

Chemistry IT Services

A selection of services in which Chemistry IT adds value. These are services ChemIT mediates or provides directly.

ChemIT's purpose

ChemIT staff members work hard to bring value to CCB research, teaching support, and administrative groups. Learn more about what drives us!

- [By the numbers, ChemIT and PhysIT](#) — Count of people, systems, and networks that ChemIT and PhysIT supports. Our group supports approximately 375 people and about 900 computers and printers.
- [Chemistry IT Services Overview](#) — What do you want to accomplish using computing technologies? We are here to help your research group achieve your goals.
 - [Chemistry IT Services By Support Level](#) — Chemistry IT: We help your group Identify, Build, and Fly better IT solutions. We are brokers and fixers (Cambridge's tag line)
- [Contextual Visions and Missions](#) — Ensure linkages and coordination using a table summarizing visions, missions, strategic plans of pertinent organizational entities impacting Chemistry IT.

Summary of Chemistry IT Services

Find out the services Chemistry IT provides to the department and research groups, as being redefined during the fall 2016 semester.

- [1\) Service Offerings for ALL Groups, grid form](#) — How can working more closely with Chemistry IT benefit you and your group?
- [1\) Service Offerings for Full Support Groups](#) — How can working more closely with Chemistry IT benefit you and your group?
 - [Draft Opt-in example from Michael Lenetsky](#) — Oliver received draft Friday, 9/2/16.
- [2\) Service Offerings for Partial Support Groups](#) — Learn about the Chemistry IT's services available to members of opt-out groups.
 - [Draft Opt-out example from Michael Lenetsky](#) — Oliver received draft Friday, 9/2/16.
- [All groups must use certain Chemistry IT services](#) — Are there Chemistry IT services all groups "MUST" use, even if they are an Opt-out group? What are the long-term consequences of adding services to this list, or removing them from this list?
- [Service dependencies on CIT and A&S IT](#) — We expend time and effort ensuring central services (CIT) and services co-managed by A&S IT end up helping us, and don't actually hurt us.

A&S's CISER account for researchers

Here you can find useful information about CISER's services and Chemistry-specific how-to's.

- [History of CISER service evaluation](#)
- [Usage data, from CISER](#) — Mostly of value to just Oliver. Data link for Oliver: <<http://ciser.cornell.edu/beta/usage/subtrack.aspx> <http://ciser.cornell.edu/beta/usage/subtrack.aspx>>

Accessing and using the Collum-Loring-Abruna-Widom (CLAW) cluster

Specific directions on accessing and using the Collum-Loring-Abruna-Widom (CLAW) cluster

Accessing file shares for NMR and X-ray facilities

Specific directions on accessing and administering NMR and Xray facility SFS file shares

- [Accessing your NMR facility data](#) — Specific directions for research group members to access their group's NMR facility data from AV500, GCMate, and Exactive instruments (NMR's Windows OS-based instruments).
- [Accessing your Xray facility data](#) — Specific directions for research groups to access their group's Xray data from Sam
- [Managing file shares for NMR and X-ray facilities](#) — Add users via <https://manage.ad.cornell.edu/adadmin> <https://manage.ad.cornell.edu/adadmin>. Documentation for facility managers using fileshare services managed by ChemIT and provisioned by CIT (Active Directory and SFS file shares). Includes reminder notes for Chemistry IT staff.
 - [Creating new share folders for new groups, NMR and X-Ray](#) — Information on this page only of value to Chemistry IT staff.

Audio, Visual, video recording (A/V) support

Primary support from Lars Washburn: Chemistry Audio/Visual Equipment <chemav@cornell.edu <http://cornell.edu>>. No cell number available, but Lar's office number, which he receives in many locations within the building, is 5-2372.

CCB's groups

ChemIT's understanding of CCB's groups. As used within ChemIT's instance of Remedy, for example. Also, ChemIT operational notes regarding specific groups.

- [Dichtel](#) — Access guidelines for CRCF staff, per Oliver, following discussion with DavidB, 1/21/13
- [Lee](#) — Steven Lee's Linux workstations and file server use. And purpose of Steven Lee's Silicon Graphics Imaging computer, running Unix.

CCB's Incoming Faculty procedures and reminders

CCB Instruction's ChemGrades FMPPro DB support procedures

A&S IT provisions and supports CCB's ChemGrades FMPPro DB. They also created and support ChemGrades web site showing read-only sub-data from DB, restricted by NetIDs.

- [ODBC connection information](#) — Student Services staff must connect their FMPPro database file via ODBC to A&S IT's FMPPro server. Here are links to help ChemIT staff do that for them.

CCB Instruction Skype set-ups

Set up Skype systems for grad student interviews each January.

CCB people lists

Kevin A. pulls Grads within CCB, per Pat H.'s database. Sharon VanD. (HR) can pull info on all staff, post-docs, and other researchers, per Workday. (Grad data in Workday doesn't have CCB group info so not useful.) Chair's Office has info on all faculty, per JoyceB's (ad hoc?) info.

- [People list documentation](#) — The "people" data from Kevin needs to be aggregated, and added to existing faculty info, for it to be useful.

CCB ST Olin research groups, by floor

ChemDraw

Links to how to license and tips. And pages containing the history of some known issues, especially on Macs.

- [ChemDraw and iWork](#) — The (older) iWork software from Apple "allows ChemDraw extraction from older Keynote presentations", per Prof. Coates.
- [ChemDraw and Office 2016 on Macs](#) — "Round trip" editing ChemDraw figures embedded within Office 2016 documents sometimes does not behave as expected as Office versions change. Here's how to fix some problems
 - [ChemDraw and Office 2016 on Macs debugging notes and history](#) — "Round trip" editing ChemDraw figures embedded within Office 2016 documents now behaves as expected. Had not for many, many years until ~Fall 2017, apparently.
- [ChemDraw v16](#) — Copy-and-paste of our write-up for when v16 was the current version, before their licensing methods changed for v17, onwards.
- [ChemDraw v17 and later](#) — PerkinElmer, the software vendor, changed the download and licensing system starting with ChemDraw v17 (about Spring 2018).

Chemistry's Departmental VPN

Only need by those with a GuestID, not by those with a NetID. Chemistry uses Cornell's VPN service to provision our "departmental" VPN, @AS-CHM-DeptVPN (CAPS-sensitive!).

Chemistry's NetID procedures

How to create, extend (sponsor), or renew the extensions of a NetID within CCB.

- [Creating of new NetID](#) — Information on this page is useful if you need a NetID but will not receive a NetID automatically because you are NOT a new student, new faculty (exceptions made), or new staff member of the University.
- [Sponsored NetIDs and related](#) — Compilation of information from Chemistry IT, including processes to get and extend sponsored NetIDs, and why.
 - [GuestID creation within Chemistry](#) — Instructions mostly of value to Chemistry IT staff, including our particular conventions used.
 - [How to sponsor a NetID, in Chemistry](#) — Documentation on Chemistry IT's role, using CIT's tools, to help Chemistry faculty provision or renew Sponsored NetIDs.
 - [Services retained by having a sponsored NetID, and services you still lose](#) — Unless other provisions are made, staff (including PostDocs, but not retirees) and non-graduating students lose access to many network-based services. This page explains the what, why, and how's.
 - [Sponsored NetIDs and GuestIDs](#) — All Chemistry Department Sponsored NetIDs are processed by Chemistry IT, as of August 2016. We also provision GuestIDs.

Chemistry Administrative/Teaching printers, their support and supplies

For service or supplies for Administrative/Teaching printers, contact ChemIT. We encourage you using our ChemIT service request webform <http://it.chem.cornell.edu/request/>. This documentation page also includes procedures for ChemIT staff.

Chemistry Instructional and Conference Rooms

See also <http://rooms.chem.cornell.edu/> <http://rooms.chem.cornell.edu/>

- [CCB Conference rooms](#) — Some CCB rooms are available to anyone at the University. Other conference rooms are available only to CCB folks.
- [Chemistry Instructional rooms](#) — Lars Washburn is the main person responsible for these rooms. ChemIT provides him support, in his role.
 - [Computers in Chemistry Instructional rooms](#) — List of software on the Macs and PCs in CCB's 4 instructional rooms: 200 (the big auditorium), 135, 219, and 335. (No computers in 119).
 - [iClickers in CCB instructional rooms](#) — CIT's ATC provides Cornell's iClicker service. Although the Baker Lab classrooms overlap, all iClicker stations are set to the "AA" frequency.

Chemistry IT's Management of IT Security

Ways used by Chemistry IT to ensure compliance with IT Security measures

- [Encryption](#) — To ensure data is not being compromised we strongly recommend, and in some cases require, drives to be encrypted
 - [Mac Encryption](#)
 - [Windows Encryption](#)
- [Management Tools](#) — Tools used by Chemistry IT to help us ensure compliance with security policies at Cornell University.
 - [Active Directory & related information](#) — Information useful for IT and non-IT staff and others.
 - [Managed Desktop or Certified Desktop](#) — Configuration Manager for Windows, Casper for Macs, Puppet or Casper for Linux, etc.
 - [Printer management](#) — We don't have a good printer management tool, system, or procedure. Might we not benefit from one?
- [Screen Lock](#) — Screen lock allows a computer when idle for a certain amount of time to lock itself, requiring re-entering the user's credentials. This prevents the situation of a user leaving the computer accessible to all, ensuring data is not compromised. Cornell policy recommends every 15 minutes or less of idle time.
- [Spirion](#) — (Formerly Identity Finder) Everyone dealing with university data is responsible for its proper handling, especially if it is sensitive data. Spirion is one tool which can assist you in your obligation to safe-guard sensitive data. This page contains information on using Spirion.
- [Updating](#) — OS and Software engineers will provide security updates along with updates containing new features. To stay on top of threats to security, it is strongly encouraged, and usually required, for systems from our office to be centrally managed. For other machines, it is recommended to regularly check for updates.
 - [Mac Updates](#) — Common procedures used by ChemIT to update computer running current Mac OSX
 - [Windows Updates](#) — Remember to check and update ALL APPS/PROGRAMS unless specified for good reason, even if not listed. This page also contains specifics related to updating some of the most common applications.

Chemistry IT and Arts & Sciences IT

Chemistry depends on many A&S IT services, such as FileMaker Pro server hosting and configuration of central IT technologies (Active Directory, Casper, Configuration Manager, Firewalls, etc.).

Chemistry Lyris Mailing Lists

ChemIT's billing to faculty

Information about ChemIT's monthly invoicing to faculty.

- [Communications to CCB stakeholders](#)
 - [Jan 2015 billing update](#) — Subject: Chemistry IT updating billing information [DRAFT]
 - [Memo from CCB Technology Cmt \(Will Dichtel\)](#) — Coming, as of 9/11/14 conversation with Oliver (Chemistry lunch).
 - [Memo from ChemIT \(Oliver\)](#) — Create a Remedy INC to myself to collect all responses.

ChemIT inventory, including procedures

Standards of practice regarding our inventory process. And links to our various inventories.

- [Cabinets in S.T. Olin's 2nd floor hallway](#) — Chemistry IT has storage cabinets on the 2nd floor in S.T. Olin, near the elevators as you head towards Baker Lab.
- [Chemistry's stock-of-parts stockroom inventory \(both in Baker 248 and 250\)](#) — Table listing cables and other items, and their quantities, moved into 248 (serving as a storage "stock room", from Baker 250).
- [Inventory procedures for non-deployed machines](#) — Instructions for updating inventory records of scrapped, stock, and missing machines
- [What is the Dell oldest computer we keep for reuse, and why?](#) — WinXP and other non-current OSes do not run on the newest hardware. We thus want to remind ourselves of which Dell models to keep, and which ones we feel safe to let go.

ChemIT monthly and annual tasks

ChemIT's "Monitoring schedule". By month, reminders regarding ChemIT actions not to forget.

- [Accomplishments tracking](#) — Highlighting group and individual staff successes.

ChemIT newsletter

Express services CCB folks would benefit from knowing about, and successes relevant to encouraging use of services.

- [Default text for newsletters](#) — Use stock text on this page to speed up crafting our newsletters. Page also includes some important reminders.
- [DRAFT, October 2015](#)
- [Topic ideas for next newsletter](#) — For our next newsletter, capture on this page specific news items to consider, in addition to those which have been posted directly on our blog since our last newsletter.

ChemIT Professional Development resources

- [ChemIT Linux-related resources](#)
 - [Active Directory integration with Linux](#) — Tips and tools, including PowerBroker (PBIS).
 - [ChemIT Linux doc location](#) — Historically our Linux docs have been created in MS Word. This page helps authorized staff find them. :-)
 - [Installing Linux](#) — Oliver's notes on Linux install explorations.
 - [Learning Linux](#) — Including Linux server administration. And certifications.
 - [Linux magazines, subscriptions and the like](#)

- [Linux software tools](#)
- [CompTIA certification, training, and related](#)
- [Cornell's professional development offerings](#) — Info as of November 2016. Includes certificated training tracks (groups of classes)
- [Other](#) — PMI's PMP and ITIL training ideas.

CIT EZ-Backup subscription process and inventory

Process to order EZ-Backup subscriptions by ChemIT, for efficient and consistent requests and order trouble-shooting. Includes template answers. Links to inventory of subscriptions.

- [Chemistry staff backups status chart](#) — List of Chemistry and Chemical Biology (CCB) staff, and whether or not they have backups of their computers.
- [CIT's EZ-Backup info for Chem/Physics](#) — Info we would appreciate getting from CIT regarding ChemIT's management of Chemistry and Physics EZ-Backup accounts.

CIT static web site service

Please see how-to page under our web services section.

Computer Physical Security, Locks

Lab Services laptops and classroom computers have in the past used locks to thwart physical theft. A problem arises when security slots change or are removed by computer manufactures.

Connecting computers to Chemistry Group printers

Instructions on how to install printers onto personal or Cornell computer devices.

- [ChromeOS can't print to group printers](#) — Options outlined on this page since ChromeOS depends on Google Cloud Print and that service is not supported by Chemistry research group printers.
- [Command line sudo techniques for changing printing defaults](#) — Sometimes printer drivers don't give you important control of default settings. Such as for default duplex. On a Mac, here is a hard way to get those controls.
- [Printer set-up tips, including driver info](#) — Chemistry IT's experience with various brands of printers and driver software may save you time and aggravation.
- [Technology to make printing easier](#) — A placeholder page with ideas on ways printing could be made easier. Often would require additional investments so may not be worth exploring further or making any changes.

Dell warranty service for Cornell equipment

https://www.it.cornell.edu/services/hardware_repair/howto.cfm https://www.it.cornell.edu/services/hardware_repair/howto.cfm

Directory info at Cornell

Why would a student's record not show up in the Cornell directory?

Exit topics for Chemistry people leaving Cornell

HR refers to Chemistry IT Chemistry Department people who are leaving. To help them and their groups, we provide a consultation, using this page as a guide.

FileMakerPro services managed by Chemistry IT

FileMakerPro licenses and server, as managed by Chemistry IT.

- [FileMakerPro Licenses managed by Chemistry IT](#) — Chemistry IT has annually paid for 32 FileMaker Pro seats, plus other related licenses.
- [FileMakerPro server run by Chemistry IT](#) — Fall 2018, Chemistry IT stood up a FileMakerPro server because the A&S IT's server had run out of DB slot

Finding serial numbers on Cornell computers

Serial numbers are found in different places, depending on the manufacturer. Tips for finding them are on this page.

HDD Wiping Guide

This guide contains the basics on how to wipe a hard drive, using the multiple tools available

Hosting A&S NAS copy

A&S provides central file storage for admin and teaching purposes. To improve robustness, ChemIT is pleased to host a copy in our server room.

How to update your NetID-based password on an off-campus computer's account

Your off-campus Windows computer's password won't update when you changed your NetID password. You can update it by bringing it to campus. Or use VPN and these instructions.

Imaging hard drives

Make a snapshot (image) of a hard drive into a file.

Instrument computer support for Research groups in Chemistry

Instruments used in Chemistry often have computers attached to them. Often those computers require special support considerations.

IT Support special circumstances

ChemIT provisions services to a few staff and faculty who actually get their main IT support elsewhere. This page helps clarify the necessary coordination to ensure optimal delivery of services.

Linux Repositories

Information concerning Chemistry IT's own repositories and others provided on campus used by Chemistry IT

- [Chemistry IT EPEL and ELRepo repositories](#) — This page will contain all the information pertaining to the configuration/use of the EPEL and ELRepo repositories managed by ChemIT
- [Other Linux Repositories on campus used by Chemistry IT](#)
- [Standard CentOS Base Repo file to use ChemIT and Campus repo servers](#)

Networks

Info and links regarding our network, including options to put machines on 10-space.

- [Change IP address on CIT subnet via CIT's DNSDB service](#). — Info mostly for ChemIT staff, due to security restrictions on the tools used. Procedure is useful in situations where an instrument computer in 10-space must temporarily be given full internet access (for vendor access, say).
- [Chemistry's Computer Exception Form and related networks](#) — Chemistry's Computer Exception Form is used to request a jack activated on CIT's AccessNet. If that won't meet researcher's needs, Chemistry's RedNet is available.
 - [Policy 5.10 Progress Overview](#)
 - [RedNet and AccessNet registry summary](#) — Jacks and IPs on Chemistry's and Physics's RedNet networks, along with relevant context.
- [Cornell's private network \(10-space\)](#) — When a service moves from campus to the cloud, the service becomes unavailable to devices on 10-space UNLESS the servers of the service in the cloud is added to CU's transproxy.
 - [Chemistry IT's use of 10-space](#) — Characterizing the use of 10-space within Chemistry and Physics.
- [How to find your computer's MAC address \(and IP address\)](#) — The Media Access Control card interfaces your computer to the network and has a unique number. Learn how to get that number, here.
- [Network tools](#) — Of value only to NetAdmins who have proper authorization. Mostly linking to CIT tools. Original info from Michael Hint's "Magic CIT info websites" (9/25/12) email.

Purchasing, specing

ChemIT can help you invest in the right technology. And help you find the best value.

- [High-end computers](#) — Snapshot of costs for higher-end computers, including compute cluster systems (high performance, HPC). Purchasing, buying. Contact ChemIT to discuss your needs.
- [Personal A/V](#) — Chemistry IT's info on video cameras, speakers, headphones, etc.
 - [Headphones and speakers](#) — CCB staff who need headphones to do their work can request a pair from ChemIT. Others are welcome to consult with us regarding options.
 - [Webcam options](#) — Chemistry IT has purchased webcams for research groups and for our group. We specify the models and prices on this page.
- [Printer suggestions, including with scanners](#) — Info on some printers and MFP's in Chemistry
- [Restricted funds in CCB](#) — How can you tell if an account is not restricted, and thus can be used for purchases not eligible to restricted fund accounts such as printer toner? Summary: 82xx through 86xx are restricted.
 - [Oliver's extracts from OMB circular](#) — Extracts with an eye on computers and computer-related services.

Recommended procedures when leaving a computer

When do you shut down your computer, instead of log-off or lock it?

Remedy

Documentation mostly of value to Chemistry IT and Physics IT staff.

- [Reported Source categories, Remedy](#) — Conventions used by ChemIT for Remedy "Reported Source" categories.
- [Service categories in Remedy and desired ones](#) — Conventions used by ChemIT for Remedy "Service" categories. And our page to record wished-for categories.

Replacement budgeting for your Group

ChemIT can assist with replacement budgeting. Replace before failure; manage potential failure risk; don't waste money.

Requesting General Assistance

For general purchase and technical requests, we have listed important information to include in your request to help us process the case in the most efficient manner.

- [Researchers: Services for your personal devices used for research](#) — Graduate students and others are often expected to have personal devices to facilitate their group's research, such as a laptop. ChemIT can help, as time permits. Help yourself by backing up your data. And help us help you by understanding what we can do for you. Thank you!

Requesting Toner Replacement

To help you request toner replacement, we have created a guide with information you should include in your request, as well as estimated costs.

Resource 25 (r25) room scheduling web application and ATC's technology DB

Chemistry IT staff, among others in the Chemistry and Physics departments, have access to see the university-wide room schedules using this application. A few also can edit the schedules, using RDP. Includes link to classroom technology database.

Self-support of a Cornell-owned machine

Self-supporting a Cornell computer means taking on additional tasks and responsibilities compared with systems managed by Chemistry IT. These pages can help save you time and trouble, including access to set-up services by Chemistry IT staff.

- [A\) Set-up options for a self-supported Cornell-owned computer](#) — For Cornell computers which are self-supported, you may want some of Chemistry IT's optional assistance. Pick and choose from the deli-order style offerings on this page!
- [B\) Resources for those who self-support a Cornell-owned computer](#) — This page includes a resources table compiled by Chemistry IT

Servers, HPC systems, NMR lab, CAC, and AWS

Public-facing inventory of servers and the like in CCB, most of which are managed by ChemIT.

- [1\) CCB High Performance Computers \(HPC\)](#) — Inventory counts and other details related to CCB's HPC clusters.
 - [aaClusters moving to CAC](#) — Documentation page placeholder for collecting information related to having current Chemistry IT-managed clusters (in 248 Baker Lab) moved to CAC.
 - [Abruna Cluster](#)
 - [ChemIT Cluster](#)
 - [Collum Cluster](#) — 8 compute nodes, 1 head node. Details on this page.
 - [Collum-Loring-Abruna-Widom "CLAW" Cluster](#) — Cluster built on Widom's headnode. 1 headnode and xx compute nodes.
 - [Freed Acert Eldor HPC](#) — Non-cluster HPC
 - [Hoffmann Cluster](#)
 - [Lancaster Crane Cluster](#)
 - [Petersen Independent Nodes](#)
 - [Scheraga Cluster](#) — Upgrading summer 2014.
 - [zClarifying cluster responsibilities and ownership](#) — Effective use of a cluster for research is enhanced with clarity of roles and responsibilities, along with shared conventions and procedures.
 - [zCluster backups and related considerations](#) — Although there may be unique considerations regarding backups for high performance computer systems, including cluster, see first Backups and file storage options for research groups.
 - [zCluster Computational Software](#) — Computational software installed on CCB clusters, and who supports and manages which software.
 - [zCluster counts details and history](#) — Inventory counts of CCB's HPC computers, clusters only.
 - [zConnecting to Clusters](#)
 - [zMaintenance and emergency procedures](#) — Clusters and other high performance servers require maintenance. Documented procedures reduce surprises for both enabling scheduled maintenance and emergency work.
 - [zStorage for HPCs and other systems](#) — Sometimes a local hard drive(s) is all you need. But often the right solution is something else. Look here for info. related to alternatives, some of which are successfully used in production and very cost-effective.
 - [zUseful Linux HPC commands](#)
- [2\) CCB non-HPC servers in 248 Baker Lab and AWS](#) — Inventory and summary notes regarding non-cluster systems in 248 and AWS, including computational stand-alone systems, web servers, and file servers.
 - [Chemistry IT's AWS servers](#) — Test migration: License server, Stockroom Apps, etc.
- [3\) CCB NMR instrumentation systems](#) — NMR's instrument machines, both Linux and Windows.
- [Linux software](#)
 - [Oliver's demo of TOC](#)
- [Power outage records, procedures, and to-do's](#) — Summer 2013 and winter 2014, there were an inordinate number of power outages in Baker Lab, and other Chem buildings!
 - [ChemIT's record of recent power outages](#)
 - [UPS inventory and status](#) — A snapshot of the UPS's used to support servers, switches, and other equipment under ChemIT's management. Mostly within ChemIT's Baker 248 server room.
- [Server costs if to use non-ChemIT alternatives](#)

Sharing files and related topics

Many services allow sharing of files. Look here for guidance on which to use, and why.

- [Box.com info](#) — Box.com is a CIT-supported service. But to get more space, they expect you to go through your IT support provider. Which is ChemIT for CCB folks, of course.
 - [Box.com limitations and recommendations](#) — Some select Limitations and Recommendations from the FAQ, for v3. How much pertains to the current version (v4)?
- [File share services and related tools](#) — these relate to the more traditional file shares allowing for a regular mounting of the share to the desktop, via CIFS and the like. Includes Linux NFS-based shares, too. Being file shares, all at Cornell. Includes permission inventory tools, too.
 - [A&S file share](#) — This is a service for A&S's administrative departments. (This service is not available to research groups.)
 - [Chemistry file sharing instances, including SFS](#) — A list of CIT SFS (and other file share) instances, along with ChemIT's how-to's and conventions. Also, notes on any pending migrations or changes, including ChemIT test instances.
 - [Directory structure and permissions within a group file share](#) — The conventions used within Chemistry for group file shares. Also includes how-to's for ChemIT staff.
 - [Drive letter conventions](#) — Windows auto-mounts.
 - [File permission inventory tools](#) — Windows NTFS folder and file permissions can be complicated. There are tools available to better view those permissions than doing so by hand, one folder and file at a time.
 - [File sharing mapping](#) — For all CCB staff and others, Windows and Mac file sharing. Includes using Cornell's DFS service.
 - [Instructions for using group's file share](#) — Note 1: Off-campus use requires the use of Cornell's VPN (Virtual Private Network services).
 - [Physics file sharing instances](#) — A list of file share instances, along with PhysIT's how-to's and conventions.

Software licensing, intallation, and use

Software licensing processes are extremely varied, which can affect installation and its use.

- [Software installation](#) — Getting media and other tricks.
 - [Adobe](#) — CU has paid for site license to Acrobat (all CU machines) and Creative Cloud (1/2 of CU's systems). It can be hard to install the software, however. And you must inventory-track most installs.
 - [FileMaker Pro installation instructions](#) — Version 16 in use by Chemistry IT. Most others using v11.
 - [Panapto](#) — Must get application through Blackboard. ChemIT staff have a course established just for this purpose.
 - [Varian Cary Eclipse Software on Windows 7](#) — The drivers present on the installation discs are made for windows NT4 and so will not work on newer OSs or 64-bit OSs.
 - [WebEx](#) — First, add computer to the correct CU AD group policy, managed by ChemIT.
- [Software licensing](#) — ChemIT facilitates access to many licensed software packages. Please feel free to ask us if you have software needs- we can often save you money and time.
 - [Licenses ChemIT directly manages or bulk-purchases](#)
 - [SBGrid software](#) — Leslie Kinsland, Ealick's group, manages CU's SBGrid software licensing.
 - [Software not licensed by ChemIT](#)

Stockroom POS software support by ChemIT

Cornell users: Please log into Confluence to see or search the restricted pages under this page. Those restricted pages won't even list within this page until you have signed in. Thank you.

- [Cornell access-only pages regarding Stockroom POS system](#) — Documentation for the Stockroom POS system which should not be made visible outside of Cornell resides under this page restricted to Confluence users.
 - [Backups](#) — This page is to assist us to convert the stock room's software backup plans into a work flow. And have that work flow tested, updated as necessary, and properly documented. Documentation started below.
 - [Brightworks PO](#) — PO# for CU's Chemistry Stockroom service is 447028, for use by Brightworks.
 - [Documentation for Stockroom POS system](#) — The stockroom has the latest version of the back-end support doc. Workflow to update our version with Brightworks is documented on this page. ChemIT also has server-specific docs..
 - [Maps and flowcharts related to Stockroom WebApp](#)
 - [Stockroom POS's VM servers](#) — For Chemistry IT staff: Documentation references regarding the Stockroom's Point-of-Sale (POS) servers (all virtual), and their environment.
- [Public-facing pages regarding Stockroom POS system](#) — Per Brightwork's request, most of our documentation and current activity regarding our work with Brightworks and their vendor(s) is not public. However, sometimes coordination benefits from some info being public, so that's parked here on an ad hoc basis.
 - [High-level status on Stockroom system's issues and related projects](#) — Chemistry IT's perspective of issues with the stockroom WebApp system and likely order of addressing them as projects
 - [Stockroom WebApp's support workflow](#) — As of 12/6/16, this is the support work flow for both break/fix AND for feature/change requests.
 - [Stockroom WebApp checkups and associated to-do's](#) — Checkups will increase chance of good service in case we need crisis help. To-do's are not time-critical but doing them gets Brightworks/ Singlebrook additional experience in our system when it's working.

Supported Operating Systems

Most computer operating systems are now changing frequently, and vendors drop support of older ones. A balance needs to be maintained between newer systems, which have the latest features and support newer hardware, vs existing older installations, which may be needed for older software or hardware still in use.

- [Windows 7 won't work on \(most\) NVMe hard drives, per Dell](#) — Dell states that on their newest models (including OptiPlex 7040's and Latitude E7270's), Windows 7 is only supported on non-NVMe hard drives.
- [Windows XP won't install on new machines since 2016](#) — Installing windows XP on newer Intel machines (as of 2016) is no longer practical, or even possible. Also, don't use SSD drives with WinXP. Link to AMD-related info sub-page, too.
 - [Windows XP on AMD machines \(2011-2016\)](#)

Vendor relations

General info regarding specific vendors and related relationships.

- [Dell](#) — NYS Agg Buy options. And considerations for Dell printers.
 - [Dell purchasing issues](#)
- [Red Barn Computing](#) — <http://rbtginc.redbarncomputers.com/> <http://rbtginc.redbarncomputers.com/>
- [The Computing Center](#) — We recommend contacting ChemIT before contacting The Computing Center for services or parts.

Web pages

Web use in CCB is varied and inter-connecting. See our specialized section for all topics web-related.

- [Consider ShareLaTeX.com for collaboration documentation](#) — ChemIT student employee, Alex, uses this tool instead of Google Docs to write well-formatted documentation. Great PDFs as output! Grad students may really like this service.
- [For Research Groups](#) — CU Blogs are great for Research Groups!
- [Updating/Editing Request Forms \(On Math Server\)](#) — Ensure you have a backup made of the previous working page before making any edits. This prevents any (major or minor) breaks by allowing us to simply revert to the previous working version.

Wireless projection

Project from your Windows or Mac laptop wirelessly (different technologies).