

# Projects

Public project-related information. See also

- The [CCB Computing Committee page](#) for monthly snap-shot of projects ChemIT worked on and completed. Thank you for your interest!

## a\_Project-tracking tools used by Chemistry IT

Access to cited files is restricted to Chemistry IT staff.

## ab\_For Research Groups

Projects focused on research in Chemistry. Usually for a specific research group.

- [Aye - Laptop and desktop support barriers](#) — Many of Yimon's support tickets related to her desktop and laptop lead to successfully addressing symptoms, and not addressing underlying structural issues implied to exist. Thus, this page tries to collect in one place tickets and other information to help better respond to future requests for support. This situation, which includes software not being kept up to date for whatever reason, is expected to only get worse, alas.
- [Cluster and other high-performance systems support](#) — Lulu Zhu does or leads us for our Linux-based work. Roger is our lead for Windows server-based work.
  - [All clusters](#) — Park items related to... (see this full page for list)
  - [HPC ideas from Cornell folks outside CCB](#) — CU peers respond to a query to fulfill an immediate need of 64-512 cores. May 2014.
  - [P041 ChemIT Headnode creation](#) — This community resource could, when completed, help many groups with clusters.
  - [P062 Scheraga cluster Matrix upgrade](#)
  - [P076 Widom Cluster](#) — Make Widom's cluster operational, including adding new hardware. 2 phases.
  - [P089 Hoffmann cluster re-expansion](#) — Fall 2014, \$30K grant. Added 10/2/14.
  - [P140 Cluster migration to CAC](#) — Exploring idea and value in moving select Chemistry clusters to CAC, from 248 Baker Lab.
- [Coates tickets and projects summary page](#) — January 2018: To help prioritize and keep track of multiple initiatives by Chemistry IT for and with the Coates group.
- [CUL and Symplectic](#) — The Library is looking at a better way of gathering a quality list of faculty publications than the current manual entry process.
- [Learning Catalytics Mobile and Web Polling Pilot](#) — Learning Catalytics is being used in Baker 200. But that room has insufficient wireless until building's network is upgraded (scheduled for that room by the end of Feb?).
- [Linux Workstations](#)
  - [Cerione, 3D workstations](#)
- [NSF Data Management Plan](#) — Roald Hoffmann's group's need to fulfill NSF's data management requirements.
- [P049 Chen - Imaging instrument \(microscope\) computers](#) — ~2 are XP, all others Win7.
- [P057 Windows XP remediation](#) — April 6, 2014 Microsoft no longer supporting (patching) Windows XP. Thus, they will become increasingly vulnerable to compromise, and must be taken off the network, per University IT policy.
- [P150 Chen - Increase productivity for Matlab computations](#) — Ideas: Expand computational capabilities (power and/ or number of computers), increase efficiency of code, streamline workflows, etc.
  - [Chen - Consult on scaling up image processing work](#) — Chen process many, many images using group-developed software (on Matlab?). It uses dedicated computers (all in the lab?) to meet current needs, but Peng is concerned that it will not scale well. In addition to processing power, effort demands and produces copious amounts of data, currently stored on one-off, external hard drives.
- [Petersen group outbound transition](#) — Work to transition Petersen group out of Cornell Chemistry summer 2018
  - [Petersen Computational Computers](#)
  - [Petersen EZBackup computers](#)
  - [Petersen group phones](#)
  - [Petersen Instrumentation computers](#)
- [z\\_Finger on the pulse, Research](#) — Possible projects, low-level explorations, etc.
  - [Reducing hard drive failures and consequences on server](#) — What are the cost trade-offs of reducing server hard drive failures? What can be done to mitigate consequences to drive failures?

## b\_For CCB Student Services and Instruction

Projects for or strongly related to CCB's instruction efforts.

- [Course and Grades tracking for Chemistry Majors](#) — Develop a web application to view courses taken, credit counts, and grades, for Chemistry undergraduate majors. Visible to each student and their faculty advisor via NetID credentials.
- [Instructional instrument laptop support](#)
  - [Inventory \(hardware\) of instructional instrument laptops](#)
  - [Inventory \(software\) of instructional instrument laptops](#)
- [z\\_Finger on the pulse, Instruction](#) — Possible projects, low-level explorations, etc.

## c\_For CCB in general

Projects with a wide scope. Usually across many or all groups in Chemistry.

- [Audit, July 2017](#) — Cornell Audit requested inventory of our all IT-related devices in Arts and Sciences, including the Chemistry Department
- [Consider: Whitelisting to mimic that portion of VDI environment](#) — One advantage (and limitation) of CIT's Virtual Desktop service is that they limit what applications you can run, limiting you to the only the applications they host. (You can package apps for them to host.)
- [CRCF's notes on CCB Comp Cmt](#) — Oliver's notes related to tasks to address CCB's Computing Committee's requests and needs.
- [CRCF Printer Server](#) — Placeholder for idea of CRCF standing up a printer server for CCB to facilitate managed desktops.

- [Encryption project for Chemistry and Physics](#) — Spring 2016: Have until December 2016 to encrypt non-exempted hard drives, per CU policy.
- [Evaluating CIT Desktop Anywhere](#) — Testing CIT's Desktop Anywhere
  - [Chem Staff VDI considerations/issues](#)
  - [Evaluate CIT's Desktop Everywhere on Dell Wyse all-in-one system](#) — Many, many "start up" issues resolved by CIT. Use was from December 2014, through August 2016. Here is a partial record of my issues, along with some remaining ones to work through.
- [Firmware updates on HP printers](#)
- [Inventory 2014](#) — Comprehensive IT-related asset inventory, including identifying all WinXP systems. And now includes printers.
  - [FAQ on CCB Research IT inventory update process, Spring 2014](#) — Answers to questions IT Reps may have as they prepare and assist ChemIT in updating CCB's computer inventory.
  - [Standard Inventory Record Tutorial](#)
- [NCP](#) — WARNINGS and status updates regarding the phone and network wiring being upgraded in Baker Lab. (ST Olin Research Wing was done in December. And PSB already has a modern network).
  - [Memo with NCP overview, plans, and expectations](#) — Updated memo originally sent to staff (11/6/12) and faculty (11/28/12) with information about the "when", "what", "why", and "who" regarding our network upgrades.
  - [Technical details](#) — Link to when VoIP is not the right choice, and thus should stay with analog (copper wire) phone. Link to model of VoIP phone. Headset idea.
- [P014 Spirion project, public](#)
  - [Chemistry and Physics How-to's for Identity Finder](#) — Spring and summer 2017 steps to follow for select staff required to use Identity Finder "now". Different process expected for the fall for "everyone". :-)
  - [Spring and Summer 2017: Chemistry and Physics, list of staff](#) — Who needs to do what within Chemistry and Physics. Doing this all before the central campus-wide (CIT) Spirion server-based system, mediated by A&S IT, is made available to us, hopefully in the fall.
- [P55 - Risk Assessment development](#) — Recommendations geared towards Chemistry research groups. ChemIT's role is to promote, not require or enforce, these best practices.
- [P153 FMPPro version from 11 to 14](#) — Department-wide issue. Chemistry IT upgraded to A&S IT's v14 servers a while ago.
- [Video Conferencing for use by CCB groups](#)

## d\_For CCB Admin and CCB Facilities

Projects with a scope restricted to Admin or CCB facilities (such as NMR). Often affecting more than one Admin unit.

- [CCB HR Exit form edit ideas](#)
- [NMR file sharing, Linux lab rebuild, and server decommissioning](#) — Project page for current NMR work.
  - [NMR file sharing, PCs, Linux, and Macs](#) — NMR uses SFS shares to enable researchers to copy files from instrument computers (Windows and Linux) to their own computers (Windows, MacOS. Any Linux?!)
  - [NMR Linux lab rebuild](#) — ChemIT (mostly Lulu) assisting Ivan on reconfiguring his Linux-based instrument computers.
  - [NMR server likely to be decommissioned](#) — ChemIT believes NMR's aged server can be retired (turned off), with just a few changes.
- [NMR web scheduler migration](#) — ~13 (16?!) year old system suffering from benign neglect. Public web server with few if any updates to OS or web server, on Chemistry's "trusted" network. Original re-write plans fell through.
- [Optimize utility of chemfac email list](#) — The <chemfac> email list sends email to CCB faculty. Who should be able to send messages to this list, and what gating of messages is required?
- [Stockroom 2.0 upgrades - Summer 2017](#) — Upgrading Quickbooks and Kiosk server software while moving to Amazon Web Services for hosting
  - [Stockroom 2.0 Servers](#)

## e\_For ChemIT

Projects focused on meeting ChemIT's needs, requirements, or supporting their operations.

- [248 Server Inventory Clean Up](#)
- [P106, P142 248 Router-Gate](#)
- [Public OSD Notes](#)

## f\_For Physics

This page identifies PhysIT's activities, and their status, related to supporting Physics Administration and Instruction.

- [aa\\_Active](#) — Activities and recommendations PhysIT actively working on.
  - [aa\\_Staff awareness on IT-related topics](#) — Fall 2016, Craig intends to require all his staff to turn on Cornell's two-step authentication (aka Duo or dual-factor). Anything else desired by Physics staff?
  - [Hardware-related to-do's](#) — Decide on support for instructional laptop Jenny uses.
  - [Non-PhysIT areas of responsibilities impacting PhysIT](#) — Clarify areas which are not PhysIT's responsibility. Ensure good boundaries as appropriate if overlap unavoidable. Procure consulting or recommendations from PhysIT where desired and appropriate.
  - [yy\\_Lower priority](#) — Good things to get done when high priority items done. Do as we are able in the meantime.
  - [zz\\_On-going or ad hoc](#) — A place-holder to remind us of topics which come up or should be reviewed from time-to-time.
- [z\\_Completed PhysIT tasks](#) — Items parked here for future reference. Especially useful if any of these topics require revisiting later.
  - [Assisting with Nick's area](#) — Relieving pain points and facilitating adoption of best practices and efficiencies.
  - [Consider: Migrate select staff to CIT's Desktop Everywhere](#) — As of 5/18/16, not worth the effort and risks.
  - [Decide on disposition of Physics Mac laptop from Barry](#) — The best we can tell, it was purchased approximately March 5, 2009, making it 4.5 years old. PhysIT using at an (old!) spare.
  - [Documentation of Physics file storage server](#) — Running since before spring 2015.
  - [Effective use of Box.com](#) — Discuss value and practical utility. Applicable to Physics, beyond John Miner? Answer: No, not with file share now in place.
  - [Effective use of Physics file storage server](#) — As of 5/18/16, completed about one year ago, for all practical purposes.
  - [Ensure adequate access to ChemIT's web resources](#) — Re-branded some of our ChemIT site to welcome/ acknowledge Physics/ PhysIT's support.
  - [Ensure proper authority for EGAs and email lists.](#) — As of 5/18/16, this had been completed years ago.
  - [Inventories for hardware, networks, software](#) — Completed, mostly within 1st year. Data point: May 2015: Uncovered yet one more computer: Jenny's laptop. Can't manage what one doesn't know one has. Ensure appropriate metadata is captured for each list.

- [IT support ideas for Lou Hand](#) — Ideas and choices related to provisioning IT support for Lou Hand to meet his needs cost-effectively.
- [Migrate backup from Retrospect infrastructure](#) — Create proposal for back-ups, ideally without depending on maintaining a Retrospect infrastructure. Ideas include EZ-Backup and/ or file server services from A&S.
- [Migrate FileMakerPro away from Barry's server](#) — Completed ~Dec 2014, to resolve reported problems. Move hosting of Physic's FileMakerPro server to A&S. (As has been done successfully in CCB, as a point of reference.)
- [Migration from Retrospect](#)
- [New scanner for Kacey](#) — Done.
- [Physic's IT lead for NCP in Rockefeller](#) — Michael Hint is assigned as IT lead for Physics Admin and Physics Instruction.
- [Physics.cornell.edu domain name management](#) — PhysIT has received the required authority to manage physics.cornell.edu domain.
- [Physics iMac from Steve Lipson](#) — Senior Lecturer Steve leaves Dec'13. His iMac then goes into Physics storage, so is able to be redeployed for future need.
- [Physics primary web site](#) — Barry hosts web site. BobM at A&S Communications supports, with retained CIT staff as back-up.
- [PhysIT calling cards](#) — Done.
- [Printer inventory completed](#) — Completed spring 2016. Had waited for Chemistry's printers first being added to PhysIT's "real" inventory system.
- [Re-image computers with PhysIT's image](#) — Mostly completed by spring 2015. One subsequent data-point: May 2015: Uncovered yet one more computer: Jenny's laptop. Prior notes on this task: Do this opportunistically, at least at first. Any new computer. Any problematic computer.
- [Remedy queue, PhysIT](#) — Done.
- [Rockefeller NCP](#) — Michael Hint coordinating with Kelly Brower to provide IT direction for building's network upgrade.
- [Secure and standard wireless in Admin conference room](#) — Completed ~ Jan 2015. Current wireless in Physics's Admin conference room is homebrew. Since access is not controlled, and on the Physics Admin network, this is "not good" from a security (and CU policy) perspective. Ideally, should be serviced by RedRover.
- [Secure network](#) — Proposal to add a best-practices layer of security on our network (ACLs).
- [Secure printers](#) — Change printer addresses to 10-space so can't be accessed unless on the department's network (or via VPN).
- [Upgrade Bert's WinXP system](#) — Completed May 2015. Bert uses special hardware and software, so the upgrade must be planned to reduce unpleasant surprises.
- [Upgrading select staff computers](#) — Completed ~Fall 2014, regarding getting approvals and funds. The Dell 745's (really, really old!) and older (!) computers are being replaced. Put on hold Dell 755's, and revisit summer 2014.
- [Walk-through with stake-holders in various areas.](#) — Completed ~ summer 2014. PhysIT expected to provide IT consulting to various folks who manage IT-related services in Physics. Ideally, learn about each environment and their needs before we are called in for consultation.

## z\_Completed

Completed projects ChemIT lead or was otherwise involved in. (Not PhysIT.)

- [a\\_Completed, Research](#)
  - [201304 Decommission Transit](#) — ChemIT set up a temporary service to address a network limitation we tied to the Baker Lab network upgrade done in Feb. 2013. Must now transition users off that temporary service.
  - [Better RedRover coverage in PSB](#) — At a minimum, add a RedRover access point on PSB's second floor. Seek partnership with non-CCB PSB researchers to add even more RedRover access points, if possible.
  - [Cluster work, completed](#)
  - [Crane 3D workstation and storage](#) — Aiming to complete fall 2016.
  - [Evaluate CISER's services](#) — CISER software (Mathematica, MatLab, etc) running on high-end clusters, free to researchers during evaluation period paid for by CCB.
  - [FREED - CCMR's IT migration tasks](#)
  - [Freed - Jack's replacement laptop](#) — Recommending a Dell Latitude E7x40/ E7x50 laptop. The "x" is either a 2 (12.5" screen) or a 4 (14" screen). Other decisions to be made are outlined on this page.
  - [Freed - John Franck's dual-OS needs](#) — Ideas to provision dual-OS, with one OS not supported by ChemIT.
  - [Freed - June 2015 workshop](#) — 2 days, June 10th and 11th, 2015. Likely about 25 participants, but max. of 40 scheduled. Presentations on first day. On-hands workshop the second day. About 12 speakers. And fewer (6-10?) workshop facilitators.
  - [Freed - Peter Borbat's workstation](#) — INC INC000001138139
  - [Lin HPLC computer rebuild, Win2000](#) — Oliver's attempt to restore a failed HD's computer. Restored the Win2000 from Ghost image from factory and got license key installed. Also tried to port application to Win7 32-bit, but vexed by software copy-protections.
  - [P23 Dichtel Mac Sync](#) — Consider 3rd party tools to improve AD integration for Mac desktops so they can more effectively use CIT's SFS service and yet also still benefit from Mac Home Directory-style behavior.
  - [P132 Dichtel Moving from Cornell to Northwestern, in Chicago](#) — A place to inventory IT-related issues and their current status. And to promote understanding and coordination among Will and other research group members, Chemistry IT, and the folks at Northwestern.
  - [P133 Park Moving from Cornell to Chicago](#) — Expect to have planning meeting with Jiwoong in August 2016.
  - [Research IT Reps](#) — Orientation session conducted right before main Fall 2013 semester.
  - [Scheraga's server in Argentina](#) — Harold wants this server at Cornell instead of where it is now.
  - [Scheraga - Cluster backup choices](#) — Add true backup functionality to the existing cluster. Discussion started Oct. 2013.
  - [Scheraga - Data corruption problem on Matrix cluster](#) — The Matrix cluster is currently unavailable due to a problem with its data storage.
  - [Scheraga - Yi He's dedicated GPU computer](#) — Harold is writing a grant requiring results which require GPU processors. Goal: Get Yi He access to a GPU-provisioned machine so he can get results to Harold ASAP.
- [b\\_Completed, Student Services and Instruction](#)
  - [Connecting and using yaehmop for Roald Hoffmann's Chem6070 Spring 2016 class](#)
  - [P12 - ChemGrades FMPPro DB](#) — Making CCB's very important ChemGrades DB more robust, and enabling necessary increased functionality, especially for teaching faculty and students. Ensuring its long-term support and operation. Representing customer is Pat Hine (PatH).
  - [Printer for Chem majors](#) — Thanks largely to Michael Hint, starting summer 2014, ChemIT produced on-going savings of \$1,850 per year (a 40% savings on prices ChemIT involved in) to provide full-color printer services, for free, to Chem majors, in Lars' undergraduate (Mac) lab. This included procuring a new, second, full-color printer for almost nothing.
- [c\\_Completed, CCB in general](#)
  - [201303 Office 365 migration](#) — Sent closure email March 25, 2013 (Monday). February 2013's migration of email from Cornell's servers to Microsoft's off-campus servers (Office 365).
  - [ChemIT's server investments](#) — The department, including ChemIT and other Admin offices, has needs for servers. These can be provisioned at CIT. Some may be more cost-effectively done by ChemIT, if trade-offs are acceptable.

- [ChemIT Liquidation of Stock](#)
  - [Copy of CCB people lists](#) — Kevin Ashman will kindly do a monthly pull of people within CCB. HR has info on all staff, faculty, post-docs and other researchers. Instruction has info on all grad students.
  - [Free to departments](#) — May 2015 give-away for items of potential value to others at Cornell, including toner.
  - [New toner, for sale outside Cornell \(free to Cornell depts\)](#)
- [d\\_Completed, CCB Admin and CCB Facilities](#)
  - [Admin Printer Review and Inventory](#) — March/ April 2013: Conduct printer review, per University directive. Result will be a more up-to-date inventory of printers in CCB's Admin areas.
  - [Lab Services - New staff computers](#)
- [e\\_Completed, ChemIT](#)
  - [ChemIT web site](#) — Fill out ChemIT's blog so we can delete our old web site's data. And maintain this wiki site.
  - [Deprecated: Effort tracking](#) — What do ChemIT staff do with their time?
  - [Improved incident tracking](#) — ChemIT will likely use new-to-the-A&S's college the campus-wide Remedy tracking system. Since April 2012, we've used part of Spiceworks.
  - [Performance Reviews 2013](#)
  - [Roll-out for ChemIT](#) — Components related to rolling out our ChemIT name, summer 2013, coinciding with ChemIT's adoption of new ticket management system.
  - [Student staffing](#) — Kathleen is leaving after Spring 2013. Find someone at least half as good!