

Leveraging Virtual Desktops:

**A Consistent Experience on Desktop, Laptop, iPad or
Other Devices**

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Agenda

- Vanderbilt Overview
- Challenges
 - Technical
 - Workflow
- Solution Overview
 - Technical
 - Workflow
 - Key Lessons Learned
 - Future State
- Questions

Vanderbilt University Medical Center

Includes the Medical Group and Clinics, University Hospital, Monroe Carrell, Jr. Children's Hospital and Psychiatric Hospital

- 900+ beds
- 58,000 discharges
- 120,000 emergency room visits
- Over 1.8 Million ambulatory visits
- 150+ Clinic Locations

Vanderbilt Technology Overview

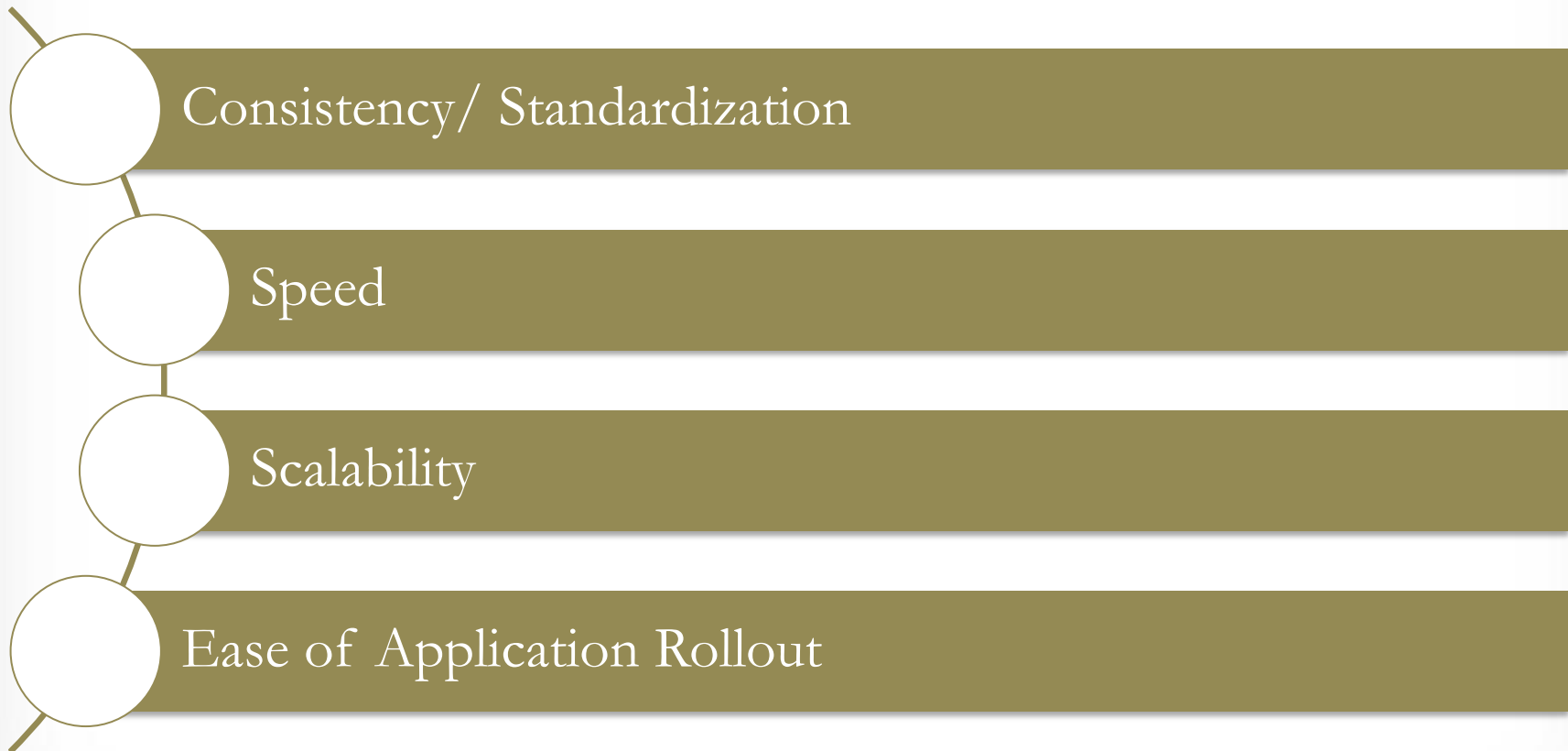
- 19,500 Computers
 - Desktops, Laptops, Thin Clients and a significant number of mobile devices
- Web based EMR developed in-house (Starpanel)
- Integrated over 110 medical applications for use on standard computers including McKesson, Epic, Cerner, Siemens, Phillips, AGFA, GE, etc
- Vanderbilt averages 1.2 million authentications on our 6400 dedicated patient care computing systems per month

Vanderbilt's Size combined with a wide variety of software/ hardware configurations creates both Technical and Workflow challenges

Vanderbilt Challenges Overview

Vanderbilt Challenges were both
Technical and Workflow Related

Problem: Technical



Problem: Workflow



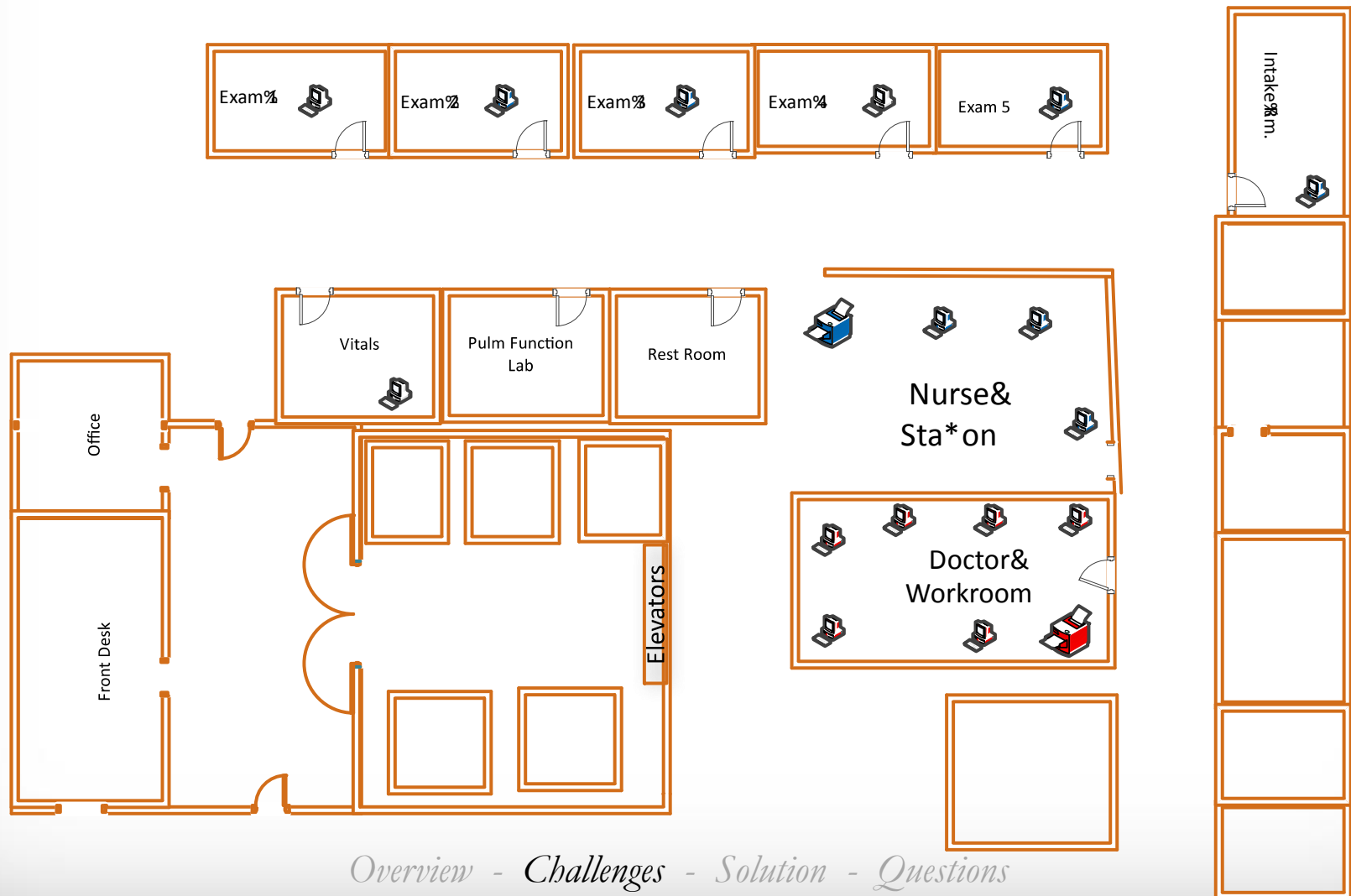
Multiple login's

Speed

Current Set Up: Did not foster real time data entry

Laptops not ideal

Clinic Setup Impacts Workflow



Workflow Example: Before Virtualization

Exam Room



Provider Workroom



If needed Return to Exam Room



Steps:

- Enter user name and password
- Open EHR
- Open Dashboard
- Open Patient
- Go to Applicable Document
- (30-50 seconds)

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- (30-50 seconds)

60 seconds to 150 seconds of time could be spent

Workflow: Exercise

How are your doctors, nurses and front desk staff accessing your EHR? Is it efficient? Drawing can be effective

Think about:

- When do doctors complete documentation?
- What devices do they use (or want to use)?
- How do clinical staff access correct medical records

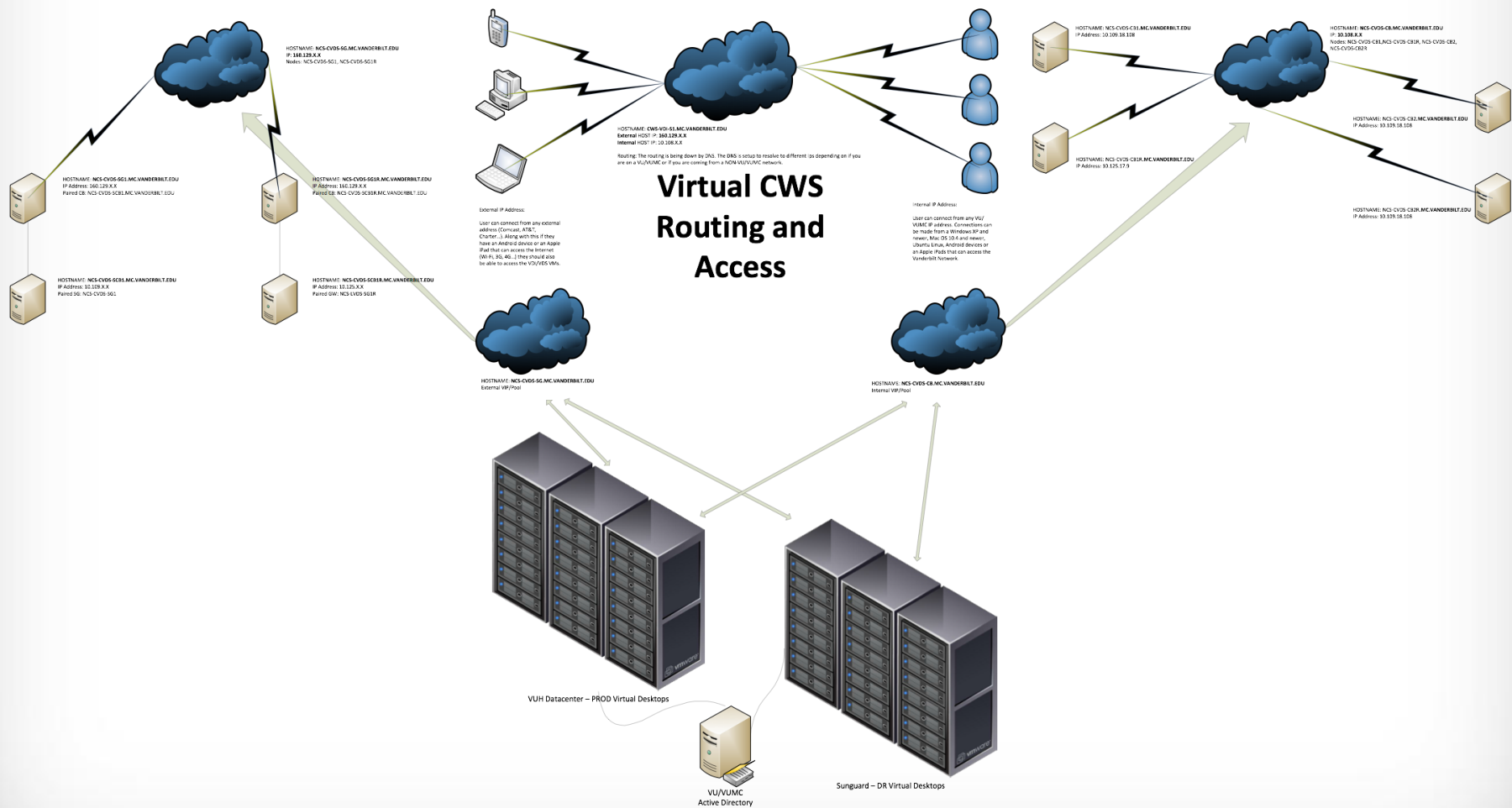
How Did Vanderbilt Solve These Problems?

Technical solution that provides
workflow benefits

Virtualization Project Overview

- Implemented VMware Virtual Desktop's enterprise wide
- Implemented HID Proximity authentication Badges to compliment VMware and increase the speed of the rollout

Solution: Technical Overview



Workflow Example: After Virtualization

Exam Room



Provider Workroom



If needed Return to Exam Room



Steps (er ni, al og n):

- Use HID badge
- Enter 4 digit code
- Dashboard already up
- Find patient
- Find document
- 20 seconds

Steps:

- Use HID badge
- Enter 4 digit code
- Last document available
- 5 seconds

Steps:

- Use HID badge
- Enter 4 digit code
- Last document available
- 4 seconds

25 seconds to 12 seconds if me could be spent

Workflow Example: After w/ iPad

Exam Room



Provider Workroom



If needed Return to Exam Room



Steps (enter, all log):

- Log into VMware view
- Enter password
- Dashboard already up
- Find patient
- Find document
- 20-30 seconds

Steps:

- Use HID badge
- Enter 4-Digit Code
- Last document available
- 5-6 seconds

Steps:

- Log into VMware view
- Enter password
- Last document available
- 10-15 seconds

25 seconds to 42 seconds of time could be spent

Virtual In Action Video

Overview - Challenges - Solution - Questions

Current Benefits

- Speed
- Added security
- Consistent user experience on multiple devices
- Standardization
- Support ease
- Bring Your Own Device (BYOD)

Challenges

- Speed – Several changes made in setting greatly impacted log in speed
- UI/ UX for mobile devices
- WiFi on iPads
- Printing complications

Future State



Thin Clients



Dragon



Mobile Apps

Questions

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