



Digital Signage We Did it Our Way

Mark Anderson – Director of Marketing
Frank Wolz III – Senior Workstation Engineer



Today's Agenda



WHY?



GOALS



SOLUTIONS



LESSONS
LEARNED

Why?



WRIGHT STATE
UNIVERSITY

Why?

- Costs
- Features
- Staffing changes
- Inconsistent content
- Inconsistent systems
- Resource waste



Why? Inconsistent



- Lake Campus
- Mixed technology
 - Hardware
 - Software
 - Administration
- Features
 - Slideshows
 - Interactive signs
 - Queuing
 - Room schedules

Why? Hard to Use



Very complex
software



Extensive training



Windows desktop
only

Why? Content Governance

- Decentralized
- Brand
- Mixed messages
- Stale content
- Retention



Goals



WRIGHT STATE
UNIVERSITY

Goals: Lower Costs



- Licensing
- Hardware
- Software
- Increase displays

Goals: Increase Usage

- Additional floors
 - Campus Announcements
- Outdoor
- Nutter Center
- Menus
- ~~Room Schedules~~
- ~~Queuing~~



Goals: Ease of Use



Web based



Content
management

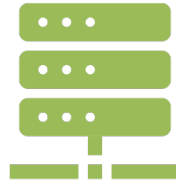


Remote
management

Goals: Consistency/Compatibility



Hardware



Software



Content

Goals: Content Features

- Sliders
 - Static
 - Video
- Custom timing
- Emergency messaging
- Video on demand
- Clock



Goals: Content Quality



Writing



Design



Governance

Goals: Retention Content



- The 3 R's
 - Recruitment
 - Retention
 - Relationships
- Need to leverage our displays for retention

Solutions



WRIGHT STATE
UNIVERSITY

Solution: Drupal

- Open source
- Web hosted
- Governance
- SSO
- End user familiar

The screenshot shows the website for the Ohio Higher Education Computing Council (OHECC) 2023 conference. The header is green with 'WRIGHT STATE UNIVERSITY' on the left and navigation links (CALENDAR, DIRECTORIES, MAPS, PILOT, WINGS, APPLY) and a search bar on the right. Below the header, a banner features the OHECC 2023 logo with the tagline 'COLLABORATE TO INNOVATE' and an illustration of a city skyline. The main content area includes the text 'Collaborate to Innovate May 10-12, 2023' and a list of links: Conference Overview, Registration, Lodging, and Sponsorship Opportunities. A 'Conference Overview' section follows, describing the conference's purpose. A 'Registration' section mentions early bird registration. A green 'Register Now!' button is at the bottom.

WRIGHT STATE UNIVERSITY

CALENDAR DIRECTORIES MAPS PILOT WINGS APPLY Search

Ohio Higher Education Computing Council (OHECC) 2023

OHECC 2023

Home

Keynote Speakers

Conference Schedule

Track Information

Entertainment

2023 Sponsors

Committees

Collaborate to Innovate
May 10-12, 2023

On this page:

- ▶ Conference Overview
- ▶ Registration
- ▶ Lodging
- ▶ Sponsorship Opportunities

Conference Overview

The Ohio Higher Education Computing Council (OHECC) fosters communication between higher education IT professionals across the state. Our annual conference is an opportunity for colleges and universities to share IT strategies that work so ideas can be transferred to other campuses to improve education for students across Ohio and beyond.

Vendors and manufacturers of computing hardware, software, communications and networking devices and other technologies are invited as sponsors, to exhibit and demonstrate the use of their products in higher education.

Registration

Early Bird Registration for OHECC 2023 is available through April 9, so register today!

Register Now!

Solution: Drupal

- Slider Item

Slider Style *

Photo only ▾

Workbench Access section *

-Campus Announcements

Title *

Campus Announcement - Final Exams (Spring 2023)

Image, logo, video

Full width Image



ID: 453081 – Size: 69.75 KB

Signage

- ✓ -Campus Announcements
- eSports Club
- Foundation
- International Education
- Lake Campus
- Nutter Center
- Residence Life and Housing
- ReyRey Cafe
- Russ
- School of Medicine
- Student Success Center
- Student Union North Lawn
- Student Union Welcome Center
- University Libraries
- VMC

Solution: Drupal

- Slider Item
- Slider Block

Autoplay Timeout

milliseconds

Leave blank to use the default timeout for the slider the item is in. This should only need to be set in unusual circumstances.

ACTION NAME

No actions scheduled for this content.

SCHEDULE ANOTHER ACTION

Action

Publish content ▾

Trigger time

Date

E.g., 04/28/2023







Time

E.g., 02:15pm

Add

Remove selected

✓ Publish content
Unpublish content

TITLE	ITEMS	LAST UPDATED	
Nutter Center Marquee Playlist – 576x288 Signage » Nutter Center	 <p>(14 total)</p>	14 hours 58 min ago by Sean Robison	edit
Nutter Center Concourse Playlist Signage » Nutter Center	 <p>(6 total)</p>	14 hours 58 min ago by Sean Robison	edit
Campus Announcements Playlist Signage » Campus Announcements	 <p>(13 total)</p>	3 days 23 hours ago by Amanda Earnest...	edit
Student Union Welcome Center Playlist Signage » Student Union Welcome Center	 <p>(5 total)</p>	4 days 19 hours ago by Amanda Earnest...	edit
Russ Student Lounge CECS Playlist Signage » Russ	 <p>(8 total)</p>	6 days 18 hours ago by Mariann Boron	edit
Library Archives playlist Signage » University Libraries		6 days 19 hours ago by Lisa Rickev	edit

Block description *

Campus Announcements Playlist

Workbench Access *

-Campus Announcements

Show row weights

SLIDER ITEMS *

Slider item



Campus Announcements - Newsroom Promo (456341)



Remove

Slider item



Campus Announcements - BSOM Music Medicin Symposium 5/12 (48

Remove

Slider item



Campus Announcements - Summer Retention - Add Class 5/14 (48337

Remove

Slider item



Campus Announcements - Outdoor Rec Promo (446766)



Remove

Slider item



Campus Announcements - Campus Store Location Change (481531)



Remove

Slider item

Campus Announcements - Summer Retention - Drop Class Refund 5/1

Solution: Drupal

- Slider Item
- Slider Block
- Custom theme
- Emergency Alerts



Solution: Content

- Office of Marketing
- Developed a webpage
- Guidelines
- Media specs
- Example content

WRIGHT STATE UNIVERSITY

About Digital Signage

Digital signage serves as a visual communication medium to inform students, faculty, staff, and visitors about programs, events, campus news, television feeds, campus facts, emergency messages, and more.

Digital sign messages are intended to promote events and programs for Wright State students, faculty, staff, and visitors. No submissions will be accepted for meeting or organizational reminders, requests to join a group, or soliciting applications for a group or organization.

Only on-campus programs, events, and activities open to the Wright State community will be posted on the digital screens. Third-party advertising is not permitted.

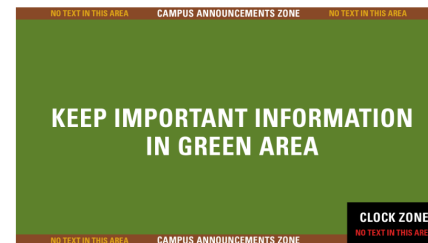
Digital Signage Content Guidelines

1. All digital signage will:
 - a. Be aligned with university branding
 - b. Consistently apply campus-wide information architecture, visual style, and terminology for digital signage
 - c. Display both local content and campus-wide content as appropriate
2. Campus governance units, academic units, and campus departments/offices are permitted to submit content for the digital signage system. In addition, registered student organizations may submit content that promotes the student organization or campus events for display on the digital signage system. The Office of Marketing and digital signage system administrators reserve the right to approve or deny content.
 - a. Content must be Wright State-related and adhere to these digital signage content guidelines.
 - b. Digital signage content that promotes or condones behavior that violates university policy, or content that is obscene, will not be approved for display.
 - c. Digital signage system administrators reserve the right to remove any content asset, without notice or explanation if such is deemed contrary to these standards.
3. Emergency Notifications: Wright State Alert messages may preempt sign content when activated. Alert integration will be tested regularly in accordance with university protocols.
4. Information/Content to be displayed, in order of priority:
 - a. Communicate emergency information, initiated via the Office of Communications, Office of Marketing, and Public Safety
 - b. Campus-wide events
 - c. Current student information (i.e., key dates and deadlines)
 - d. Building, department, or directory information (for permanent wayfinding signage)
 - e. Announcements (weekly/daily)
5. All signs will be reviewed for content and clarity. Slides may be returned for revisions or additional information.
 - a. The Office of Marketing cannot guarantee that submissions will be published on the display system. The office reserves the right to make editorial judgments about any submitted item based on institutional considerations, space availability, appropriateness, and other discretionary factors that may affect the publication of the announcement.

Digital Signage Image Specifications

The Office of Marketing can help create signage for your message. You can also download the [Photoshop](#) or [PowerPoint](#) template to create your content. These have the below guidelines built in. Also, refer to the [Editorial Style Guide](#) for writing guidelines. Please submit your request **at least two weeks** before your content's start date.

- Size: 1920 pixels x 1080 pixels; 72 dpi
- The top and bottom of the image may be cut off to accommodate university information (55 pixels top and bottom), so be sure to not place text or important imagery in these areas.
- A clock is displayed bottom right corner of the signs. The safe zone for this is 425 pixels x 200 pixels.
- Keep text brief as there is a seven-second runtime for images/slides.
- Your message will play for a maximum of 30 days if it is not date-driven.
- There are certain signs on campus that are different sizes and have different purposes. If your content is appropriate for these signs, please fill out the form below to get specifications.
- If a QR code is to be included, it can be no smaller than 300 x 300 pixels. Because some screens are installed at distances or higher than eye level, QR codes need to be readable with these considerations.



WRIGHT STATE UNIVERSITY

RAIDER ROUND UP

WSU VS. NKU



GAMES | PRIZES | FUN

NUTTER CENTER MCLIN GYM
5PM

WRIGHT STATE UNIVERSITY

WRONG CLASS? NOT FOR YOU?

January 20 is the last day to drop/withdraw from a course and still receive a tuition refund.

⚠ Contact RaiderConnect to see if this would affect your financial aid.



MEET NEW FRIENDS, LEARN NEW SKILLS, AND HAVE AN ADVENTURE OF A LIFETIME

BOUNDARY WATERS CANOE TRIP

JUNE 8 - 17, 2022



WRIGHT.EDU/OUTDOOR



Win a

\$100

Visa Gift Card

1. Order at least one textbook or course material from Wright's Official Online Bookstore by February 15.
2. Select Ship to Campus at checkout for an automatic entry!

wright.ecampus.com




WE PUT THE R&R IN
LIBRARY!

Destress for Success

Table Top Club, UAB, Astronomical Collaboration, Counseling and Wellness, Campus Recreation, and Raider Pups!

Visit the Dunbar Library to DeStress!
November 28 - December 8

Learn more at
www.libraries.wright.edu/community

WRIGHT STATE UNIVERSITY
UNIVERSITY LIBRARIES





COVID-19 VACCINES

Call or text
937.245.7200

Boosters
and Pediatric
Vaccine Also Available

**AN APPOINTMENT
IS REQUIRED**

Wright State Physicians

INTERNSHIPS, CO-OPS, & CAREERS!

2023 SPRING CAREER FAIRS

WEDNESDAY, MARCH 15

VIRTUAL 9:30-11:30 A.M. HANDSHAKE	IN PERSON 1-4 P.M. 156 STUDENT UNION
---	--



WRIGHT.EDU/
CAREERFAIR-SPRING2023



FIRST WEEKEND REGISTRATION IS OPEN

First-year and transfer commuter students and residential students without a meal plan must register for First Weekend.

Registration is due August 15.




AFROTC / Det. 643 Blood Drive

Tuesday, February 21
9:30 a.m.-2:30 p.m.
Student Union Atrium



For appointments, scan the QR code or visit militarydonor.com.

MISSION CRITICAL

Make It Your Mission to Save Lives

DONATE BLOOD

SUPPORT THE WARRIOR



ASBP



Solution: Content

- Committee
- Request form
- Training

Digital Signage Request


First name * REQUIRED

Last name * REQUIRED

Department, Office, Unit, or Organization * REQUIRED


Email * REQUIRED

Start date * REQUIRED

Month Day Year 

What date would you like this content to start playing on the campus-wide playlist?

End date * REQUIRED

Month Day Year 

Enter the date that you wish for the content to be removed from the playlist. Your message will play for a maximum of 30 days if it is not date-driven.

File

No file chosen

Please upload the file that you would like to submit to the campus-wide playlist for digital signage. The size should be 1920 pixels x 1080 pixels; 72 dpi. Files must be less than **2 MB**. Allowed file types: **.jpg .jpeg .png .ppt .pptx .mov .mp4**.

Additional File

No file chosen

Please upload the file that you would like to submit to the campus-wide playlist for digital signage. The size should be 1920 pixels x 1080 pixels; 72 dpi. Files must be less than **2 MB**. Allowed file types: **.jpg .jpeg .png .ppt .pptx .mov .mp4**.

Notes or Questions

Please provide any additional notes or questions regarding your submission.

Solution: Content

- Retention
 - Student Success
 - Annual content calendar
 - Developed slides
 - Scheduled them





CLICK FAST!

January 15 is the last day to add a class in WINGS.

If you miss the deadline, you'll need BOTH:

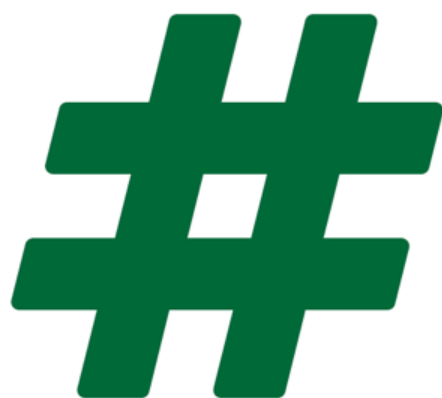
- Instructor permission
- RaiderConnect assistance



REGISTER FOR TWO SEMESTERS AT ONCE.

Course registration is
now open for fall 2023
and spring 2024.

➡ Visit **WINGS Express** to create your
entire class schedule for next year.



**WRIGHT
STATE
GRAD**

**Graduating this term?
Congrats!**

⚠ You must apply for graduation by
~~January 20.~~ **FEBRUARY 3**
DEADLINE EXTENSION!



WISHING FOR A CLASS DO-OVER?

February 3 is the last day to drop a course without a grade. The attempt won't even be on your transcript.

OH, FUDGE.

**Want to avoid seeing a
D or F on your transcript?
March 17 is the last day to
drop a course with a W,
which does not affect
your GPA.**



MIDTERM GRADES

UNDERGRADUATE FACULTY:

Grades are due

February 26, 11:59 p.m.

UNDERGRADUATE STUDENTS:

**Keep pushing! You're
halfway to the finish line!**



SPRING BREAK

**Feb. 27–March 4: No classes;
offices open**

➔ Visit **wright.edu/academic-calendar**
for deadlines and other dates.



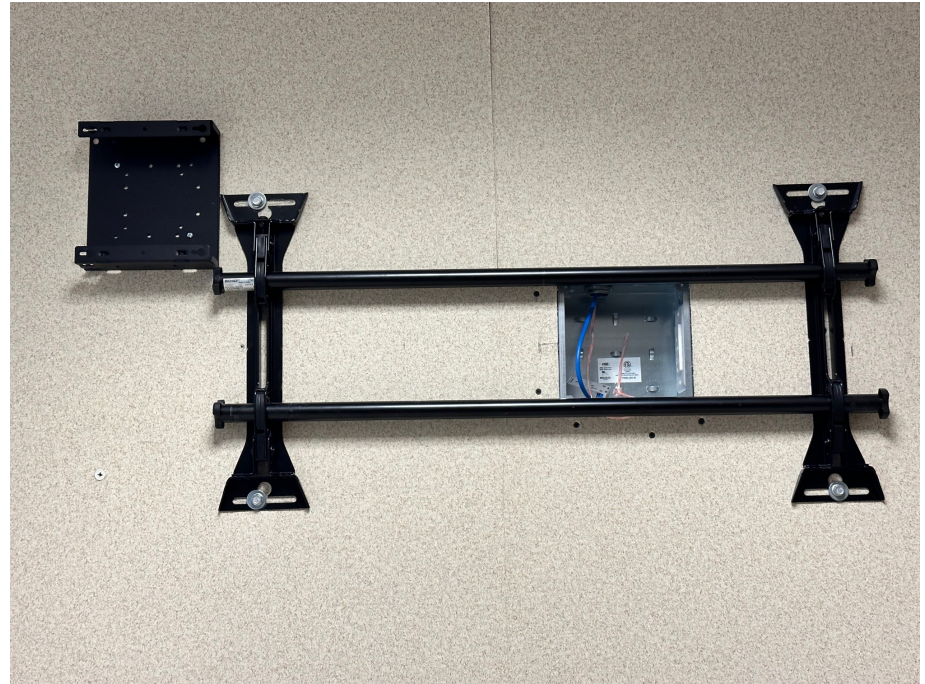
Solution: Displays

- HDMI/Display Port
- Fiber converters
- RF modulators
- Varying sizes and resolutions
 - HD
 - 4K



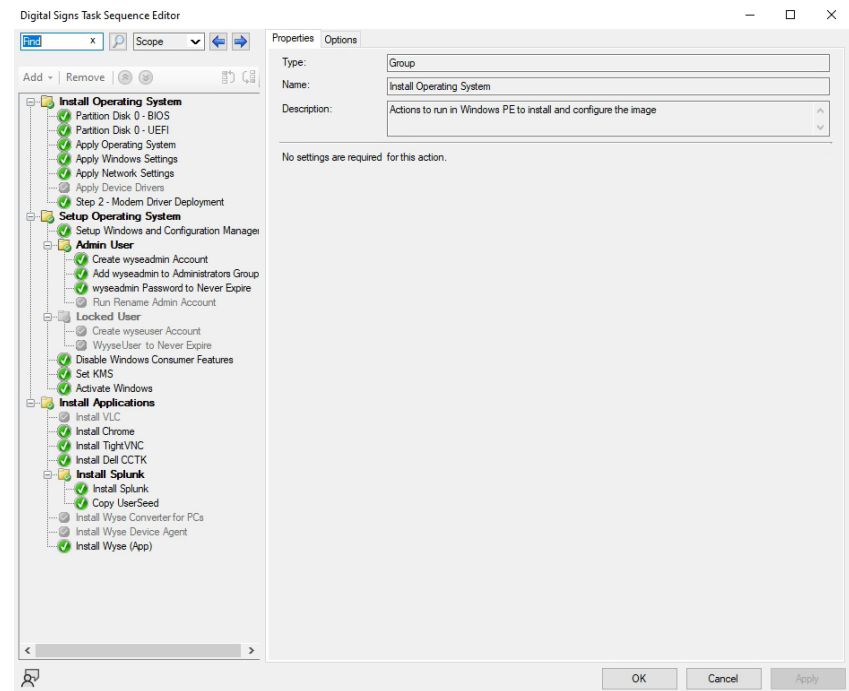
Solution: Players

- Dell OptiPlex Micros
 - Lower spec
 - Used
- Hardwired
- SCCM for initial config
- Windows 10 LTSC
- Domain Joined



Solution: SCCM

- Special Sequence
- Installs Programs
 - Dell CCTK
 - TightVNC
 - Specific Chrome Version
 - Splunk



Solution: Player Management

- Wyse Management Suite
- Standard Management Console at WSU
- Only annual licensing cost
 - \$12.50 per player
 - \$1000 per year
- Remote admin access



Solution: Wyse Management Suite

The screenshot displays the Wyse Management Suite Pro interface. The top navigation bar is green with the Wright State University logo, the text 'WSU Wyse Management Suite Pro', a user profile 'superfjw', and the 'Last Login Time: 05/03/23 12:22:32 AM'. Below this is a horizontal menu with options: Dashboard, Groups & Configs (selected), Devices, Apps & Data, Rules, Jobs, Events, Users, and Portal Administration.

The main content area is titled 'Group Tree Hierarchy'. On the left is a tree view showing a hierarchy of groups, with 'Dayton Announce' selected. The right pane shows the configuration for this group. At the top, there's a 'Local search' bar and links for 'Export Policies', 'Import Policies', and 'Edit Policies'. Below this, there are icons for a group of devices (44) and a key icon. The configuration is organized into sections: 'Default Campus Announcements for Lake', 'Wyse Software Thin Client (4)', and 'Wyse Software Thin Client'. The 'Wyse Software Thin Client' section is expanded, showing a table of configuration items.


Configuration Item	Value	Group
Configuring Appliance Mode		
Appliance Mode	Generic	Dayton Announce
Exit From Appliance Mode	No	Dayton Announce
Generic Appliance Mode		
Appliance Command Line	c:\Program Files\Google\Chrome\Application\chrome.exe -start-fullscreen -no-default-browser-check http://www.wright.edu/signage/campus-announcements	Dayton Announce
Appliance Mode Name	Dayton Announcements	Dayton Announce
Power Settings		
Power Settings on Battery		
Power Settings When Plugged In		
Configuring Shared Drives		
Clock Settings		

Solution: Wyse Management Suite

The screenshot displays the Wyse Management Suite Pro web interface. At the top, there's a green header with the Wright State University logo and the text "WSU Wyse Management Suite Pro". Below the header, a navigation bar includes links for Dashboard, Groups & Configs, Devices (which is highlighted), Apps & Data, Rules, Jobs, Events, Users, and Portal Administration. The main content area is titled "Devices" and includes a "How to Add a Device" link. A search bar is present with the text "Local search" and "Search by: Serial Number, Name". Below the search bar, there are several filter dropdowns: Configuration Groups (Dayton Announce), Status (Registered), OS Type (Select), OS Subtype (Select), Platform (Select), Manufacturer (Select), Agent Version (Select), Subnet/Prefix (Select), Timezone (Select), Device Tag (Select), OS Version (In), Ip Type (Select), and BIOS Version (Select). A "More Actions" dropdown menu is open, showing options like Factory Reset, Change Group, Send Message, Delete, Update BIOS/ThinLinux Image, Shutdown Now, Schedule Device Command, Wake on LAN, Tag Device(s), Export Devices to CSV, Schedule to Hybrid Client, Bulk Change Group, and Reimage. The main table lists devices with columns for Name, Compliance, Type, S Version, Serial#, IP Address, Last User, Group, Last Check-in, Registered, and Write Filter. The table contains 10 rows of device information, all of which are Wyse Software Thin Clients. The last row is highlighted.

Name	Compliance	Type	S Version	Serial#	IP Address	Last User	Group	Last Check-in	Registered	Write Filter
SIGN-SC10THALL	Yes	Wyse Software Thin Client	Windows 10 Enterprise LTSS 64-bit (0.0.17783)	H9SK903	192.168.253.47, fe80:a9ba:6271:462e7c5f%6	N/A	Dayton Announce	10 minutes ago	Yes	Enabled
SIGN-SC10TLOBBY	Yes	Wyse Software Thin Client	Windows 10 Enterprise LTSS 64-bit (0.0.17783)	48FYX23	192.168.253.46, fe80:99f9:98f9:d57:58%5	N/A	Dayton Announce	10 minutes ago	Yes	Enabled
SIGN-FHVENDEAREA	Yes	Wyse Software Thin Client	Windows 10 Enterprise LTSS 64-bit (0.0.17783)	7M3MY23	192.168.253.35, fe80:a9b8:c64b:d11b:b4aa%5	N/A	Dayton Announce	15 minutes ago	Yes	Enabled
SIGN-OHLOBBY	Yes	Wyse Software Thin Client	SuperWyse PC	JDOVMH3	192.168.253.88, fe80:991a:f59b:7830:2ba%6	N/A	Dayton Announce	18 minutes ago	Yes	Enabled
SIGN-FHOUTHENT	Yes	Wyse Software Thin Client	SuperWyse PC	HWDTMH3	192.168.253.79, fe80:bde8:a5d7:3c:5f:9a72%5	N/A	Dayton Announce	18 minutes ago	Yes	Enabled
SIGN-RCJOSHENT	Yes	Wyse Software Thin Client	SuperWyse PC	JD1VMH3	192.168.253.83, fe80:655d:913a:ffbf:5c45%6	N/A	Dayton Announce	18 minutes ago	Yes	Enabled
SIGN-DUCTLOOR	Yes	Wyse Software Thin Client	SuperWyse PC	H8RL903	192.168.253.53, fe80:1111:d13c:cca5:6d92%6	N/A	Dayton Announce	18 minutes ago	Yes	Enabled
SIGN-WHENTRY	Yes	Wyse Software Thin Client	SuperWyse PC	H9ZL903	192.168.253.68, fe80:3883:74e8:2e42:79af%4	N/A	Dayton Announce	19 minutes ago	Yes	Enabled


Solution: Wyse Management Suite



 WSU Wyse Management Suite Pro

DashboardGroups & Configs**Devices**Apps & DataRulesJobsEventsUsersPortal Administration

Device Details

[Query](#)[Restart](#)[Shutdown Now](#)[Unregister](#)[More Actions](#)



Compliance Status

Device Name
 SIGN-SC101HALL
Device Type
Wyse Software Thin Client
OS Version
Windows 10 Enterprise LTSC 64-bit (10.0.17763)
Image Version
2.1.2.141
Configuration Group
Dayton Announce
Agent Version
14.6.4.8

Serial Number
H9SK003
Device Identifier
004E01AA1F41
IP Address
192.168.253.47, fe80::a9ba:62f1:463e:7c5f%6
Connection Type
Ethernet
Last Check-in
12 minutes ago
Last Logged in User
.\\WyseUser

SummarySystem InfoEventsInstalled Apps **15**Device LogTroubleshooting

Notes

[Add Note](#)

No Notes

Group Assignment

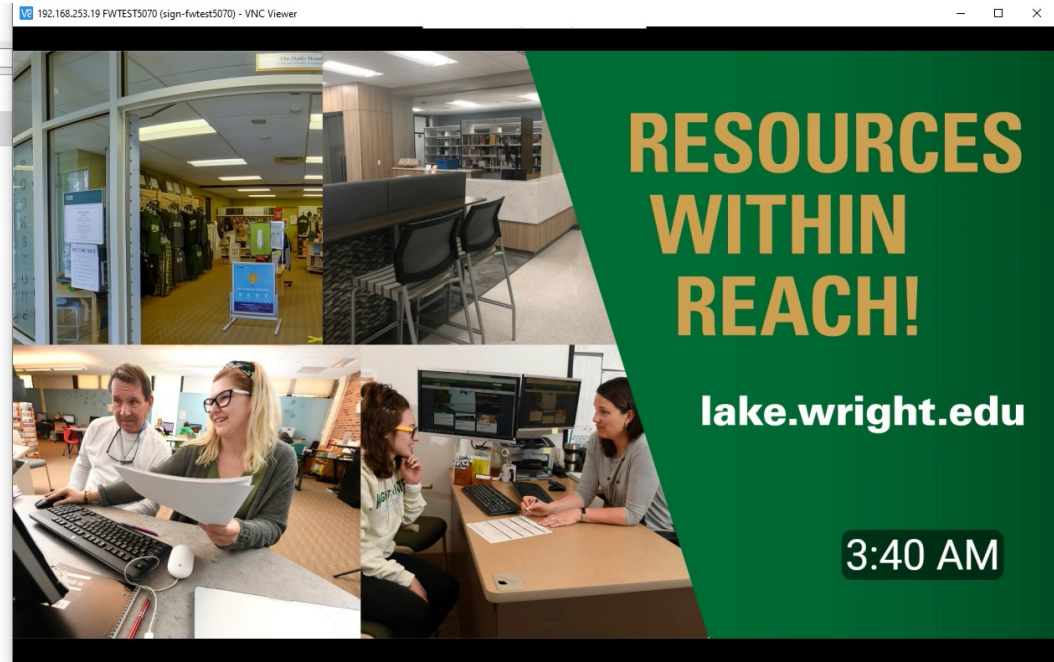
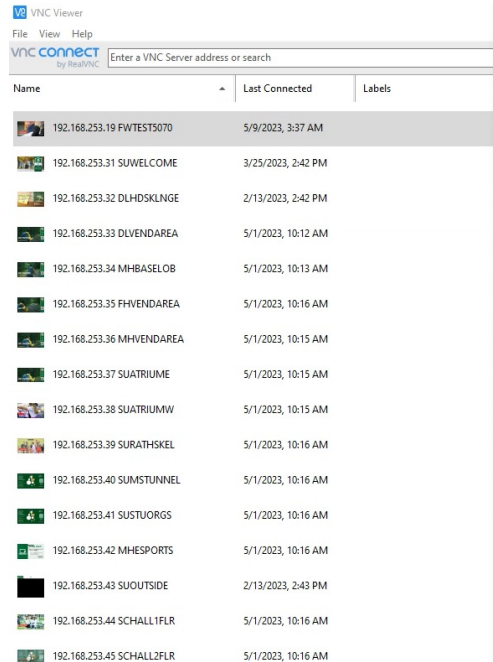
[Change Group Assignment](#)

Group	Date Assigned
Dayton Announce	07/26/22 3:44:54 PM
Unmanaged Group	07/26/22 3:10:19 PM
Provision Signs	07/26/22 2:27:53 PM
Dayton Announce	06/01/22 10:59:08 AM
Unmanaged Group	06/01/22 10:29:58 AM

Solution: Secure

- Network Security
- Drupal
- Physical Security
 - Displays are biggest potential risk

Solution: Remote Access



Lesson Learned



WRIGHT STATE
UNIVERSITY

Lessons Learned: General

- Leverage internal expertise
 - PC Management
 - Drupal
- Saved money
- Increasing screens
 - First floor of all buildings
 - 75 total players (more displays)



Lessons Learned: Content

- Events driven
- Branding
- Retention messaging
- Replacing static boards
- Increasing content demand
 - Split channels?
- Event specific content



Lessons Learned: Page Views

- Website page view/caching
- Refresh every 2 minutes
 - $30 \text{ refreshes/hr} * 24 \text{ hr} * 30 \text{ days}^{\wedge}$
 - 21,600 views per month per player
- 70 players = 1.5M views per month
- API-style HTTP request, have a cron job write the equivalent response to static files.
 - The emergency alerts check already functions this way and doesn't count as a page view, supposedly.



The background of the image is a photograph of a large crowd of people, likely at a sporting event, with a strong green color overlay. Many individuals in the crowd have their hands raised, making the 'rock on' or 'devil horns' gesture. The overall atmosphere is one of excitement and collective energy.

RIGHT HERE. RIGHT NOW.

WRIGHT STATE

WRIGHT STATE UNIVERSITY