

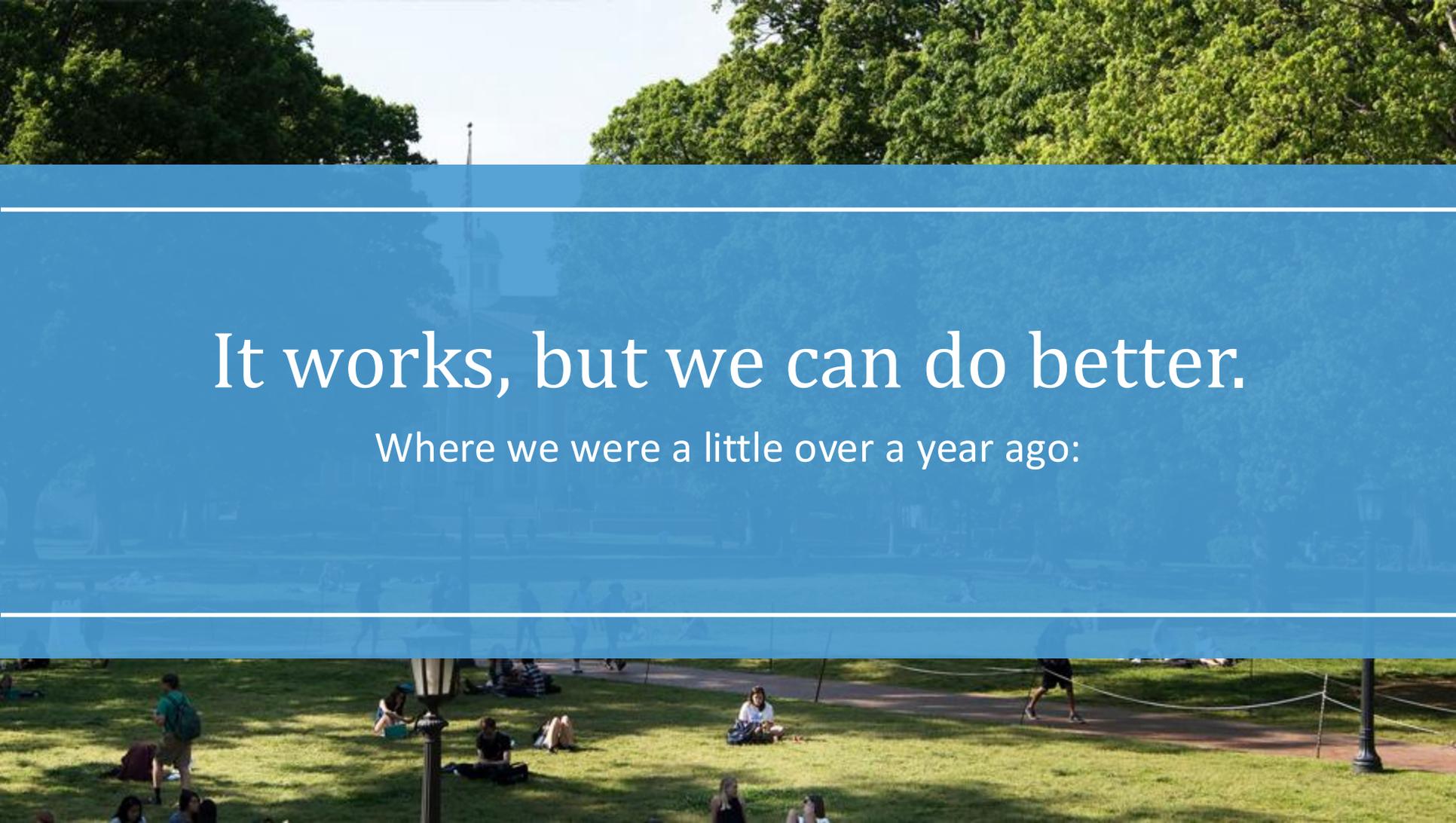
Infoblox at UNC

Infoblox Users Group – February 7, 2019
Will Whitaker – will.whitaker@unc.edu



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It works, but we can do better.

Where we were a little over a year ago:



DNS Data Cleanup

- Lame delegations
- Overlapping zones
- Invalid record types
- Typos in source files

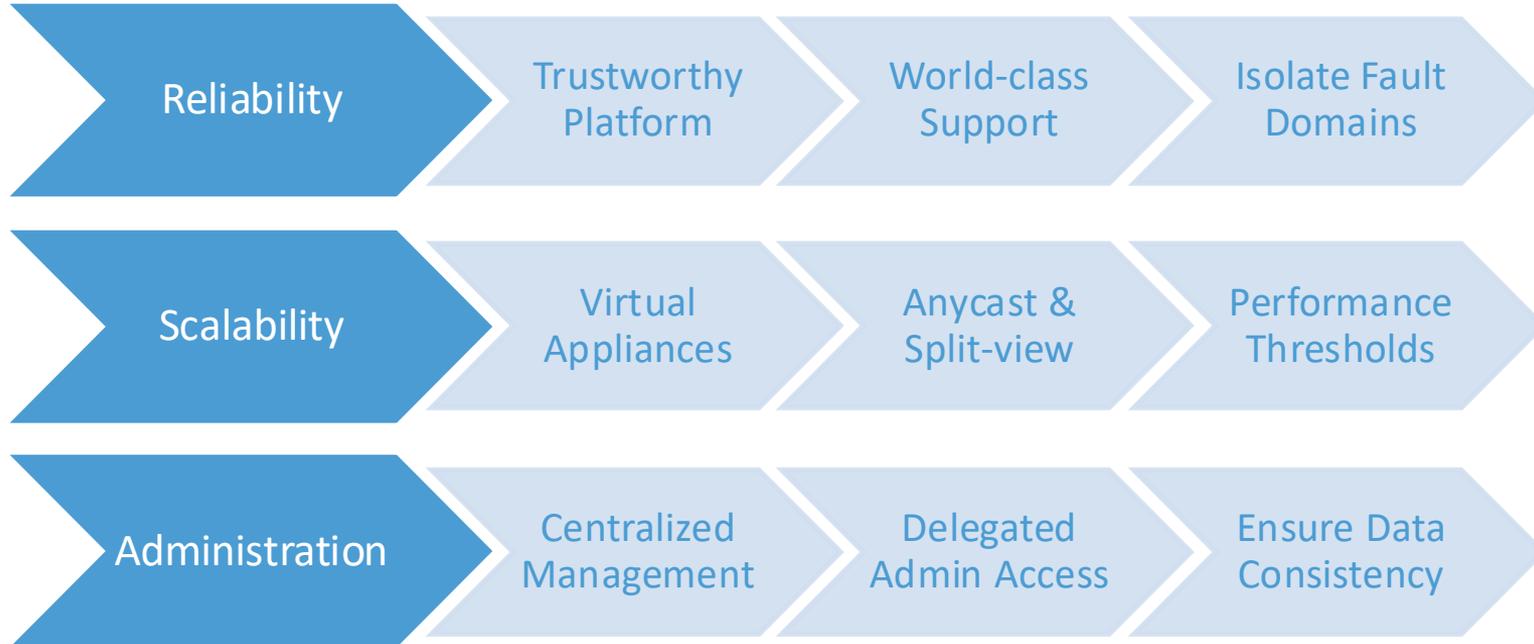
DHCP Data Cleanup

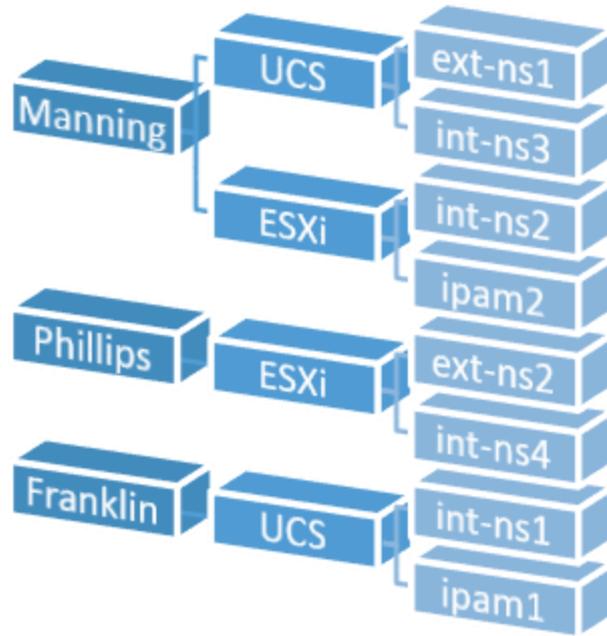
- Invalid networks
- Invalid ranges
- Fixed address validation
- Server use validation

Next Steps: Essential Design Goals



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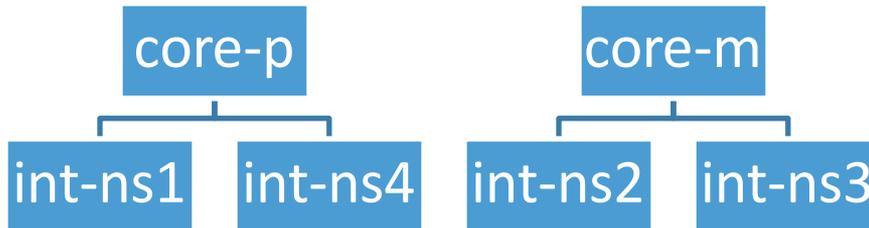


Three Datacenters



Two Hardware Setups

- Cisco UCS – standard offering
- Standalone ESXi – dedicated



Multiple Appliances

- 172.22.255.100
- 2610:28:3091::100

Load Balancing

- Equal-cost multi-path routing
- Connected to network cores
- Service aware advertisements

The background of the slide is a photograph of a brick building with a gabled roof and a brick chimney. A large, semi-transparent blue rectangle is overlaid on the image, containing the text. The text is white and centered within the blue area. The building's facade, featuring several windows and columns, is visible through the blue overlay.

DDI Migration

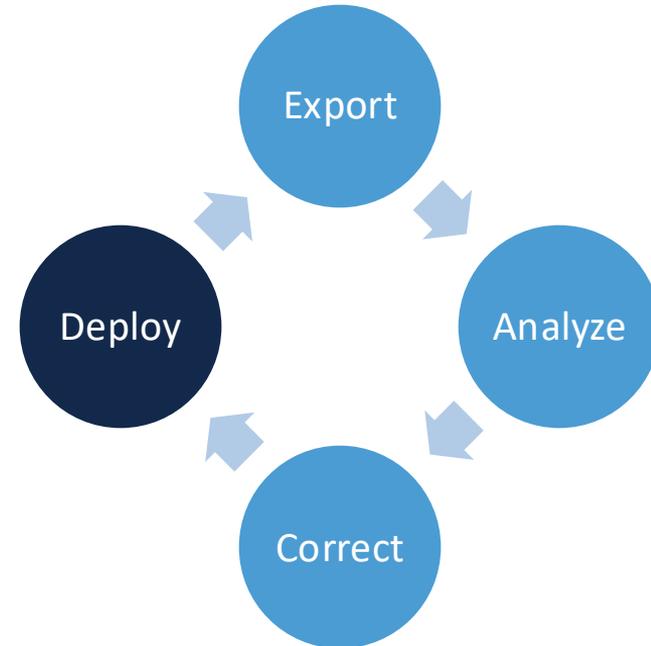
The change over:

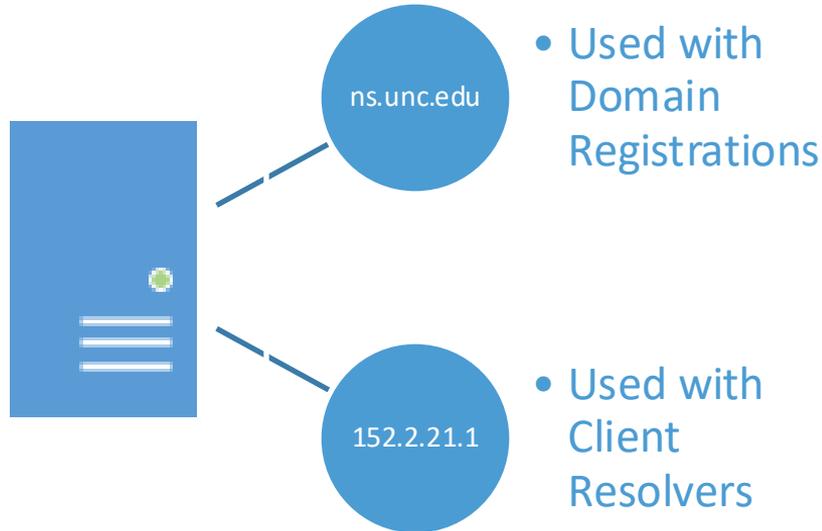
Professional Services

- Migration planning
- Analyze exported data

Cutover Rehearsal

- Export phpIPAM CSV
- Export DNS/DHCP configs
- Run Data Import Wizard
- Start and stop key services





Shift published names to new external Infoblox addresses

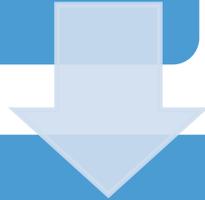
Shift published IP address to new internal Infoblox Anycast

Free up old hardware



Before Cutover

- ISC DHCP on
- Infoblox DHCP off



After Cutover

- ISC DHCP off
- Infoblox DHCP on

Populate routers ip-helpers

Leave Infoblox DHCP off

Step down lease timers



Post Migration

Campus Adoption:





One anycast IP?

- No really, what is my secondary DNS server's address?

Reality

- Proliferation of hard coded DNS across campus
- 5 Anycast legacy IPv4 addresses
- 5 Anycast legacy IPv6 addresses
- Secondary effort to phase them out



Campus DNS?

- I just use 8.8.8.8

Reality

- Majority of zones are public
- DDNS tied to External view
- Views confuse admins
- Double book keeping needed
- Carrot needed to leverage shift (i.e. DNS firewall)



Pre-migration

- No DDNS

Post-migration

- DDNS enabled

Reality

- Windows AD clients stopped sending updates to ad.unc.edu
- Option 81 was needed
- Work continues to migrate private networks



VLAN Management

- Identified as missing in our initial evaluation.
- Accepted as needed and incorporated in product roadmap.
- Will replace opensource tool currently being used.

Other Tools and Processes

- AKIPS, Netsight (XMC), Nyansa
- DNS Firewall and Security Department Needs

Questions?

Will Whitaker
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