# Infrastructure Technologies Advisory Group

Agenda/Notes

# November 5, 2020

# **Present:** Greg James, Jonas McCoy, Aaron Peeler, Dan Deter. David Ladrie, Mark Williams, Gary Li, Danny Davis, David Goodwin, Ed Rogers, Andy Raynor, Eric Sills, Joshua Jury, Doug Flowers, Ed Rogers, Franklin Finch, Keith Boswell, Ralph Castanza, VJ Tailor, Greg Sparks, Debbie Carraway, Chris Eichman, Kirk Main, Danielle Sink

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# **Welcome**

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

**ITSM**

* CMDB
  + Where are others related to CMDB needs?
  + Leaning towards requiring CMDB entries for all items in enterprise data centers to aid with compliance (UNC 1400.3)
  + Onboarding DASA for UNC 1400.3 POC
* Change Management
  + OIT using SNow Change Management for 1 month
  + Approvals/Workflows are the challenges
  + CMDB and Service Catalog important but not required
* Moving Sysnews to SNow - November 17th
  + New Outage and Announcement forms
  + Service Status page service offerings w/status
  + User Lookup moving to ServiceNow
  + System Tools page
  + “General” categories for units that aren’t in the Service Catalog
* 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**

* VMware - vCenter upgrade to 6.7 U3G 10/10/2020 - completed successfully
* VCL - Azure Windows Virtual Desktop (WVD)
  + Autoscaling implemented to support fluctuating demand for student usage
  + Microsoft WVDStats added to VCL statistics page
* 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
  + CSI will be conducting a 30 minute Zoom demo / Q&A during the IT Community event on 11/11/2020 at 2:30pm.
  + At this time we have ~600 systems running in parallel with the current Sysnews Nagios.
  + The IRIS / ONCALL ( replacement for pager.ncsu.edu and on call calendar ) is now running in production with the latest code.
    - Onboarding of groups will start with those customers already working in new monitoring, then expand to the rest of the existing customer base.
* The Operations group is working with CSI for training and pulling in resources they wish to have monitored.
* 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>

* External monitoring is ready for testing. Initial focus is monitoring the internal environment and ‘may’ later be extended to other needs.
* Goal at this point is to be fully production 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
  + Slow progress because of competing priorities.

**Campus Network**

* Developing a solution for remote site connectivity outside of Wake County. Will use Ubiquiti bridges and some switches at Lake Wheeler - testing continues
* Now focusing on core firewall upgrade - Palo Alto 7050s are now installed in production, config migration starting this week, PCI will be the first context to migrate off of ASAs.
  + Rule clean up happening as well
* Backbone updates - Product evaluation will begin soon after November EMW
* Life Safety Centrex Replacement
  + NMDF and SMDF zones - cutovers 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
  + All remaining devices are expecting to be decommissioned by Nov.
    - Considering Dec 1st as official EOL (turn off DC1 networks)
  + Working on electrical/mechanical system decommissioning plan
* Decommissioning of 3750s and N7Ks in DC2
* 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 - finalizing design for elec/mech upgrade.
* Lake Wheeler MDF - designer selection in progress

**Infrastructure Records**

* Outside plant inventory project - creating database and drawings for 500+ manholes
* Fiber jumper inventory - field work to start next couple of weeks

**Building Infrastructure Projects**

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

**Cellular/mobile**

* Small cell consultant RFP - award in progress
* 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
* Awaiting next University Strategic Plan

**Unified Communications**

* 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
  + UNCG moving to MS Teams for voice
* 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, waiting 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, Davd 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), New Carmichael building
* Outdoor Wireless: getting locations approval from OUA for: Stafford Commons, Wolf Plaza, Brickyard, Court of NC
* Controller code upgrades have been completed on Carter Finley and ResNet controllers
  + Will most likely delay going to 8.x code on ResNet controllers due to costs
* 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**

* Awaiting info regarding best guess for next year

### 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 – December 3, 2020 9:30am