# Infrastructure Technologies Advisory Group

Agenda/Notes

# December 3, 2020

# **Present:** David Goodwin, Debbie Carraway, Ralph Castanza, Eric Sills, Gary Li, Dan Deter, Keith Boswell, Kirk Main, Greg James, Ed Rogers, Greg Sparks, Chris Allen, David Ladrie, Aaron Peeler, Neal McCorkle, Mike Kastellec, Vijay Tailor, Doug Flowers, Josh Jury, Kevin Lee, Mark Williams, Beatrice Richardson

# **Welcome**

Reminder: Google group… [group-intag@ncsu.edu](mailto:group-intag@ncsu.edu)

**ITSM**

* Upgrade to Paris ([slides](https://docs.google.com/presentation/d/1YWAjuMmdo-nZ693MmjV_iVQ2RdilgnAqWdeMCK1kjm8/edit#slide=id.ga41ff9ef88_0_16))
  + Development paused 11/30
  + Paris Testing 12/8 - 12/17
* Next Phase of ITSM Planning
  + Event Management - postponing for now but will gradually ease into early process work
  + IT Service Catalogs for Colleges and Divisions

**Server Infrastructure**

* DC2 Data Domain move to EDC (primary backup storage)
  + Started planning phase
  + Targeting move Feb 2021

**Storage Infrastructure**

* OIT Storage and VM rate refresh FY20-21 published
  + [Storage Rates](https://oit.ncsu.edu/campus-it/oit-general-storage-services/)
  + [VM hosting rates](https://oit.ncsu.edu/campus-it/virtual-hosting/pricing-and-billing/)

**Software Infrastructure**

* VCL - Azure Windows Virtual Desktop (WVD)
  + Preparations for upgrade to 2020 Spring release. Converting API calls. Tentative week of 12.14.20
* RedHat Licensing
  + A decision has been made to renew our existing licenses with Red Hat for the upcoming year in May 2021.
  + We will re-evaluate options a year from now to determine where to obtain licenses and support for the subsequent year.
  + If your unit has systems that require Red Hat Linux, we encourage you to work with Oracle to address concerns around your system support options under Oracle Enterprise Linux (OEL). We still have some OEL trial licenses available.
* Sysnews Monitoring and Notification
  + At this time we have ~723 systems running in parallel with the current Sysnews Nagios. ~130 more systems are in Zabbix and in the process of being made ‘production’.
  + The IRIS / ONCALL ( replacement for pager.ncsu.edu and on call calendar ) is now running in production with the latest code.
    - SMS is now available through Twilio with testing for text to voice ongoing.
    - Onboarding of groups already in Zabbix is now in process for IRIS / ONCALL.
    - Customers that currently only use pager.ncsu.edu are now being added into IRIS / ONCALL with 1:1 instruction from CSI for initial on call queue population.
  + A new version of Zabbix( 5.2 ) is available and being evaluated in our Development environment. This will require an upgrade of the O/S( RHEL 8 / CentOS 8 ). Evaluation of disruption to current production is being evaluated to see if the upgrade can be accomplished before go-live. For more information on what Zabbix 5.2 offers: <https://www.zabbix.com/documentation/current/manual/introduction/whatsnew520>
* New Documentation:
  + - ServiceNow KB article(s):

<https://ncsu.service-now.com/nav_to.do?uri=%2Fkb_view.do%3Fsys_kb_id%3D94a40a621bbf14944d506288bd4bcb74>

* + - Onboarding docs:

<https://pages.github.ncsu.edu/oit-csi/documentation/monitoring-information-zabbix.html>

* + - Onboarding FAQ:

<https://pages.github.ncsu.edu/oit-csi/documentation/monitoring-faq.html>

* A follow up email will go out before winter break to remind those already not on boarding of the pending ‘go live’ date. At this time ~70% of existing Nagios/Pager customers are somewhere in the process of onboarding.
* The stated goal is to be on the new system 1/11/2021. The proposed retirement of the current system is 3/1/2021.
  + - Both the current Sysnews Nagios and the Zabbix / ONCALL system will run in parallel for a time while groups are moving over, testing, and going live.
    - Please submit a Servicenow ticket to the OIT\_UNIX queue and provide a good contact and current on call group( if you have one ) to begin the process of moving over.
* EPS for Linux desktops and laptops
  + We have not been able to allocate needed resources to this project.

**Campus Network**

* Now focusing on core firewall upgrade - Palo Alto 7050s are now installed in production, config migration continuing, Research moved this week, PCI will be next week.
  + Rule clean up happening as well
* Backbone/core updates - Starting to evaluate various Cisco platforms/architectures, will be ordering equipment for lab soon
* Life Safety Centrex Replacement
  + NMDF - cutover complete
  + SMDF - cutover in progress
  + CMDF - construction in progress
  + WMDF - design complete
* Redundant fiber entrances - SMDF zone - cabling in progress
* 2806 Hillsborough, Milton Small bldg, Turner House - cable termination in progress
* New Greek Village fiber X-connect - cable installation in progress

**Access Layer**

* TUNAMELT project - 3560x switches - designs completed (39%)

**Data Center**

* DC1 Decommissioning
  + Dec 1st was official EOL (turn off DC1 networks)
  + Working on electrical/mechanical system decommissioning plan
* Decommissioning of 3750s and N7Ks in DC2 - should be turned off this week
* DC2 - analyzing costs for construction vs. COLOs
* Parking lot item - “virtual data center” – 9/3/20 conversation confirms there’s still some need for “flat” networks outside the data center (new fabric facilitates this among data centers).
* General service offering for colo - COVID has slowed this a bit but we’re handling needs on an “as needed” basis
  + Intake processes being refined -- email jdperry5@ncsu.edu for intake
  + Cost model for rack space being finalized - [current draft](https://docs.google.com/spreadsheets/d/1MQhV3Q25NK4AuoIJWamuWuV-yl7auDlI6IqyqLAdaUg/edit#gid=826436317) - these costs will hold through June 2021
  + Special challenges of tape libraries - need to change tapes on a regular basis, etc

**CATV**

**MDFs**

* NMDF - 100% design documents due 12/8. Fiber rework being scheduled. Equipment removal by end of Jan.
* Lake Wheeler MDF - designer selection interviews 12/14

**Infrastructure Records**

* Outside plant inventory project - creating database and drawings for 500+ manholes
* Fiber jumper inventory - field work started

**Building Infrastructure Projects**

* Design – Alpha Delta Pi, Lake Wheeler Islands 1-3
* Construction – West Dunn, Materials Mgmt., Sigma Kappa, Zeta Tau Alpha, Student Health
* UPS RFP - selected APC

**Cellular/mobile**

* Small cell consultant hired
* Indoor - Spidercloud -
  + List: [SpiderCloud](https://docs.google.com/spreadsheets/d/16ZpdmpP7JNH1_P2tvzCISjmNXMzE-VyaEY1KrZv3uPc/edit?usp=sharing)

**IT Strategic Planning**

* Will be pulling together a short document to get closure on 14-20 plan
  + Gathering updates to initiatives matrix
* Awaiting next University Strategic Plan

**Unified Communications**

* Planning for SRTP rollout (call encryption)
* Investigation of options for spam blocking and text messaging
* Renewing Cisco EA -- Finalizing documents with purchasing for Enterprise Agreement
* Partner Updates: UNCG, App State, NC A&T, Pembroke
  + System upgrades at NC A&T and Pembroke
* NC DIT -- Tools, Training, Support -- setting up monitoring, self service
* Life Safety rollout underway -- Working on SMDF transition
* Evaluating hybrid service for cloud integration

**Systems & Development**

* Tools Updates
  + 90% complete integrating Firewall tools with Palo Alto, working on production config for PCI network
  + Developing life safety logging and reporting system
* Collaborating on architecture for container service
* Collaborating on UPS RFP evaluation relating to automated provisioning
* Pulling outside plant copper into EPIC

## Wireless

* Wi-Fi 6 Project - Design in progress: Jordan, Textiles, David Clark, Leazar. Priority list [FY20-21 Priority List.xlsx](https://docs.google.com/spreadsheets/d/19lc181qUq-C9jAZNUReJMCt06ranuePI/edit#gid=1206202891)
* Projects in construction: King Village, 210 Classrooms (180), Bureau of Mines
* Outdoor Wireless: OUA wants to see if this should be coordinated with small cell sites
* Will be installing Ubiquiti wireless bridges at Lake Wheeler
* Now tracking wireless metrics as part of overall [monthly metrics](https://oit.ncsu.edu/campus-it/campus-data-network/communication-technologies-metrics/)
* Look at practicality of loaning out to departmental staff - No movement on testing more handheld devices
* Grassroots effort by University of Delaware to build an [EDUROAM map](https://wifi-map.hpc.udel.edu/) for available wifi

**Budget**

* Finalizing DC2 estimates/comparison to colo this week - all indications are that colo will be far more attractive financially
* Awaiting info regarding best guess of impacts for next year - assuming there will be pressure not to increase any rates

### Parking Lot Items

* Routing licenses at the BDF level – Interim solution is 50/50 when “desired”, ComTech funds when required. Building level routing is part of design discussions for new core/distribution layer architecture

## Upcoming Meeting Dates

* Next InTAG Meeting – January 7, 2021 9:30am