UNM Wireless Updates

Current status of the continued efforts to increase wireless coverage on campus, wireless authentication and improvements

June 6 – 7, 2019

- Top Areas of Improvement 2018
  - Chemistry
  - Duck Pond
  - Humanities
  - KNME Annex
  - Logan Hall
  - Marron Hall
  - Mattox
 - Office of Contract Archeology

- Top Areas of Improvement 2019
  - Business Center
  - Latin American and Iberian Institute
  - Ford Utilities
  - Art Annex
  - UNM Press
  - Veterans Center
  - CERIA
  - Hibben Hall
  - Hodgin Hall
  - Yale Mall
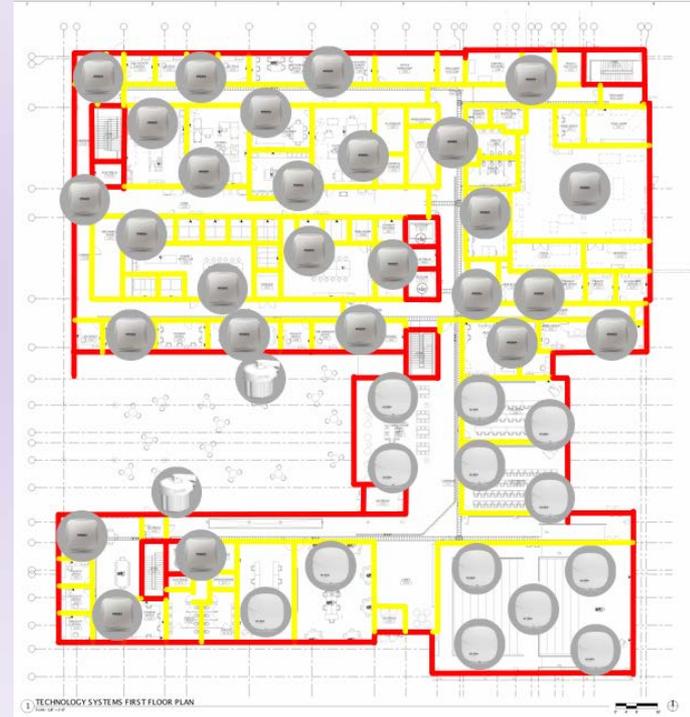 - Planning, Design, and Construction

- Gallup Wireless Refresh

  - AP upgrades from Aruba AP models 105, 125, and 134, which are about 10 years old, to Aruba AP models 205, 305, and 325s, which all support 802.11ac.
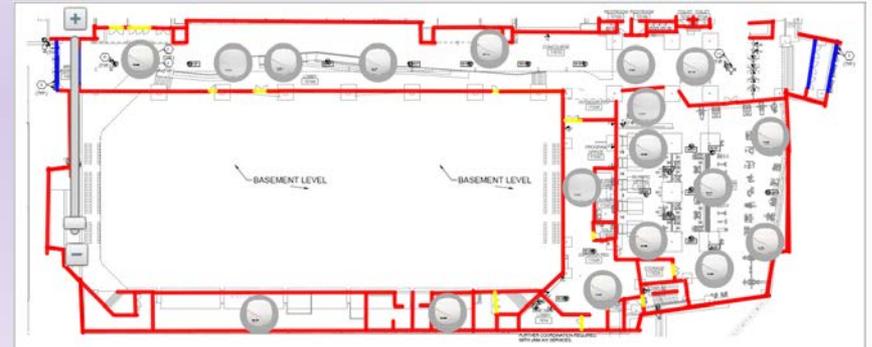
New Buildings/ Remodels
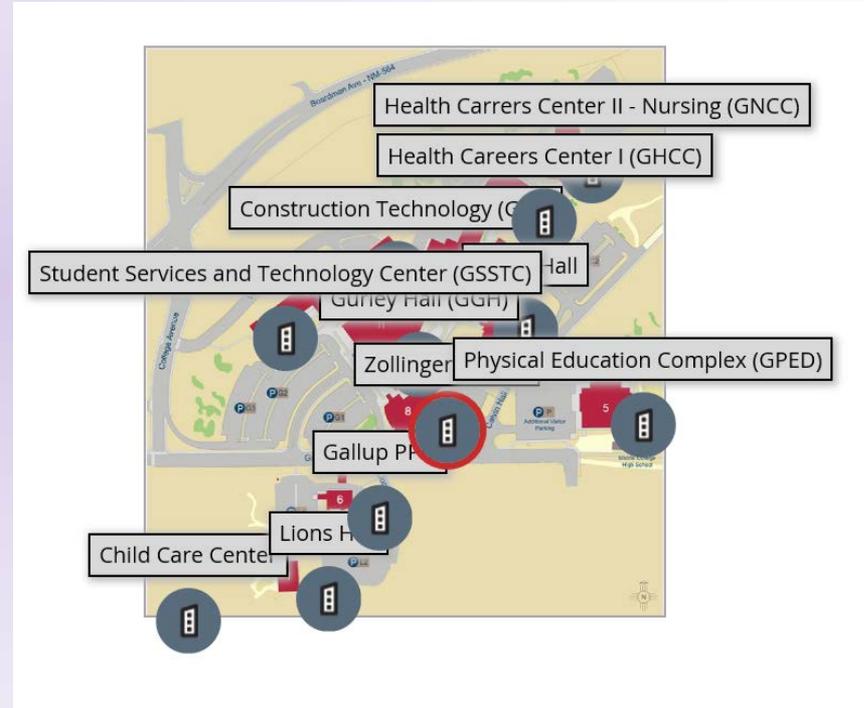
- Completed
  - McKinnon Center for Management

- In Progress
  - Honors College
    - To be completed 2019
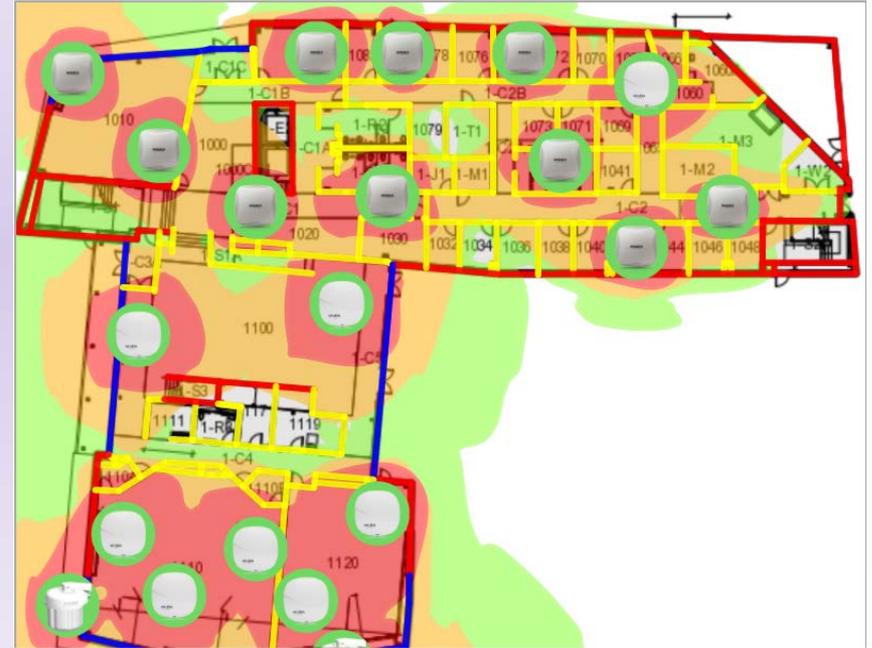
- In Progress
  - PAIS
    - To be completed 2019

- In Progress
  - Johnson Center
    - TBD

UNM SSIDs and Authentication

- What are the UNM public SSIDs?
    - Lobo-Guest   Open Authentication
    - Lobo-WiFi   802.1x Authentication
    - EDUROAM   802.1x Authentication

- How do I connect to wireless?
    - Lobo-Guest UNM fast info answer id 7655
        - https://unm.custhelp.com/app/answers/detail/a_id/7655
    - Lobo-WiFi UNM fast info answer id 7633
        - https://unm.custhelp.com/app/answers/detail/a_id/7633
    - EDUROAM UNM fast info answer id 7584
        - https://unm.custhelp.com/app/answers/detail/a_id/7584

UNM SSIDs and Authentication

- Lobo-Guest
  - Uses Captive Portal authentication where you acknowledge the terms of use for limited wireless access
  - Ports 80 and 443 allowing only http and https traffic through
  - Open, no encryption
  - Devices are cached, only have to authenticate every 12 hours
  - IOT Devices friendly

UNM SSIDs and Authentication cont.

- Lobo-WiFi
    - Uses 802.1x authentication
        - Authentication between a supplicant (client), and an authentication server, using and authenticator in between.
    - Traffic is encrypted
    - Connection is session based
        - Every time the device connects to the SSID a new connection is established and the credentials are checked
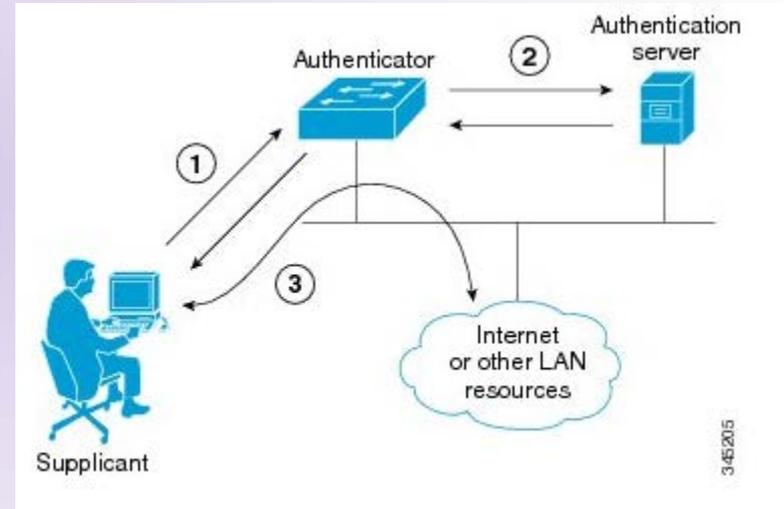
UNM SSIDs and Authentication cont.

- ## EDUROAM

    - Allows for visiting faculty, students, and staff from other institutions that participate in EDUROAM, like UNM, to let the users connect using their own university credentials

    - Also uses 802.1x authentication

    - You can learn more at https://www.eduroam.us/
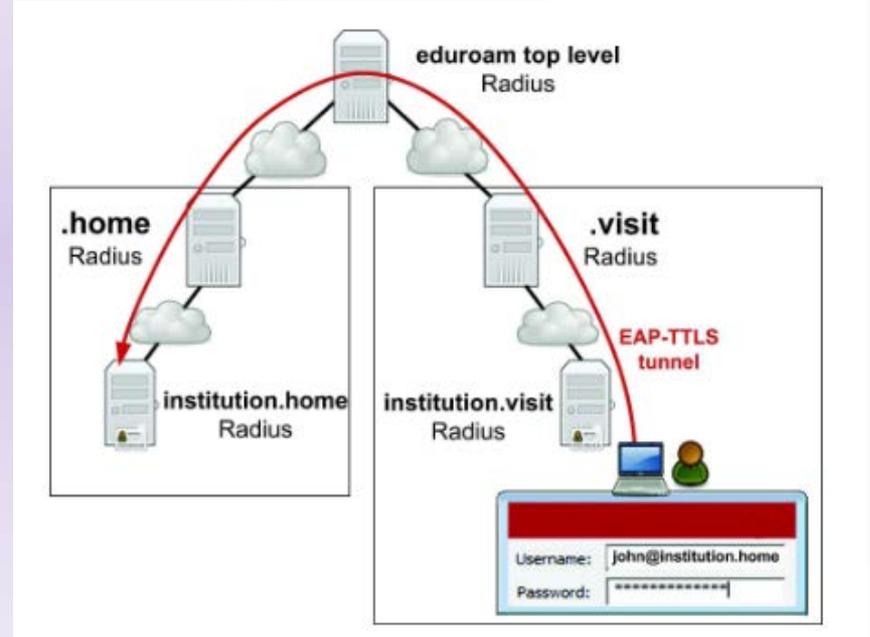
EDUROAM US Locations

Authentication Service Improvements

- Problem:
  - High number of netid account lockouts
    - Roughly around 1200+ accounts locked out daily
    - About 60% of the account lockouts come from wireless devices
    - Users with locked netids cannot connect to either Lobo-WiFi or EDUROAM
    - Users cannot access basic services like myunm.edu

- Findings
  - Due to the nature of the 802.1x authentication protocol, if you do not change your password on all your wireless devices when your password changes, the devices with bad credentials can keep trying to connect whenever they are within reach of the SSIDs
  - UNM wireless didn't limit the number of retries a device with bad credentials can make, while trying to connect to wireless

Authentication Service Improvements cont.

- Solution
  - We implemented a temporary blacklist of wireless devices connecting to wireless, that are sending bad credentials to the authentication server
  - The device blacklist is in effect for 20 minutes, to prevent the server from receiving to many bad requests which would prompt the netid lockout
  - Users with bad network credentials can't connect to EDUROAM or Lobo-WiFi, so blacklisting the device doesn't affect the existing connectivity
  - If the user actively tries to connect to any UNM SSID, they cannot connect prompting them to troubleshoot their wireless connections and credentials which have gone so far unnoticed

Steps to forget an SSID

- Refer to fast info answer id 7776
  - https://unm.custhelp.com/app/answers/detail/a_id/7776/

How do I forget a wireless SSID on my device?

Answer ID 7776 | Published 05/13/2019 03:48 PM | Updated 05/13/2019 04:06 PM

How do I remove a Wi-Fi connection?

Use the instructions below to forget an SSID (Wireless Network) on your device as part of troubleshooting or as needed.

iPhone
- Go to settings > Wi-Fi
- Touch the blue "i" next to the Wi-Fi symbol of the SSID that you want to forget.
- When the next page comes up, touch "Forget This Network".
- When the prompt comes up, touch "Forget".

Apple OS X
- Open "System Preferences" and open "Network".
- Select the Wi-Fi adapter - Not any other networking adapters, just the Wi-Fi.
- Click the "Advanced..." button.
- Make sure you disconnect from the SSID using the Wi-Fi icon at the top of your computer.
- In the "Preferred Networks" pane, look for the SSID.
- Select the SSID and click the "minus" button to delete it.
- Click "OK", and at the next window, click "Apply".

Android device
- Touch "Settings" followed by "Connections".
- Touch Wi-Fi.
- Touch the SSID under "CURRENT NETWORK".
- Touch "FORGET".

Windows Machine
- Click on the Start menu, type "Settings", and Press enter.
- Click on "Network & Internet".
- On the left-hand side, click on "Wi-Fi".
- Click on "Show available networks".
- In the window that pops up in the lower right-hand corner, right-click on the SSID that you want to forget.
- Click on "Forget".

Remember that when your password expires, is changed, or you forget the SSID, you will have to enter your credentials again to login.

If you have any questions please submit a Help.UNM ticket or contact UNM Information Technologies Customer Support Services (IT CSS) by calling (505) 277-5757.

Thank You

Questions?