



DATE: December 12th, 2024
TO: Dr. Stacy King
FROM: Bruce Rehmer, Technology Director
SUBJECT: Technology Report for KCIA

The purpose of this report is to give an overview of the technology acquisitions, projects and state of the technology for KC International Academy. This overview along some financials will be covering technology improvements and work completed over the last couple of school years.

The technology department is composed of two staff members, Bruce Rehmer (Tech Dir.) and Benjamin Rehmer (Technician). We provide support for all devices, while also assisting in software troubleshooting and integrations including rostering data from Infinite Campus into the various software(s). We roster data into Securly, K12itc Albert system, Clever, Achievement Network, NWEA, Amplify, Boddle, Discovery Ed, Great minds, Imagine Learning, IXL, Accessit Library, and Talking Points.

During our day(s) we also monitor a variety of other systems:

- Securly Content Filter
 - Monitoring blocked sites and blocked searches by users on our network.
- Securly Classroom
- Google Admin Console
- K12itc Help desk tickets and system
- Spectrum Fiber Internet Utilization
- Papercut Copier System
- Jamf Apple system
- Cleartouch Command center
- Security Camera System
- N1C battery backup systems.
- Federal ERATE notices

The following are network devices we oversee at KCIA:

- 650 student devices
- 150 staff devices
- 52 Cleartouch TV's
- 6 Copiers
- 53 Security cameras
- 2 DVR's for security camera recordings.
- 11 office printers

- 93 Voice over Internet phones
- 30 Hall Speakers
- 43 Cisco Meraki Access points
- 8 Cisco Meraki Network switches
- 5 Outside Aruba Access Points
- 2 Digital Cafe clocks

The following are the technical contracts and annual licenses KCIA is currently engaged in:

- K12itc/Menlo- Network Services
 - Network: \$76,030 annual cost. A 5 year network managed-services contract started July 1st, 2021 and expires June 30th, 2026. K12itc has been the network provider for KCIA since the summer of 2016. KCIA is on its 2nd 5-year contract with K12itc.
 - Phone/Paging: Annual cost of \$25,545 a year. In the summer of 2023 we added to our contract a new VOIP Cisco Phone system with 93 phones and a paging system with new Hall speakers that also serves as our class bells to. During this project and abandoning AT&T analog lines, we converted the emergency phone on the primary elevator to a cellular connection. The lift elevator is directly wired into our Cisco phone system and dials Shaun Henry's (Maintenance Director) cell phone number.
 - K12itc/Menlo Services they provide are as follows:

K12itc/Menlo Managed Services provided	
Network Equipment Management	Backup servers
Firewall	Printer & Copier Management Services
Content Security Filter (Securly)	Google Management Console
VM Server(s) - Cisco Bridge	Gmail support
Wireless Access Points & Management	Chromebook - google console and licensing
Active Directory Services	Jamf support for iP management
DRC State Testing Servers and Client software	Microsoft Licensing and software support
SCCM - Deployment/Imaging services for windows pcs	Intercom Paging/Bell system
VOIP Cisco Telephony support	

- GFI - \$18,855.96 annual cost. A 5 year copier contract with GFI starting on 7/01/2021. Contract provides maintenance and

supplies for the 6 Sharp copiers distributed around the building. Contract expires June 30th, 2026.

- Spectrum/Charter - \$13,200 annual. Provides a 1 gigabit business class fiber internet connection with a contract that started July 1st, 2023, and expires June 30th, 2026. We have been utilizing this fiber connection since December of 2017. Over the last few years our peak utilization has hit 35-40% during spring Map testing. Over the last week period from 12/4 to 12/11 our maximum load was 23%. Some current statistics are below.

Bandwidth

1 Gbps

Peak Utilization

Current Day

Date: 12/11

↑ **21** mbps
Upstream

↓ **137** mbps
Downstream

Past 7 Days

Date: 12/04 - 12/10

↑ **8** mbps
Upstream

↓ **47** mbps
Downstream

Past 30 Days

Date: 11/11 - 12/10

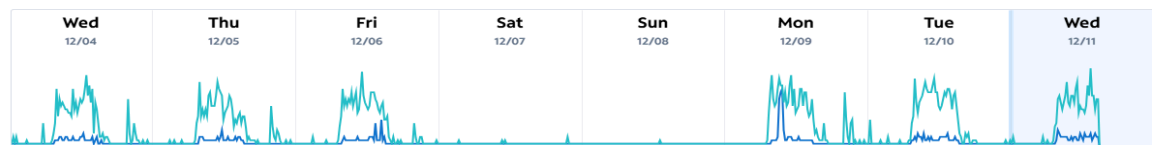
↑ **8** mbps
Upstream

↓ **116** mbps
Downstream

Date
12/11/24

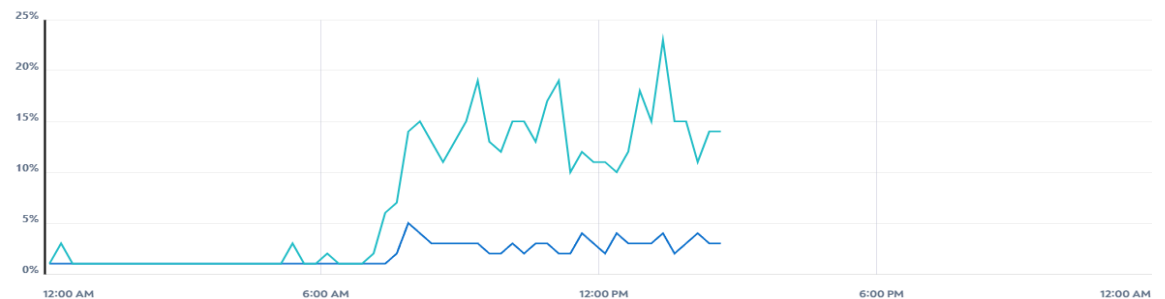
Traffic Type

All Upstream Downstream



Bandwidth: 1 Gbps

Upstream Downstream



- Microsoft Volume licensing - \$7,300 Annual license covers allowing all windows devices to be able to re-image with new operating systems, access to all Office products, server licenses, Active Directory system, and others.

- Jamf - \$1,017 - Cloud based system manages our fleet of ipads allowing us to quickly manage apps, update operating systems, configure screens, and control access.
- Securely Classroom - \$3,710 annual license, allows KCIA teachers to monitor, project and control all of their student chromebooks during their classroom time.
- GoDaddy - \$99 for 5 year license ending on 1/24/29, for the rights to use KCIA.US as our domain.

Other projects and acquisitions:

- Staff Laptops: We currently are on a 4 year rotation for staff laptops. A few years ago we started replacing 30-40 devices every year to foster better budgeting for these in the future. This circumvents the need for them to all need replacing at the same time. We have now reached our desire of having a planned schedule with a budget of around \$50,000 a year for staff devices.
 - June 2024 - 37 HP Elitebooks @ \$1,332 a device totalling \$49,284
 - June 2023 - 38 HP Elitebooks @1296 a device totalling \$49,248
 - June 2022 - 37 Dell Latitude @ 1,320 totalling \$48,840.
- Student Devices:
 - Ipads for Kindergartners have been in place since 2016. 90 of the originally purchased IPADS had to be retired last year due to Apple discontinuing operating system updates for those models, which made them vulnerable to attacks. During that time 1st graders switched to Chromebooks in 23-24, this additional surplus of IPADS helped cover the 90 IPADS we needed to remove.
 - Chromebooks for grades 1st thru 8th. We currently are on a 3 year replacement cycle with student chromebooks. Here is the latest purchases for our students:
 - Summer 2024 - 6th-8th grade devices replaced with 250 HP Chromebooks at \$299 each with a 3 year accidental damage report, totalling \$74,750. We also bought 250 protective GumDrop clear cases for \$6,925, to help prevent the historical 10% of LCD breakages that we were experiencing with our middle school.
 - Summer 2023 - 1st, 4th-5th received 240 HP Chromebooks for \$294 a unit totalling \$70,560

- Summer 2022 - 2nd-3rd grade received 160 Dell Chromebooks @290.84 per unit, totalling \$46,534.40
- Cleartouch TVs:
 - Summer 2024 the Middle School's Epson Projectors and whiteboards were removed from all of the middle school rooms and replaced with 16 75" Cleartouch TV's. The total project was \$50,607 and was purchased with Federal ESSER funds. We now have a standardized instructional display in each K-8 classroom, using the Cleartouch TV systems.
- Gym Projection System
 - A \$50,000 donation was gifted from NorthPoint to install a projection and sound system in our gym. The total project cost was \$62,000. Highlights of this system is:
 - Epson Projector 8,000 Lumens with protective cage
 - Motorized 184" diagonal DA-lite screen.
 - 12 speakers
 - 6 Wireless microphones
 - 2 wireless handheld microphones and 1 wired.
 - Touch Screen controller with wireless capabilities
- State Security Grant
 - Thru a \$100,000 Missouri security grant, the following technologies were included in the total project:
 - \$20, 257 - Four N1C battery/surge protectors to protect the cameras, switches, and DVR's to keep running through power outages and surges.
 - \$9,868 - New Outside Door controllers and badge readers with Cloud management system, with new printable id badges and printer.
 - \$5,700 for 7 cameras, bringing our total to 53 cameras covering our campus.
 - \$4,300 - Two DVR's with improved recording capacity of up to 3 weeks.
 - \$2,497.50 - Kitchen door Access with video
 - \$2,000 of new cabling for equipment
 - \$2,131 for 2 Outdoor speakers for paging

- \$2,167 - HP computer with enhanced video card and memory for Security Director.
 - \$1,700 - Two 48" monitors at security station
- Network Closet Reorganization
 - We have 3 network wiring closets in the building. We have spent substantial time decluttering and organizing the primary network closet in the elementary wing, with new wiring, labeling, and reorganizing like devices into groupings in our switches. We completed this over Thanksgiving break.
 - We will focus on the 2nd floor switch closet over spring break with the same tactics.
 - The 3rd Floor closet is a huge concern and safety issue as it is hanging on the wall in a HVAC closet. The bottom of the rack is over 6 feet off the ground, and a ladder has to be used to do any wiring configurations. With board permission we will seek to have a floor mounted rack in the same closet, utilizing most of the existing wiring. We will pursue Federal ERATE funding to discount the project by 85%.
- The following 2 sections of "Purchase Orders" and "Amazon Orders" are being provided to assist in seeing the acquisitions needed to carry on supporting the instructional technical equipment and environment here at KCIA. These financials covers the last 3 fiscal years.
- Purchase Orders

Date	Vendor	Description	Cost	Total
12/4/24	Superior	North door camera replacement	\$1,215	
10/25/24	KCAV	Cleartouch Spare	\$3,100	
10/4/24	Jamf	Ipad management	\$1,017	
9/25/24	Menlow	Microsoft Licences	\$7,300	
9/12/24	K12itc	3 new Hall paging speakers for new rooms	\$2,524	
9/4/24	Chromebookparts	LCD and keyboard replacements	\$388	
8/6/24	Superior	2 Cameras for new class areas	\$966	
7/19/24	K12itc	Securly Classroom for Teacher Chromebook control	\$3,710	
7/9/24	Superior	Cabling for new class areas, gym, offices	\$2,421	

6/13/24	KCAV	1 Cleartouchs - room 409	\$3,295	
6/12/24	KCAV	16 Cleartouch TV - Middle school	\$47,313	
5/30/24	Costco	2-LG Gram Laptops (Jake & Becky)	\$2,000	
5/13/24	RTI	HP Computer - Security	\$2,168	
5/9/24	RTI	4 - N1c Battery backup/surge (security)	\$20,257	
5/3/24	RTI	37-HP laptops for staff	\$49,268	
5/1/24	RTI	250-Gumdrop cases for MS HP chromebooks	\$6,925	
4/30/24	RTI	250 - HP Chromebooks for 6th-8th	\$74,750	
4/30/24	PEI	Gymnasium Multimedia Projector/speaker project	\$62,178	
		totals for 2024-25		\$290,795
3/12/24	Superior	Punch down network panels	\$324	
3/8/24	Superior	Cabling for security station	\$353	
2/9/24	K12itc	2-outdoor speakers	\$2,131	
2/9/24	Superior	Kitchen door Access with video	\$2,498	
2/9/24	Superior	cabling for cameras, new jacks, labeling	\$2,000	
2/9/24	Superior	Outside door controllers and badge reader systems	\$9,868	
2/9/24	Superior	2 DVRS, 3 cameras, switches, labor	\$11,459	
1/24/24	Godaddy	Kcia.us domain 5-year renewal	\$99	
7/11/23	yellodog	Cabling, jacks, raceway for Banes office	\$775	
10/12/23	K12itc	Microsoft Licences	\$7,264	
7/11/2023	Yellowdog	Cabling for new phone system(s)	\$4,995	
10/12/23	Chromebookparts	LCDs, keyboards, hinge cover replacements	\$868	
10/10/23	Jamf	JAMF Management renewal	\$1,017	
9/18/23	KCAV	cleartouch replacement pens	\$271	
8/11/23	KCAV	1 75"cleartouch with epon and parts	\$3,666	
7/26/23	K12itc	2 additional paging speakers	\$1,578	
6/28/23	K12itc	Securly Classroom for Teacher Chromebook control	\$3,254	
6/8/23	K12itc	Elevator phone adapter	\$214	
5/17/23	ki12itc	23- Wahsega Paging/Intercom speakers	\$27,787	
5/12/23	costco	1 lg gram laptop Dr. King	\$1,298	
5/11/23	RTI	38-HP Elitebooks w 3 yr warranty	\$49,248	
5/11/23	RTI	240-HP Chromebooks	\$70,560	

5/4/23	RTI	4 N1C Battery Backup/surge units - network closet	\$18,952	
		Totals for 2023-24		\$220,479
4/5/23	Chromebookparts	LCDs, keyboards, hinge cover replacements	\$887	
8/5/22	Costco	2 - LG Grams laptops	\$2,100	
1/31/23	Chromebookparts	Dell chromebook parts	\$350	
12/6/22	KCAV	2 - Cleartouch Tvs with carts	\$8,665	
12/6/22	KCAV	Epson projector bulbs	\$462	
12/1/02	Chromebookparts	hinge covers for chomebooks	\$122	
10/18/22	Chromebookparts	LCD replacements	\$700	
9/20/22	Chromebookparts	dell lcd replacements	\$210	
9/13/22	ki12itc	Microsoft Licences	\$7,025	
9/12/22	Jamf	JAMF Management renewal	\$1,358	
9/8/22	GoGuardian	Chromebook management tool for teachers	\$3,721	
9/2/22	KCAV	batteries for microphones	\$261	
8/26/22	Superior	2 lts dvs	\$4,240	
8/23/22	CDWG	10 mobile computer teacher desks	\$4,691	
6/23/22	Dell	160 dell chromebooks	\$46,434	
4/5/22	dell	35-teacher dell latitude laptops	\$48,851	
		Totals for 22-23		\$130,077
Totals				\$641,351

- Amazon Orders

Category (Amazon)	22-23	23-24	24-25	Grand Total
Accommodation furniture	\$173.99	\$949.00	\$354.87	\$1,477.86
Adhesives and sealants	\$13.68	\$22.51	\$22.98	\$59.17
Audio and visual presentation and composing equipment	\$86.38	\$22.58	\$199.97	\$308.93
Batteries and generators and kinetic power transmission	\$791.98	\$374.30	\$30.89	\$1,197.17
Bearings and bushings and wheels and gears			\$48.95	\$48.95
Beverages	\$154.86	\$34.47		\$189.33
Cleaning and janitorial supplies	\$41.97	\$200.54	\$110.79	\$353.30
Commercial and industrial furniture			\$41.98	\$41.98
Communications Devices and Accessories	\$90.66	\$206.97	\$1,149.10	\$1,446.73
Components for information technology or broadcasting or telecommunications	\$833.08	\$105.00	\$1,677.41	\$2,615.49
Computer Equipment and Accessories	\$2,377.92	\$1,143.10	\$751.23	\$4,272.25
Consumer electronics	\$8,636.36	\$4,505.49	\$148.08	\$13,289.93
Data Voice or Multimedia Network Equipment or Platforms and Accessories	\$113.61	\$49.98	\$45.98	\$209.57
Domestic appliances		\$139.98		\$139.98
Electrical equipment and components and supplies			\$29.98	\$29.98
Electrical wire and cable and harness	\$30.78	\$121.72	\$389.52	\$542.02
Floor coverings	\$85.40			\$85.40
Furniture and Furnishings	\$25.99			\$25.99
Hand tools	\$31.96		\$40.95	\$72.91
Heating and ventilation and air circulation			\$22.98	\$22.98
Information Technology Broadcasting and Telecommunications		\$5.99		\$5.99
Janitorial equipment	\$11.58			\$11.58
Laboratory supplies and fixtures	\$39.57			\$39.57
Material handling machinery and equipment		\$39.99		\$39.99
Measuring and observing and testing instruments			\$12.99	\$12.99
Office Equipment and Accessories and Supplies	\$815.45			\$815.45
Office machines and their supplies and accessories	\$326.74	\$251.87	\$162.47	\$741.08

Personal care products	\$9.99	\$9.99		\$19.98
Photographic or filming or video equipment		\$545.00	\$258.93	\$803.93
Printed circuits and integrated circuits and microassemblies	\$36.99			\$36.99
Sewing supplies and accessories		\$10.98		\$10.98
Signage and accessories	\$38.80	\$42.80	\$96.37	\$177.97
Grand Total	\$14,767.74	\$8,782.26	\$5,596.42	\$29,146.42

Sincerely,

Bruce Rehmer

Bruce Rehmer