# Infrastructure Technologies Advisory Group

Notes

# October 4, 2018

# **Present:** Greg Sparks, Greg James, Debbie Carraway, David Ladrie, Ed Rogers, Kevin Lee, Doug Flowers, Shawn Dunning, Vijay Tailor, Mark Williams, Chris Allen, Jill Sexton, Keith Boswell, Joshua Gira, Pat Gaddy, Josh Jury

# **Welcome**

Now have a Google group… [group-intag@ncsu.edu](mailto:group-intag@ncsu.edu)

**Staffing Update**

* NOC Manager position (reporting to Kristina) - Reposting position

**JEMS (Jack Exemption Management System) Decommissioning**

* When new ports patched, look for open ports, then any VLAN 99, and finally utilize a port that’s been inactive for 180+ days
* Need a process to notify folks when a port is unpatched - suggestion is send to all PCR admins for given building

**CATV**

* Working through contract hurdles with Spectrum for new service
  + New target roll-out date: January

**MDFs**

* Poe selected as site for NMDF. Getting ready to start elec/mech upgrade design.
* No date yet for push to remove non-ComTech equipment but will be after processes are in place for hosting non-OIT equipment in DC2/EDC

**Infrastructure Records**

* Fiber inventory in progress - OSP cables only (52% complete)
* Working with Univ. Architect Office on telecom utility mapping

**Building Infrastructure Projects**

* In construction: CVM Main, Lang & Comp Labs, Delta Zeta, Dabney, Brooks  
  In design: CMAST, Butler, Lambda Chi Alpha, Weaver Labs, Patterson

**Campus Network**

* Centrex Replacement NMDF, SMDF zones (construction)
* Working on master plan design/estimate for providing data network to Lake Wheeler Rd. farms
* Backbone updates - Investigating requirements and implementation standards
* VPN decision made - Working with NWN to do configuration and installation of production boxes
  + Client testing going on now within OIT- expect to implement in the next 2-3 months
  + Will allow for 2-factor for VPN
    - Thought now is to go live with 2FA on the rollout
    - Integrate with DUO
* Have purchased Infoblox (new DDI (**D**NS, **D**HCP, **I**P Address Management) solution) - Phased migration to be completed by end of November.
* Construction in progress on AFTC infrastructure lab expansion/upgrade.

**Data Center**

* DC1 Decommissioning
  + Continuing to gather inventory
  + Evaluating options for resilient connectivity
  + The target date for completion December 22, 2019
* Interior Layer 1 (fiber) standard - RFI responses under review
* Intake processes being refined
* EDC now operational (in pilot phase)

**Access Layer**

* Big Layer Two (BLT) project designs - 45/47 academic buildings (96%), 11/58 admin buildings (19%) - Target date for completion=Summer ‘19
* PCI - Reviewing Pen test results

**Cellular/mobile**

* Indoor - Spidercloud - design in progress on 6 buildings. Working through hazmat roadblock. List: [SpiderCloud](https://docs.google.com/spreadsheets/d/16ZpdmpP7JNH1_P2tvzCISjmNXMzE-VyaEY1KrZv3uPc/edit?usp=sharing)

**IT Strategic Planning**

* Instead of adding new initiatives, focusing on inventorying enterprise scope efforts already underway that support the goals - there are lots
* Service Planning
  + CMDB workshop held in September, apparent that change management revamp needs to happen in conjunction and as a critical path before rolling out CMDB

**Budget**

* Received funding for FY 18/19 phase of CAT5 upgrade projects
* Added DC2 needs ($7 million) to the campus IPL ([integrated priority list](https://docs.google.com/spreadsheets/d/1iOInj8RG-3s-9ceWRcFi46F9sHIAMOLbAyFvB_rAwco/edit#gid=387967991))
  + Cooling enhancements, generator replacement, UPS replacements, other power concerns. The goal is to increase density in DC2.
* High level [overview of connectivity rate](https://docs.google.com/presentation/d/1ocL2Wv5DcxG2opX48dXxHjJbZbjYm-GQV40W0JgxRDE/edit#slide=id.p)
  + How did central funds get reallocated?

**Unified Communications**

* Partner Updates: UNCG, App State, NC A&T, Pembroke
  + Security updates
* Call Center - Callback queue development
* Investigating PSTN cost savings options
* Collaboration on collaboration and conferencing at NCSU

**Systems & Development**

* PCI - Pen test, automation
* Tools Updates
  + Nucleus replacement - up/down, threshold
  + AKiPS -- thresholds and alerts
* Development
  + VLAN validation tools in the VMWare environment

## Wireless

* Have paid for professional services to help upgrade controllers to 8.x code -
  + Working with CAD to see if we can determine if there are any issues with the mixed model environment.
* Classroom wireless
  + [Classroom Coverage](https://docs.google.com/spreadsheets/d/1EM_YfPCHXV7BNHRdlUaj0_x6E75tMZblSppfhlmfJgQ/edit#gid=2136708155) - current list
  + 15 out of 237 110-classrooms remain - all by end of calendar yr.
  + Future: need to begin discussion on 210 classrooms funding
* Beacon focus group met on 2/27/18
  + Agreed to meet again in the fall
* EDUROAM (secure SSID) -
  + Working on SecureW2 documentation, collaborating with Walk-in Center and Help Desk
  + The goal is to eventually transition as many stakeholders as possible to use this SSID
    - Eduroam use - see monthly metrics link below
* Now tracking wireless metrics as part of overall [monthly metrics](https://oit.ncsu.edu/campus-it/campus-data-network/communication-technologies-metrics/)

**Storage Infrastructure**

* Changing from Netbackup to Data Protection Suite (Dell/EMC product), shifts backup traffic to Ethernet from Fiber Channel - target to complete end of August
* Backup capacity challenges have been encountered that appear to be related to database moves to Exadata - deduplication seems to not be effective between Solaris DB backups and Exadata backups
* [Inventory](https://docs.google.com/spreadsheets/d/1j_qQgCwSBvMwthNNKpPHnAxlzGbFc5LDl6AZFtopqJU/edit?usp=sharing) of OIT storage services underway
* Plan to offer a tier 3 storage offering (NAS and block accessible near-line SAS storage with large, 6-8TB, slow, 7200rpm, disks) this FY

### Governance Revamp

### Need to figure out future of ITSAC-I and any relationship to this group

### Parking Lot Items

* Routing licenses at the BDF level – when and how much should occupants pay? Interim solution is 50/50 when “desired”, ComTech funds when required
* “virtual data center” – 4/5/18 conversation confirms there’s still some need for “flat” networks (even outside the data center)

## Upcoming Meeting Dates

* Next CTAG Meeting – November 15, 2018 - 9:30, AFTC 106