College of Engineering Labs (EOS Labs): <https://it.engr.ncsu.edu/computing-labs/>
- Technology Lending at Hunt Library: <https://www.lib.ncsu.edu/huntlibrary/technology>

RULES AND POLICIES

Endpoint Protection Standard (EPS)

“University Rule”

- [RUL 08.00.18](#) - Endpoint Protection Standard (EPS) requires users take appropriate security precautions when interacting with university data.
- The EPS applies to **all devices** that access university data, regardless of who owns them.
- The standard also specifies that all **university-owned** devices be managed by a CMS (Configuration Management System) if one is available for that platform.
- EPS requires “security controls” regardless whether it is a university owned endpoint or not.
- Exception Process exists.

Endpoint Security Controls

- Some Examples of Security Controls:
 - Anti-malware & antivirus software
 - Login Authentication
 - Encrypted Network Communication
 - HD encryption
 - Host-based firewall
 - Least Privilege Access

[Endpoint Protection Standard - Security Controls](#)

Mobile device security requirements & recommendations:

<https://oit.ncsu.edu/it-security/mobile/requirements-recommendations/>

Data Sensitivity Framework

Data sensitivity levels:

- **Ultra-sensitive** – Purple (Examples: SSNs, PINs, passwords, credit cards, digital signatures, biometric data)
- **Highly sensitive** – Red (Examples: personal information regarding health, financials, identity)
- **Moderately sensitive** – Yellow (Examples: education-related data and any data that would affect university business if disclosed inappropriately - grades, course schedule, student ID)
- **Normal, not sensitive** – Green (Examples: published university web content and any data that would not affect university business if disclosed - preferred email address, grade level - undergrad, grad)
- **Unclassified**– White (Examples: static content published on university web pages)

Endpoints storing sensitive data:

- Accessing and storing **purple university data** is prohibited on non-university-owned endpoints.
- Storing **red university data** is prohibited on non-university-owned endpoints
- See [Storage Locations for University Data](#)

RULES/POLICIES (continuation) - DOs & DONTs

- Consult with CSC IT if you need a new version of compiler or interpreter. Example: Python
- Need to install Docker on a department server or workstation? Contact csc_help@ncsu.edu
- Do not modify server software firewalls
- Do not install: Web/FTP services RA/TA **workstations**. Contact CSC IT for better fitted environments.
- Do not re-install a departmental-owned computer w/o prior approval from CSC IT

RULES/POLICIES (continuation)

- Do not transfer computer hardware from one lab to another lab w/o CSC IT approval.
- **Dual Boot**: Not allowed on departmental desktops
- **Clickwrap Agreements**: Do not install software on department equipment that requires you to click “I AGREE” before installing it! Check **clickwrap** approved list 1st at <http://software.ncsu.edu/clickwraps>
- **PHISHING**: Don't feed the PHISH! NCSU will never ask you to provide your password.

All violators will be reported to Dean of Students.

All TAs/RAs will have their Advisors notified.

The DGP is made aware of all infractions

Violations of usage policies will result in appropriate disciplinary action up to dismissal from the program.

The BASICS – Computing Account & File Space/Storage

University Computing Accounts Details

- **Unity Account or Unity ID**
 - UnityID@ncsu.edu
- **What Happens to Unity Acct After Graduation?**
 - Students who graduate with a degree retain access to
 - MyPack portal
 - All other access: AD Wolftech, github.ncsu.edu are disabled soon after graduation (1 month).
- **Access to Google Workspace**
 - Students will retain access to their NC State Google account (@ncsu.edu) for six months after graduation.
 - NCSU offer students the opportunity to retain an affiliation to NC State with an alumni email-only account.
- **Best Practices Before Graduation**
 - Migrate ALL personal files from NCSU data storage to personal storage solution
 - Don't take file ownership away with you:
 - Use GitHub Organizations

University File System/Storage

- NCSU-Drive: 20GB
 - <https://oit.ncsu.edu/my-it/file-space/ncsu-drive/>
 - SMB, CIFS, NFS v4 connection
- Google Drive: 15GB
- Google Shared Drive: 15GB
- For more info, see:
https://ncsu.service-now.com/sp?id=kb_article_view&sys_kb_id=aecdd08297a4fd944972722f2153af86
- OIT Research Storage (for faculty)
 - Individual Research Storage (2TB)
 - Project Shares (2TB)
 - Globus Services to share and transfer data with other Globus participating Higher Ed Institutions.
 - <https://research.oit.ncsu.edu/docs/storage/>

Cloud Services and Software

Cloud Services

- **Web Hosting:** <https://getontheweb.ncsu.edu/>
- **CSC IT offers Virtual Machines** for research and instruction: Faculty/advisor must submit request to csc_help@ncsu.edu
- **github.ncsu.edu** “enterprise” – available to students and faculty
- **VCL: NCSU Virtual Computing Lab**
An On-demand remote access service to reserve a computer with a desired set of applications for yourself.
- **AWS Educate**
<https://aws.amazon.com/education/awseducate/>
- Microsoft Azure Cloud Services

Cloud Services (Continued...)

- **On-Campus High Performance Computing (HPC):**
<http://hpc.ncsu.edu>
 - Cluster resources to support research & instruction
 - recommended for long running jobs (e.g 100+ cores for up to 48 hours)
 - Advisor/Faculty creates a project with HPC
 - Advisor/Faculty grants student access
- CSC Professor Frank Mueller ARC Cluster:
<https://arcb.csc.ncsu.edu/~mueller/cluster/arc/>

Software

- **Google Apps @ NC STATE (cloud)**
- Zoom: <https://ncsu.zoom.us/>
- **Adobe Creative Cloud (CC)**: for CSC Full-Time Employees or eligible temps. Device license available.
- **Foxit**: PDF Editor/Creator. Same license model as CC
- **Microsoft Azure Dev Tools (formerly DreamSpark)** – available to students and faculty:
<https://it.engr.ncsu.edu/help/kb/soc-support-ms-azure/>
 - Download for free: Visual Studio, .NET Framework, Visio, Project, Win OS
- **MS Office 365** – free for students, faculty, & staff:
<https://oit.ncsu.edu/office-365/>

Software (Cont'd)

- Server class software: Oracle DBMS, MariaDB, Docker Containers, Jenkins,...
- Overleaf: <https://www.overleaf.com/edu/ncsu>
 - Online LateX Editor
- Grammarly Pro – CSC PhD Students.
- For additional software: <http://software.ncsu.edu/>
 - MatLab Student Version,
 - CISCO AnyConnect client for vpn (NCSU)

NETWORKING

Networking

- **Wireless (WiFi 6)**
 - Three main SSIDs
 - Eduroam (secured), NCSU, and NCSU-guest (web only)
- **Eduroam (education roaming)**
 - Free & encrypted wireless service
 - Uses certificate enrollment
 - Certificate will allow you to securely connect both on NCSU campus and participating institutions worldwide
 - <http://go.ncsu.edu/eduroam>
- **NCSU SSID** - register your device via nomad.ncsu.edu
- We discourage use of 2.4GHz devices
- If research requires use of 2.4GHz band, use channels 1, 6, and 11.
- Campus WiFi Etiquette: <https://wifi.ncsu.edu/etiquette/>
- **Wired** – Available to university-owned devices only.
- **VPN** - vpn.ncsu.edu (requires 2FA)

Networking (continuation)

- **Wired** – Available to university-owned devices only.
 - CSC devices are assigned a static DHCP IP
 - CSC has designated subnet IP ranges for administrative, research, labs, etc.
 - Wall ports must be assigned to the correct subnet in order for a device obtain an DHCP IP lease correctly.
- **Incoming traffic on port 22 (ssh) will be blocked at the gateway effective October 1, 2021. vpn will be required from off-campus**
- **VPN** - vpn.ncsu.edu (requires 2FA)
 - CISCO AnyConnect Client



PRINTING

Printing

- Department does NOT support **personal**
- For personal or coursework printing use WolfPrint:
<http://oit.ncsu.edu/wolfprint/wolfprint-welcome>
- Printing on CSC printers:
 - Contact your faculty or advisor.

The END

THANKS!

csc_help@ncsu.edu