



**Information Technology Division
Annual Report
2020-2021**

Message from Chief Information Officer

With the 2020-2021 academic year ended and the new 2021-2022 school year started, it is a good time to reflect upon the activities and accomplishments of the past year that bring the Information Technology Division (IT) to where we are now. In the 2019-2020 school year, we experienced the start of a pandemic that stopped the whole world on track. It took a herculean effort to get the District online to continue to deliver instructions. We saw how Bond 2014 infrastructure projects paid dividends! The online efforts would not have been possible without the refresh of the District's campus IT infrastructure as supported by the 2014 Bond and the needed devices of the 2018 Bond. The 2020-2021 academic year saw the surge of the pandemic, forcing all students and teachers back online. The IT Division with the help of others, distributed over 40,000 devices to our students who needed a device.

We worked collaboratively with our Academic Affairs Division to help teachers with systems and hardware to further enable our teachers' ability to deliver instructions with fidelity. We brought new tools such as Teams and ClassLink to enhance and facilitate online learning experience. Zoom licenses were purchased for all campuses to allow virtual meetings for large groups that exceeded Teams' capacity at the time. We continue the effort to educate staff and students on various information security topics. Finally, along with the Business and Finance Division and the Human Resources Division, we are embarking on a journey to revamp and standardize FBISD's enterprise resource planning (ERP) processes and procedures. With the revised processes and procedures, the team will look at available ERP software and systems to see if one will facilitate FBISD management of day-to-day business activities such as accounting, procurement, and human resources to name a few.

During the past 20 months, with all of the trials and tribulations that the pandemic brought to our community, our parents, our students, and our district, I am most proud to serve our district with my fellow IT staff members and the rest of our District. Everyone worked tirelessly and continues to put forth all energy to ensure that all the FBISD students are served, and their education continued during the unprecedented event. I cannot be any prouder to call everyone my peers and friends!

The goal for the Office of the Chief Information Officer continues to be a prompt, effective and trusted information technology organization for Fort Bend ISD teachers, students, and staff. The Information Technology Division will achieve this through transparency, accountability, and end user-led IT governance. Our campuses and classrooms depend on technology and the IT Division's success is measured by how effective it can meet district staff and student needs. We can anticipate the technological needs with constant dialog with key divisions within the district as well as ongoing effort to understand and leverage new and upcoming technology to serve the District's mission and vision. We are committed to working together with teachers, students, staff, and administration to provide the best educational experience using available technology. Our technology services and resources are a vital part of the Fort Bend ISD's commitment to academic excellence.

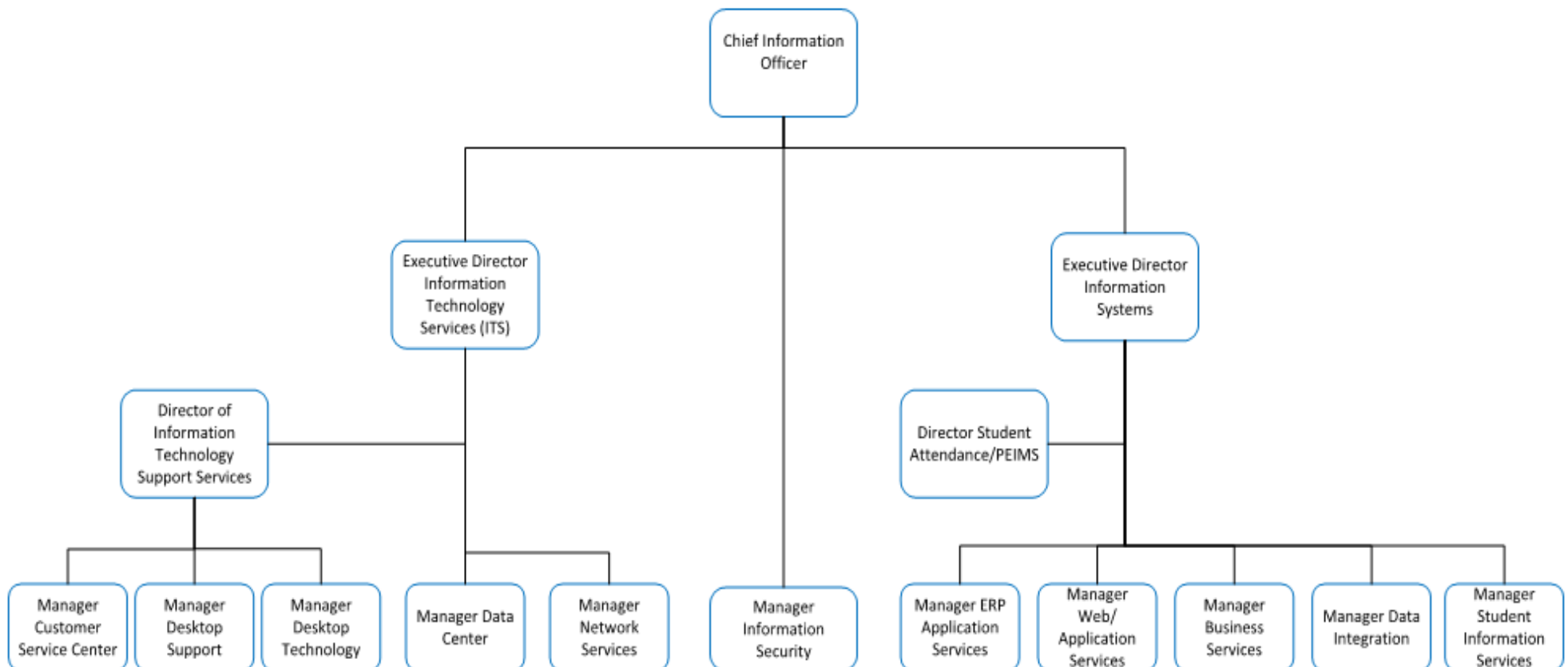
Long Pham
Chief Information Officer
Fort Bend ISD

INFORMATION TECHNOLOGY DIVISION

Mission: The Information Technology Division exists to provide our customers with technology solutions and services that are innovative, dependable, scalable, and sustainable.

Vision: The Information Technology Division will be recognized as innovative K-12 technology leaders by providing effective use of existing and emerging technology to enable the continuous improvement of teaching and learning.

Fort Bend ISD Information Technology Division



The Information Technology Division is comprised of two departments including Information Technology Services and Information Systems. The two departments consist of several teams that support all technology hardware, software, and data.

Information Technology Services (ITS)

- **Network Services**
 - Network Services
 - Wireless LAN Services
 - VoIP Phone Services
 - Network Engineering
 - Network LAN/WAN Services
 - Network LAN/WAN Support
 - Structure Cabling
 - Network Security
 - Remote Network Access (VPN)

- **Data Center and Server Management**
 - Data Center
 - Storage/SAN (Storage Area Network)
 - Servers
 - Cloud Services
 - System Backups
 - Active Directory
 - Email, Server/email Security, User Management
 - Identity Management
 - Application Support (Teams, SharePoint, etc.)

- **Desktop Support**
 - Desktop Support
 - Mobile Devices
 - Printers
 - Projectors
 - Smart Displays/Elmo
 - Desktop audio/video
 - Student Technology Toolset Management
 - Broadcast Studio Audio/Visual
 - Board Meeting Support
 - Enterprise Video, Webcasting, Video CMS
 - Elementary Support/High School/Support Site Support

- **Desktop Technology**
 - Desktop Tools
 - Asset Management
 - Print Services
 - Active Directory Policy Management
 - Desktop Security
 - Desktop Hardware Standards
 - Software Life Cycle Management

- Desktop Application Packaging, Deployment and Compliance
- Desktop Risk Management
- Patch Management

- **Customer Service Center**
 - Remote Desktop Support
 - Remote Mobile Device Support
 - Remote Printer Support
 - Enterprise Application Support
 - Password Management
 - First Level Network/Telephone Support
 - First Level Application Support
 - Account Management Services
 - IT General Information Support
 - Cisco Phones Support

Information Systems (IS)

- **Attendance**
 - Local, State and Federal Reporting
 - Texas Education Agency (TEA) Records Exchange Services
 - PEIMS Support Services
 - Office of Civil Rights Reporting
 - Average Daily Attendance (ADA)/Registrar Support

- **Web/Application Services**
 - Application Implementation and Project Management
 - Custom Programming and Reporting
 - Datamining (MSSQL, Power BI, and Excel)
 - Second and Third Level Application Support
 - Internal Web Services
 - External Web Services
 - Custom Web Development
 - Web Community Manager (formerly known as Schoolwires)
 - SharePoint Online

- **Business Services**
 - Vendor Management
 - Contract Management
 - Sourcing Management
 - Grant/Bond/ERate Management
 - Operation Expenses Management
 - Asset Management
 - Disaster Recovery Processes SIS Programming

- **Database Administration**
 - SQL Database Administration
 - Database Design

- Database Tuning
- Data Extraction, Encryption and Transmission
- Data Analysis
- Process Automation
- Business Process Analysis

- **Data Integration**
 - Data Warehousing
 - Business-to-business Integration and Data Exchange
 - Unified Data Management (UDM)
 - Bulk Data Transfer
 - Online Resources and Textbooks - User Account and Roster Provisioning

- **Enterprise Resources Planning (ERP) Application Services**
 - PeopleSoft Human Capital Management
 - PeopleSoft Financials (FSC)
 - PeopleSoft Database Security Support
 - PeopleSoft Security
 - PeopleSoft FSC Training

INFORMATION SYSTEMS

Student Information Systems

Accomplishments

- Student Electronic Cumulative Folders – piloted at nine campuses and then the electronic folders were available to all campuses. Perfect timing as the District moved to all online due to the pandemic.
- Updated all middle school course grading configuration to exclude semester exams.
- Added three new GPA sets, methods and marks added to all courses at all secondary entities, going back seven years.
- New custom forms:
 - O-Lab application (regular school year and summer school),
 - GT learning plans,
 - Crisis codes,
 - ECHS/PTECH applications,
 - Bil/ESL summer school application
- Pandemic efforts:
 - Assisted with the harvesting of district laptops.
 - Assisted with the planning of distribution and managed Skyward entries at distribution sites: scheduling, training (job aids, videos, demos), support of workers, (both onsite and remote), and daily reporting.
- Grading configuration
 - Created custom transcripts to accommodate the pandemic environment. Custom transcript included new calculations and denied credit due to disengagement.
 - Changed configuration for grading setup at each entity for T3, T4, SE2, S2
 - Changed configuration to grading periods and terms
 - Changing grade marks from numeric to “Met” / “Did Not Meet” for T4
- Calendars – updated to reflect changes to the new calendar.
- Reporting
 - Weekly reporting on student grades
 - Weekly reporting comparing grades vs device checked out



- Attendance – added new attendance codes.
- Custom Forms
 - Student/Family survey for teacher/staff to complete based on student/family needs
 - Family Device Custom Form to track the distribution of laptops and hotspots including serial numbers and parent’s identification
 - Counselor Forms
 - Crisis Data Forms for PEIMS
 - Updated Lending Library Forms for all campuses

ERP Services (PeopleSoft)

- ERP by the numbers
 - 264,893 - Payroll checks confirmed
 - 72,007- Total Vouchers processed in PeopleSoft FSC.
 - 25,969 - Total Purchase Orders processed in PeopleSoft FSC.
 - 3,046 - Change Forms Processed
 - 2,704 - WinOcular new hires/rehires loaded and processed
 - 2,157 - Distinct Vendors on Purchase Orders
 - 2,048 - Exit forms Processed
 - 1,099 - Changes implemented for Tax reporting.
 - 1,378 - PeopleSoft Support/Project Cases Created
 - 1,345 - PeopleSoft Support/Project Cases Closed
 - 700GB - size of all PeopleSoft Production databases
 - 142 - Stipend electronic forms processed
 - 42 - Tickets opened with Oracle Global support and resolved.
 - 32 PeopleSoft VM’s transitioned to monthly Windows patching managed by ITS.



Accomplishments

- Developed new General Ledger and Bank Transfer Journal Approval Workflow processes.
- Developed new Budget Transfer Journal Approval Workflow process.
- Implemented a new IT Asset Transfer process to give IT staff tools to monitor technology assets and move assets to where they are needed.
- Implemented Standardized NIGP Category Codes to provide Purchasing better spending visibility.
- Implemented a new Purchase Order Standard Comments to improve consistency of language used with vendors.
- Implemented a new Asset Custodian process for IT Staff to track ownership of student laptops.
- Added Void checks to Positive Pay files so the bank will not cash a check we have voided.
- Changed Office Depot to email purchase orders to force all deliveries to the warehouse at the start of COVID-19.
- Contract Creation – Developed an automated process to create contracts for all new hires based on provided parameters.
- Automate Docks – Developed an automated process for absences and deduct if an employee does not have sufficient absence balances.
- Stipend Electronic Form – Electronic form created to process the stipends with approvals process to eliminate paperwork.
- ReadySub Project with sub-callout and absence management with interfaces, a transition from Aesop.
- Substitute Recommendation Electronic Form - created to process substitutes with approvals and automated entry in PeopleSoft.
- Quarterly tax updates applied and W2 processing.
- July, August, and September contract roll for all employees.
- Created Position Data automated data load – uploaded data changes to position data with updated employees associated with the position.
- EForm enhancements
- Modified TRS summer school formulas – TRS is now requiring summer school hours to be reported differently than regular hours.
- Budget Request Form enhancements
- Gibson Audit support and PEIMS validation – an online process created so HR can pull data requested by Gibson.
- Change Form enhancements – updated and rearranged the change form to be easier for HR departments to handle their respective data.
- PEIMS Class Roster – new report

- Created Department Budget Table automated load – for finance to load new department budget data faster and at the beginning of the school year there are numerous new entries
 - Families First Act Absence code changes to support COVID-19 reporting.
 - New page for employees to see absence balances –allows employees to see their absence balances before they enter an absence
 - Created Creditable Years automated load – load changes or new hire data faster for the credible years of service that is used by PEIMS and TRS.
 - Created TASB automated load – load mass changes to TASB data.
 - Created ROTC EPI report
 - Prepared 18 new Windows 2019 virtual machines for the upcoming PeopleTools 8.58 upgrade.
 - Implemented Apsian and configured SAML SSO integration with Azure 2-factor Authentication.
 - Applied all Oracle critical patch updates.
 - Created new reporting-only Databases for integration with Tableau and Power Bi.
 - Implemented PeopleTools 8.58 upgrade
 - Taleo implementation to replace WinOcular
- Projects for 2021-22
 - ERP systems RFP and evaluation
 - Disaster Recovery process with Azure backup.

Business Services

- E-Rate - \$413,000 received by the district in Fall of 2020 for district-wide connectivity
- TEA Reimbursements – collaborative effort for \$454,400 spent on hotspots for connectivity during pandemic
- IT assets ordered for remote learning are now pending a \$7,000,000 reimbursement under a new TEA program
- DocuSign implemented for electronic contract signatures during pandemic
- Zoom licensing implemented during pandemic
- TEA PPRP reimbursement - \$7 million reimbursement
- E-Rate - The district plans to file for a reimbursement of \$300,000 in 2021 for eligible network connectivity.
- Projects for 2021-22
 - IT disaster recovery plan – in progress
 - Emergency Broadband Benefit – Program to support eligible households with a discount of up to \$50 per month

Web and Application Services

- Received and worked on 6,000+ tickets
- Integrated over 50 applications into 1Link
- COVID-19 Emergency Response

- 1800+ total hours allotted phone support staff hours
- Prepared laptops for deployment to students (in 1 week)
- Transitioned district to a fully online learning model
- Implemented Online Learning resources for all campuses
- Created Wellness Screener Application for COVID-19
- New Application Implementations
 - Devos broadcasting at campuses
 - PrimeroEdge for Child Nutrition
 - ScholarChip District-wide badging solution for 11,000+ employees
 - Bold Manitou to the cloud for monitoring fire and burglar alarms
 - Facilitron solution to manage 3rd party rentals
 - Truancy web application (for Student Affairs and PEIMS to run reports)
 - TAB Fusion installation for Special Education Department
 - ECHS/P-TECH Application for early college programs
 - ILink Implementation
 - Deployed 20 new digital resources for Teaching & Learning, CTE, and Library Media Services



- Auditing
 - Reviewed and improved Clever sharing rules for 35+ applications
 - Purged all inactive cards and user accounts from WinDSX
 - Worked directly with 96 district buildings/campuses to audit existing user accounts and permissions
 - Completed monthly cleanup of Transfinder data and Video Insight orphaned recordings.
 - Reviewed and cleaned up editors for all campus and district websites
 - Led accessibility review and training for all campus and district websites
- PrimeroEdge - Transitioned Child Nutrition back of house operations (Vendor Ordering, Recipes, Menu Cycles, Production Inventory) from WebSMARTT to PrimeroEdge
- EJ Ward (fuel services application) - Upgraded to version 4.5.2.23
- Docuware

- Created document storage file cabinet for the Information Technology Department. A total of 161 documents were stored successfully in the 2019-2020 school year.
- Created document storage file cabinet for the Human Resources Department. A total of 7,392 documents were successfully stored in the 2019-2020 school year.
- Implemented the Business & Finance's Account Reconciliation process to a DocuWare workflow. A total of 353 Account Reconciliation documents processed through the workflow successfully in the 2019-2020 school year.
- Implemented the Purchasing Procurement Intake process to a DocuWare workflow. The department is working on training and implementing this process now.



- Kronos (time clock application)
 - Imported and transitioned 34 Information Technology non-exempt employees to Dimensions for them to track time.
 - Imported and transitioned 121 Wellness Monitor employees to Dimensions for them to track time.
 - Created 6 transfer buttons for employees to track COVID-related duties.
 - Expanded card reader slots on 157 Kronos clocks to accept district badges.
 - Cooperatively worked with Desktop Services to replace Kronos Clock batteries district wide.
 - Removed biometric verification requirement from Kronos clocks.
- Video Insight - Completed application upgrade to version 7.6 on 24 servers.
- Blackboard communications - configured to be able to discern our online learners and our campus learners for separate communications as we transitioned into a hybrid-learning model.
- Fort Bend ISD Support Portal Management - improved user experience and the efficiency of the existing IT staff while aligning to industry best practices such as Information Technology Infrastructure Library (ITIL). Providing support for over 12,000 end-users and 300-technical support analysts.
- Raptor Visitor Management System - transitioned 85 buildings to the new cloud-based Raptor 6.
- WinOcular - Web/application server and database server migration from Windows Servers 2008 to Windows Servers 2016 or 2019.

- **Projects for 2021- 22**

- PowerSchool Implementation for Assessments and Performance Management
- Schoology LTI integrations
- Increase ease of access to all digital resources by students, teachers, and staff
- Docuware
 - Finish implementing document storage file cabinet for PUR Furniture process.
 - Implement Design and Construction Cell Tower process into a workflow.
 - Implement Design and Construction Non-Campus Building Modification Request process into a workflow.
 - Create document storage file cabinet for Communications department.
 - Assist with importing Taleo documents into DocuWare for Human Resources.



- Kronos
 - Import and transition TRS Retiree employees to Dimensions to track time.
 - Import and transition campus Paras to Dimensions to track time.
 - Implement the use of Accruals to track COMP time for employees.
- Transfinder
 - Assist with migrating RouteFinder Pro to RouteFinder PLUS (no word on approval from the Board yet)

Data Integration

- Support all implementation that requires data files to be created and transported to vendors
- An increase from 27M records to 59M for this reporting period

Student Attendance/PEIMS

PEIMS—Attendance Team

The Public Education Information Management System (PEIMS) team oversees the loading, validating, and submission of the district’s PEIMS data to the Texas Education Agency (TEA). The following are a few of the team’s accomplishments for the 2020-2021 school year, despite FBISD returning to a pandemic after Spring Break in March 2020: The PEIMS team conducted professional learning of almost **2,400** FBISD staff members via their **52** plus training sessions that covered deadlines, data requirements, up to date information, and reminders on day-to-day job functions. During



this time, they were able to conduct **220**

face-to-face and virtual campus visits, as they checked on the progress of the 27 newly trained campus clerks. Using technology to improve efficiency for all participants, the PEIMS team dutifully responded to **1,910** support tickets (cases). The team attended Region IV ESC training sessions and participated in the TASBO Winter Conference, as their director received TASBO’s first-ever RISE Award. As part of the Team’s continued commitment to enhance and improve timelines for

PEIMS submissions, the PEIMS Team submitted the 2019-2020

PEIMS submissions a week ahead of each of TEA’s submission deadlines! The team continued to focus on data accuracy and communicated expectations to all stakeholders, including the almost **600** end users of the PEIMS-supported software, On Data Suite. These combined efforts resulted in **61** campuses with **96.0%** or higher attendance rates and a positive impact on PEIMS reporting and overall data accuracy for Fort Bend ISD.

Category	Supporting Data
Professional Development	<ul style="list-style-type: none"> • <i>Held 10 Open Labs for FBISD end users</i> • <i>2,337 participants from PEIMS training sessions</i> • <i>Trained 9 new HS ADA Clerks, 3 MS ADA Clerks, 15 elementary ADA Clerks (27)</i> • <i>220 campus visits to ensure data quality expectations and support</i> • <i>1,910 CRM cases worked</i> • <i>52 training sessions offered including 14 Bi-Weekly Campus Support Skype sessions with an average of 120 participants utilizing 38 eLearning courses offerings</i> • <i>Maintaining support to nearly 600 On Data Suite end users</i>

Team Growth & Trainings	<ul style="list-style-type: none"> • <i>Region IV ESC sessions (7)</i> • <i>PEIMS Coordinator received her TASBO CTSBS 1st-level certification</i>
District Collaboration	<ul style="list-style-type: none"> • <i>Worked with Student Affairs to avoid TEA violation regarding DAEP for African American Students after 6 straight years</i> • <i>PEIMS Coordinator served on TEA Panel for PEIMS successes.</i>
Presentations & Awards	<ul style="list-style-type: none"> • <i>Director received TASBO 2020 1st-ever RISE Award</i> • <i>Director presented at TASBO boot camp, finance and HR academies</i> • <i>Director was a TASBO certification instructor/educational session presenter</i>
Procedural Improvements	<ul style="list-style-type: none"> • <i>Conversion of data verification & audit box process to electronic process</i> • <i>Continued state processing of PEIMS files ahead of state due dates</i> • <i>No PEIMS nor attendance audits received from TEA</i>
Attendance Rates	<ul style="list-style-type: none"> • <i>40 out of 53 (75.5%) elementary schools with 96.0% or higher attendance</i> • <i>7 out of 12 (58.3%) high schools with 96.0% or higher attendance</i> • <i>14 out of 16 (87.5%) middle schools with 96.0% or higher attendance</i>

INFORMATION TECHNOLOGY SERVICES



Desktop Services

- For 2020-2021 school year, the team, along with other IT teams, collected and 65,000 laptops and iPads for the Lending Library to loan out to our students for 100% online opening of schools. All devices were delivered to campuses for students to check out a device if they needed one.
- In addition to laptops and iPads, over 10,000 LTE hotspots were delivered to campuses for checkout.
- Removed over 5,500 legacy printers and replaced with 3,058 managed HP printers as part of Bond 2018 projects. This new printer fleet will save the District over \$500,000 in ink/toner costs annually while providing stakeholders with a more stable printer environment.
- Completed Bond Refresh Phase II deployment of 2800 Apple iPads and 13,000 Laptops as part of the District Classroom Toolkit.
- Continue to upgrade and standardize all cafeteria and library Audio/Video system as part of the Bond 2018 Large Venue AV Refresh.
- Deployed over 1,500 laptops to paraprofessionals and support staff to support online learning.
- Implemented Intune Configuration Manager and co-management configuration.
- Created and built more than 50 new application packages for deployment to District's devices.
- Maintain more than 50,000 Windows devices with Microsoft Critical Security patches monthly.



- Performed Adobe upgrade to Adobe Creative Cloud 2021. This upgrade gives users access to the latest version of the Adobe Cloud Applications on both district and personal devices This will enable productivity and creativity efforts in both the office and the classroom.
- Upgraded the JAMF Pro MDM Platform to the latest version to support District iPad fleet. This update allows FBISD to migrate JAMF to the cloud in a future update.
- Updated Windows imaging process to 20H2 which includes modern Windows 10 management features. This new image will provide greater stability and features for staff and students.
- Upgraded all Microsoft Office applications across the entire Windows fleet to Office 365. This upgrade allows for much greater collaboration by users.
- Upgraded Global Protect virtual private network (VPN) to version 5.1.5 and deployed to all laptops to support remote login and online learning while maintaining a safe and secure environment for our staff and students.
- Created and built more than 20 new iPad App deployment packages.

Network Services

- Completed carrier's voice network upgrade that reduced carrier's footprint on District's premise.
- Installed WiFi equipment at the Boys and Girls Club locations to support and facilitate District's Learning Centers during the pandemic.
- Deployed 5 Techno Buses to support students without wifi access during pandemic
- Installed secondary firewalls at colocation site for network redundancy.
- Deployed and supported three call distribution queues to support online instructions.
- Implemented network infrastructure at Triplex for Police Department and Extended Day (Construction Project)
- Implemented network infrastructure at multiple campus expansion projects throughout the district
- Implemented new HVAC and environmental controls at all phase 2 campuses (50+)
- Implemented network infrastructure on 21 temporary buildings throughout the district
- Transition TLETS for Police Department to new facility
- Upgraded Wide Area Network (WAN) lit-fiber connections from 10G to 40G



Data Center & Server Management

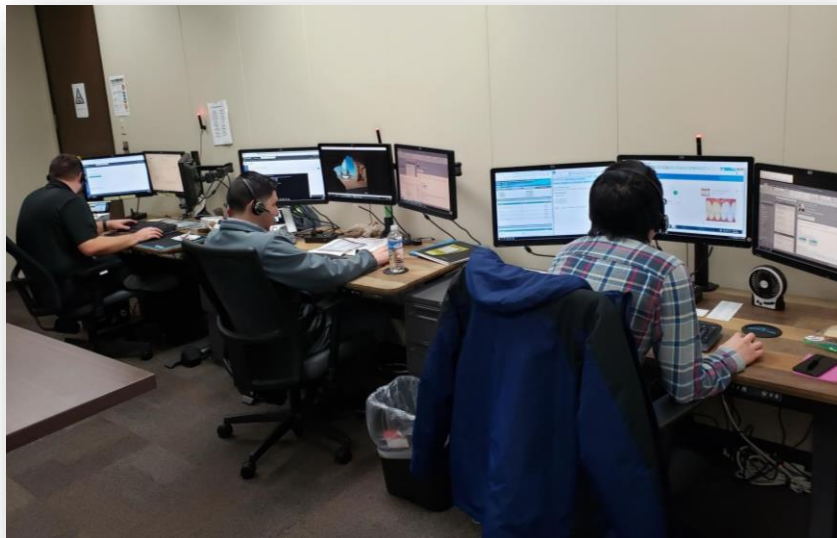
- Implemented school data sync solution to provision Microsoft Class Teams for online collaboration.
- Deployed a small POC Hyper-Convergence solution by Cisco called HyperFlex at Co-Lo data center for deploying critical workload in support of Disaster Recovery (DR) tolerance needs.
- Stand up authentication solution in Azure behind load balancer to support fault tolerance from a single node failure. The authentication service is used by multiple third-party applications for authentication needs including Skyward.
- Deployed Reverse Proxy solution in Azure for Support portal to be accessible externally to support student ticket submissions.
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- Deployed ClassLink portal solution for Student and Teacher as a reduced sign on solution to facilitate online learning. The solution was branded as 1Link.
- Expand license support for Power BI as departments begin to leverage dashboard and report features of Power BI.
- Upgrade SolarWinds to a confirmed secure patch version post recent security incident withing SolarWinds corporation.

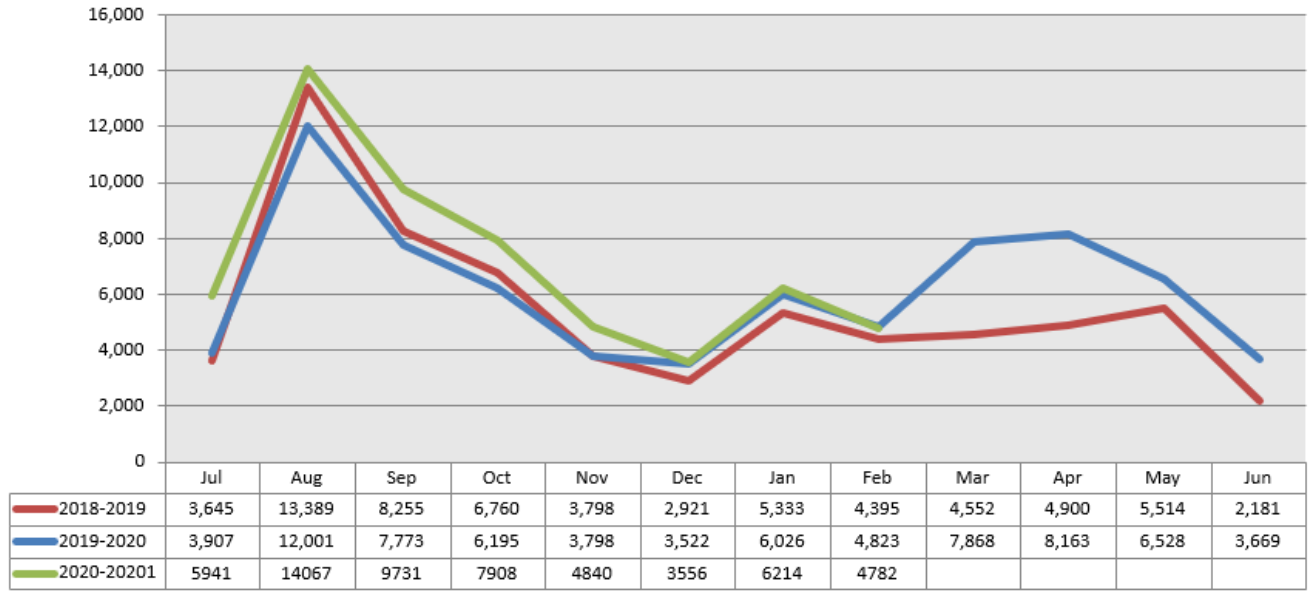


Service Desk

During the pandemic, the Service Desk staff members served not only Fort Bend ISD staff members, but all online students (and their parents). At times, it became overwhelming for the analysts; however, they forged through and assisted as many students, parents, and staff members as they can.

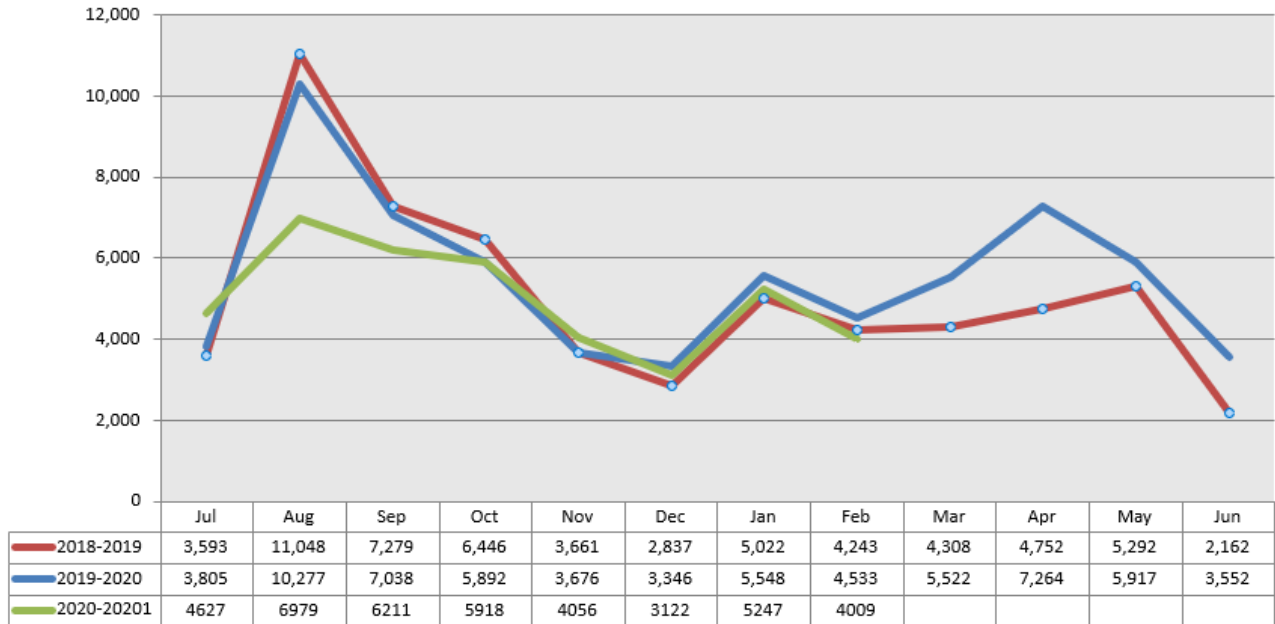


Calls Presented



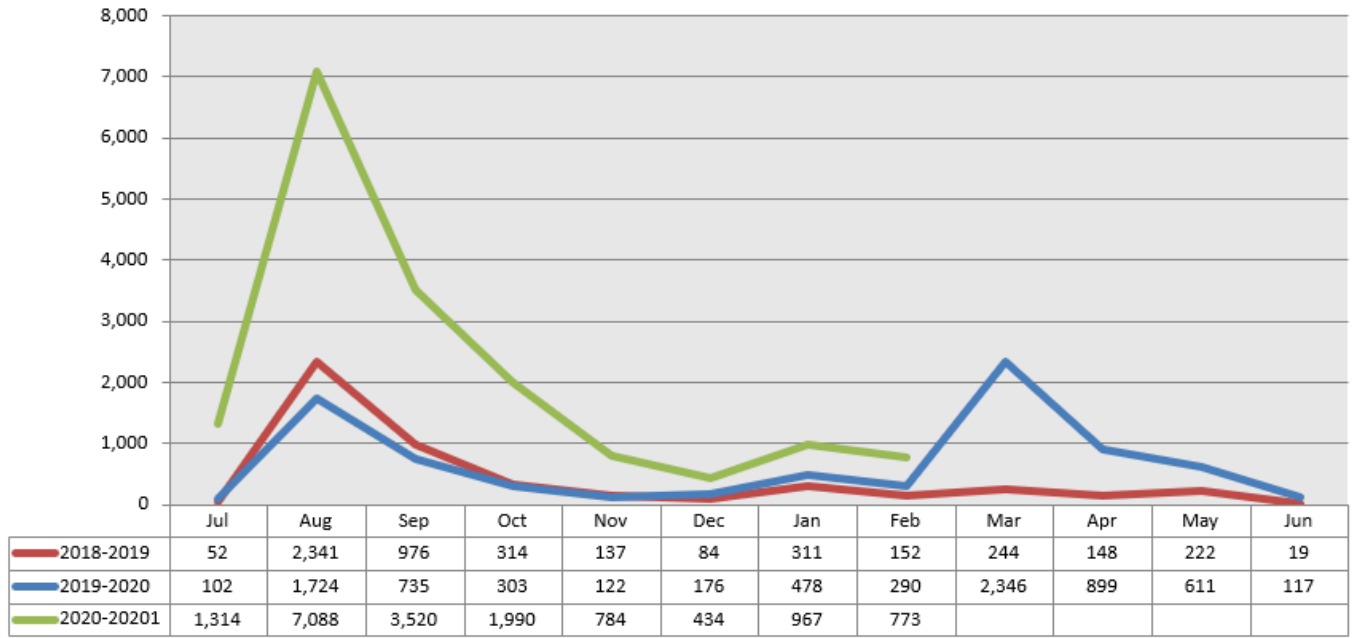
Number of calls presented to the Service Desk

Calls Handled



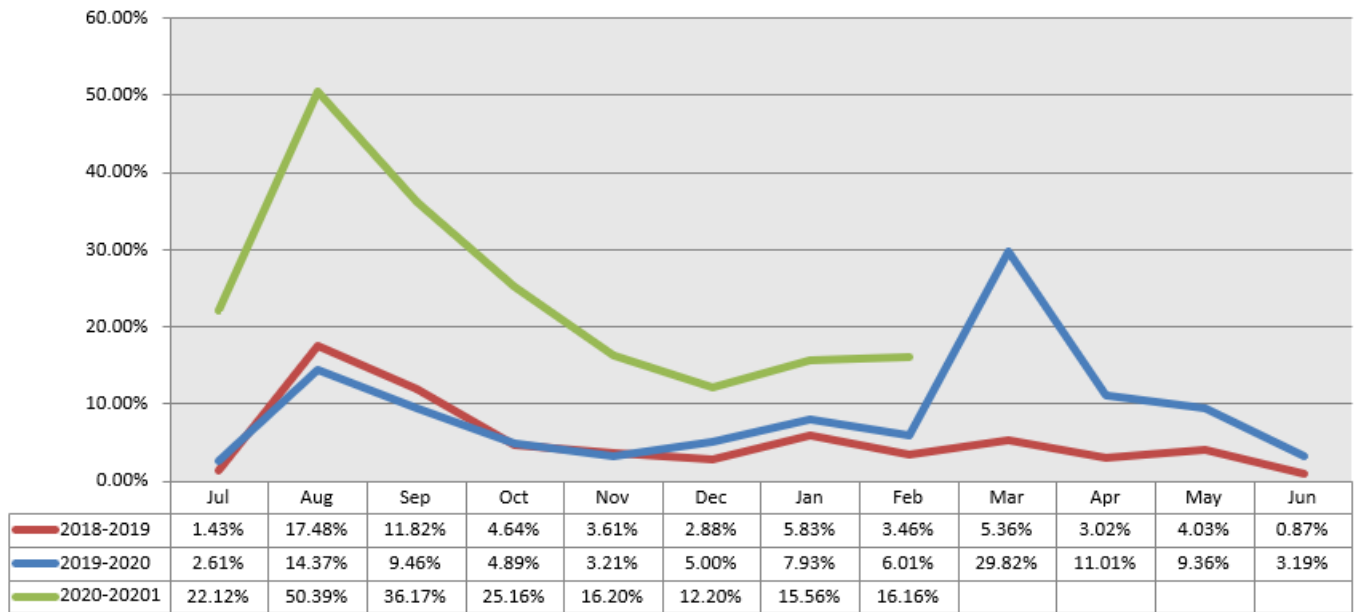
Number of calls answered by the Service Desk

Calls Abandoned



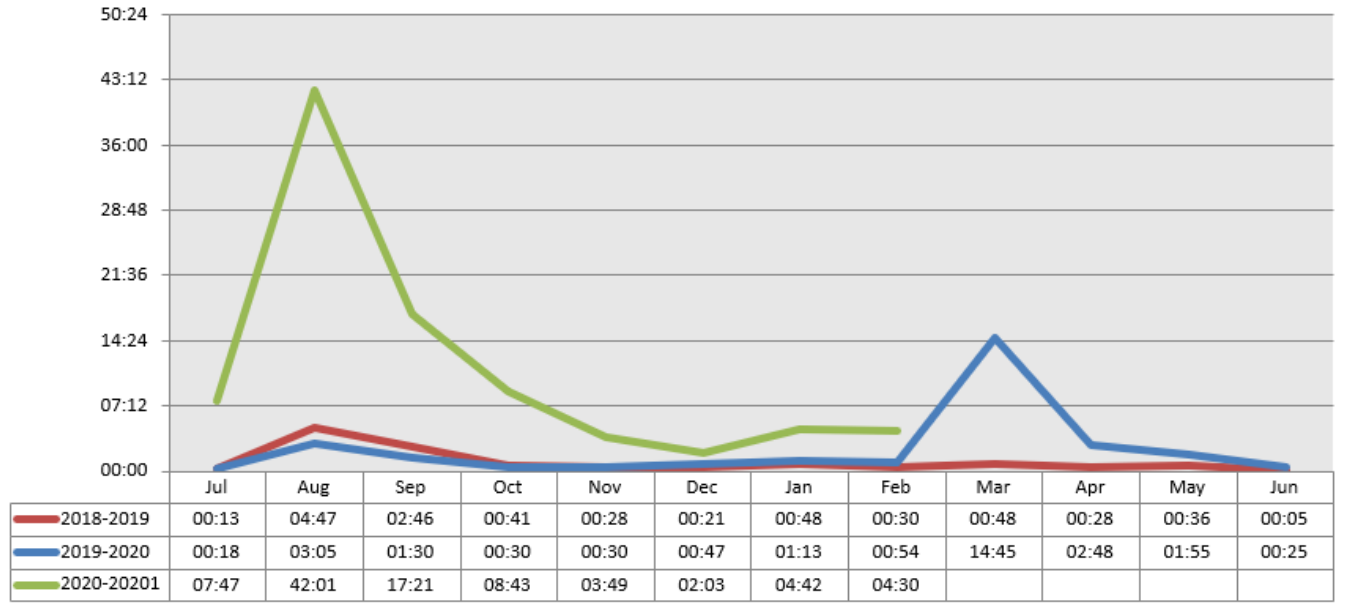
Number of calls abandoned

Calls Abandoned - Rate



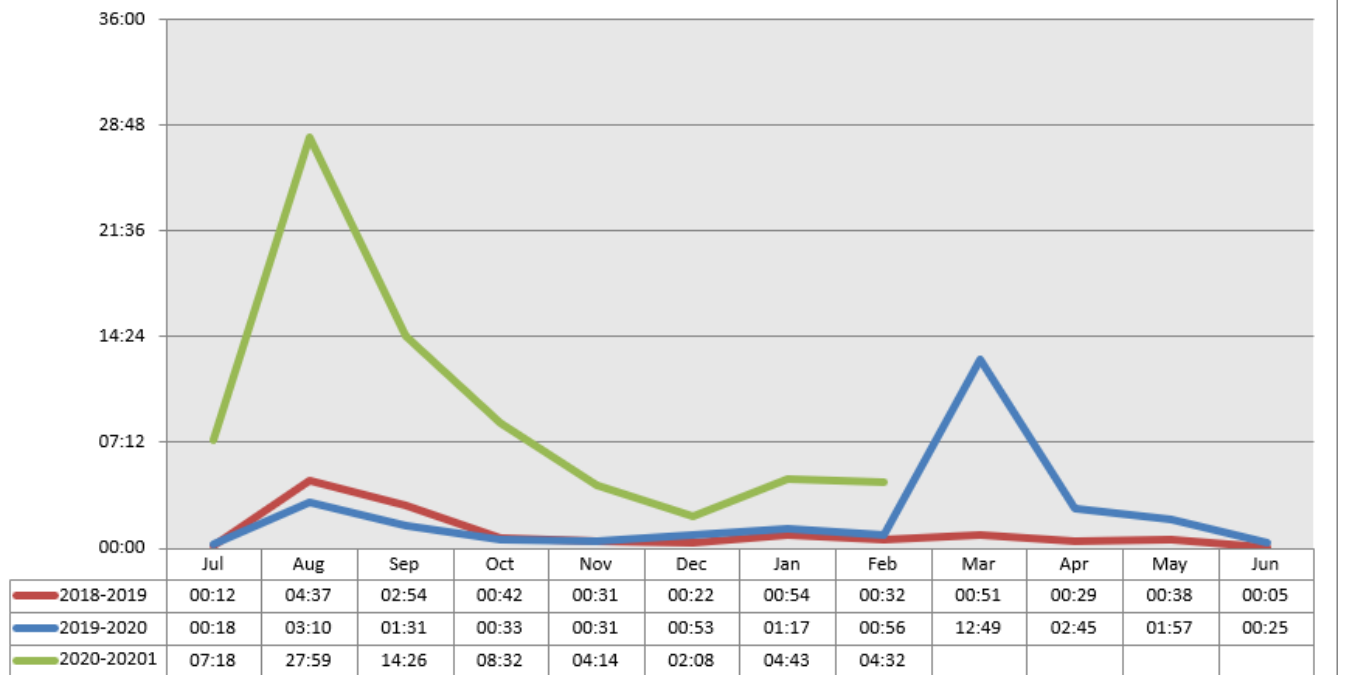
Abandoned rate for each month and year

Average Speed of Answer

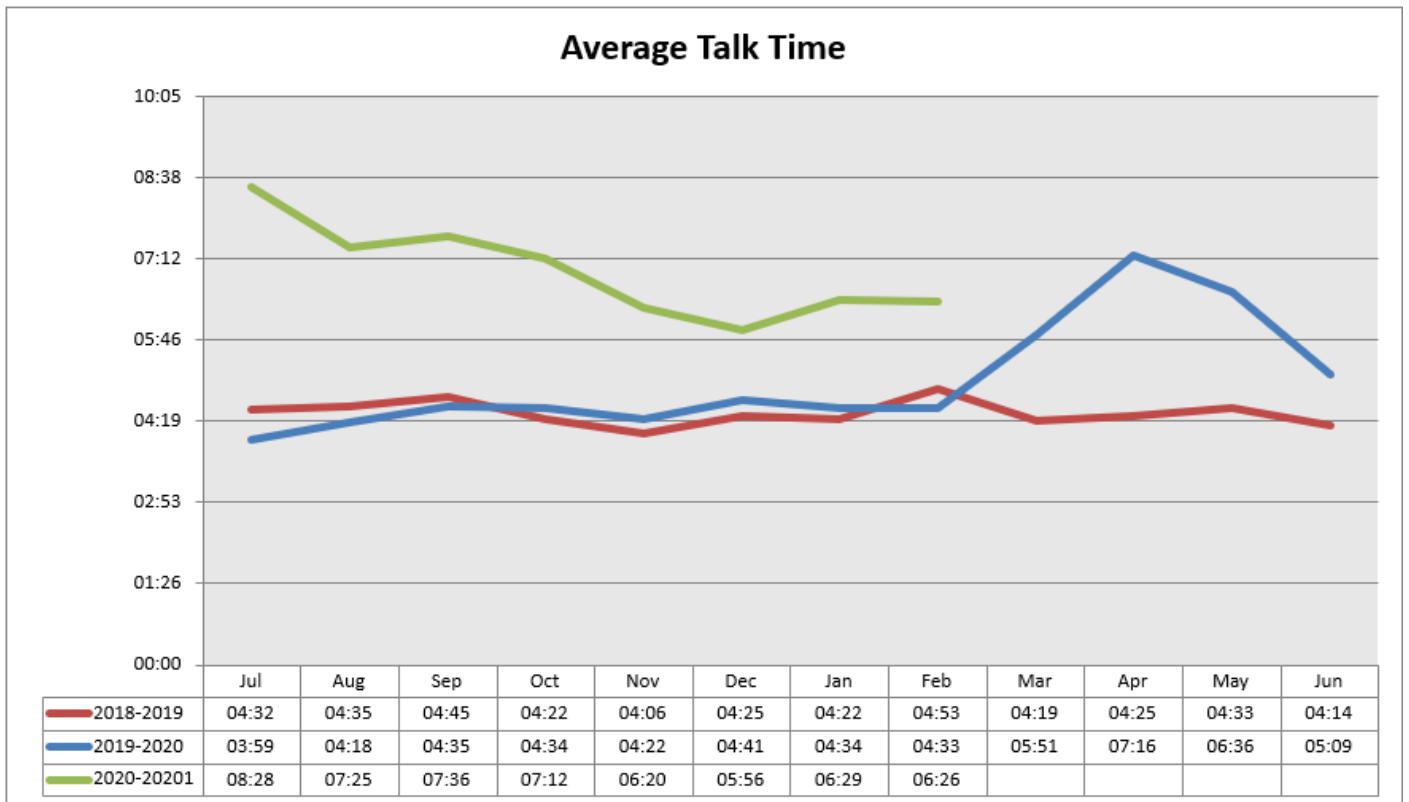


Average time a call is answered (in minutes and seconds)

Average Hold Time



Average hold time for a caller in the queue (in minutes and seconds)



Average talk time to assist an end user (in minutes and seconds)

Projects for 2021-2022

- Replacement for aging 6,921 teacher and support staff with new laptops.
- Assessing feasibility of Stretched Network and Server clustering between primary (Admin) and secondary (Co-Lo) data centers to introduce additional fault tolerance to services hosted in the data center.
- Assessing feasibility of CommVault HyperScale cluster deployment between primary (Admin) and secondary (Co-Lo) data centers to introduce additional fault tolerance to data backups by allowing the ability to both run backup jobs and store backups at redundant sites.
- Upgrade Azure AD Connect to the current version
- Future Bond Planning
 - Current 2018 Bond Projects
 - Classroom AV Refresh
 - IDF/MDF HVAC Closeout
 - Districtwide UPS Battery Refresh
 - District Firewall Refresh
 - District Server Refresh
 - Data Center Infrastructure Software Upgrade
 - Large Venue AV Refresh
 - Staff Device Refresh
 - Secondary Title 1 Device Deployment/Refresh
 - Primary and Secondary District Internet Upgrade
 - Districtwide DDI Implementation (DHCP/DNS/IPAM)
 - FBISD Police Device Refresh and Mobile Data Terminal Deployment

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- Lakeview Elementary School Technology Deployment
 - Fine Arts Renovation Technology Deployment
 - Wireless System Software Upgrade

INFORMATION SECURITY

Information Security News

With the district's increase usage of technology and proliferation of digital threats from inside and outside of the district's network, the district created an Information Security Advisor position that directly reports to the Chief Information Officer. The primary responsibility of the Manager Information Security is to ensure all FBISD technology processes, equipment, practices, and environment are secured and follow industry best practices in information security. The 2019-2021 school year saw several major efforts in securing the district digital environment.

Department of Homeland Security led 'Threat Hunt'



FBISD hosted a team from the Department of Homeland Security for a two-week comprehensive Threat Hunt on the District's network and computer systems. This Threat Hunt involved allowing DHS computer intrusion and forensic experts the access to deploy sophisticated hardware and software on the FBISD network to inspect the District's information technology systems and data transport networks for evidence of malicious activity which could be an indication of prior or on-going compromise of the District's secure

networks. The scope of the investigation included not only information technology systems but also management networks, including building automation, heating and cooling and physical safety systems.

System Patching & Vulnerability Scanning

Information Technology continued proactive vulnerability scanning of all critical systems to ensure the systems are properly configured and patched. This activity compliments on-going efforts to harden and secure workstations and servers following industry best practices and utilizing secure operating system builds.

Several security systems were deployed or are in the plans. A security platform was implemented to detect and minimize the spread of ransomware if one were to occur. Another system provides two-factor authentication for employees to safely connect to their PeopleSoft information.

During the 2020-2021 school year, a cyber security internal audit conducted by Gibson Consulting. Results will be presented to the Board in the second quarter of 2021-2022 school year. Finally, State of Texas Department of Information Resources (DIR) approved a cyber security training program developed specifically for Fort Bend ISD environment as a part of Senate Bill 820 requirement. This training will be conducted at the start of each school year as a part of the District's annual employee training.



APPENDIX A

2019-2020 Accomplishments

Due to the pandemic, the 2019-2020 Information Technology Division Annual Report was not released. This appendix is the summary of the accomplishments during this interesting time.

INFORMATION SYSTEMS



Business Services

- **Asset Management**
Over 20,000 pieces of equipment have been added to the District as part of the project to fully equip schools and libraries with laptops, carts, and devices and paid for by the 2018 Bond. These deployments have been an interdepartmental effort and collaboration as the future is going to bring a massive number of refreshes to FBISD staff in order to have the technological capability for our leadership to carry on their mission to support district teachers and students. All assets are uploaded into PeopleSoft and tracked for maintenance and program compliance purposes.
- **ERate**
In 2018 and 2019, a total of \$1,384,000 has been reimbursed for a fiber buildout project as part of the federal ERate program. This provided the District money back for eligible Internet connectivity services. The level of compliance for this program is extremely stringent as the FCC manages it. Departments consolidated the District's cabling to both have fiber, worked to include future activities and network cabling deployed to support the refreshed computing environment. As more campuses are built, the efforts from the Business Services, IT department and Purchasing are making sure that every expenditure is aligned closely with any funds that may be reimbursed.

Student Information Systems

- **Electronic Student Cumulative Folders** – created a District Document Management Committee that meets monthly with a focus on moving to electronic student cumulative folders - pilot of two high schools, three middle schools and three elementary schools started in July 2019.

- Presented four sessions Texas Skyward User Group Conference in Frisco, Texas.
- Uploaded VISTAS students with category code and student indicator for tracking purposes.
- Early Learning Centers – moved students, added permit codes, added teachers and assisted with master schedule.
- Offered 124 training sessions with a total of 1,416 attendees.
- Worked collaboratively with Curriculum to present video master schedule messages from PEIMS, Special Education, Gifted & Talented, English Language Learners and Fine Arts Departments at master schedule training sessions.
- Created an electronic O-Lab, 21st Century, Student Application in Skyward with areas for students, parents, counselors, administrators, CCC, and O-Lab manager to sign electronically.
- Created a process to request a new course, with a flow so that all areas sign-off prior to deploying to production.
- Verizon Grant/ Verizon Innovative Learning Schools – Online custom forms for parents and students, added fees, trained campus staff and created custom reports for staff at three middle schools.
- Electronic ECHS/P-TECH Student Application and Parent Approval of Application in Family/Student Access
- Lending Library Parent Applications in Family Access
- Responsive Intervention Custom Form
- Created Custom Transcripts.
- Setup/configuration of grade books for Grading Pilot campuses.
- GT Portfolio uploaded to Student Portfolio.
- Technology needs added to each course in the curriculum master.

ERP Services (PeopleSoft) by the numbers

- 251,720 Payroll checks confirmed
- 78,167 total vouchers processed in FSC
- 30,713 total purchase orders processed
- 6,500 code customizations for specific FBISD functionality that were reviewed and reapplied to the environment.
- 3,278 - Change forms Submitted
- 2.868 Terabytes of SQL disk space
- 2,422 - Distinct vendors on PO's
- 2,397 CRM/Support Portal Cases
- 2,121 - WinOcular new employees created in HCM
- 1,968 - Exit forms Submitted
- 305 GB Database Size FSCPRD
- 288 GB Database Size HCMPRD
- 442 SQL Databases
- 77 new public queries in Finance
- 25 SQL Database server environments (Prod, Test, and Dev)

- Successfully upgraded PeopleSoft HCM and Finance environments simultaneously with a go-live on February 14, 2019, with minimal business disruption. This was a first because we have always done one environment at a time. The complex project included PeopleTools, Application and SQL Server Databases being upgraded to current release versions in both environments.
- Implemented SQL Server Always-On 2017 to improve redundancy of PeopleSoft database servers.
- Proactively developed and enhanced scripts for notification of up/downtime of PeopleSoft instances with email and text notifications being generated so issues could be researched and addressed quickly to minimize business impact.
- Tested Disaster Recovery from Backups.
- Implemented Oracle PBCS (Oracle Planning and Budgeting Cloud Services) with interfaces from Finance and HCM for Business and Finance to more accurately create various budget impact scenarios.
- Modifications to Finance workflow to accommodate new reorganizational structures.
- Changed all internet vendors to Secure Protocol for POs and Invoices.
- Created a method for users to delete old Run Controls no longer in use which clears up their PeopleSoft workspace and allows ease of use.
- Worked with Accounts Payable on the Comdata implementation with interfaces and testing which allows vendors to receive payments via credit card process.
- Conducted 10 New User Training classes and trained 53 Financial users.
- Supported Financial Year End Processes, including closing POs, Rolling POs and configuring system for the new Fiscal Year.
- Configured system and developed reports to support the transition for Activity Funds from Fund 865 to 465 and 461 meeting TEA Requirements.
- Implemented multiple enhancements to the Furniture, Fixtures and Equipment module to improve performance and provide flexibility to use the module, to order school badges and equipment.
- Implemented enhancement to allow business users to close Blanket POs based on Amount Remaining and Last Activity Date while preserving the ability to reopen those POs if needed.
- Developed approvals processes to manage and track new technology purchased under the 2018 bond.
- Implemented Requisition Approval workflow enhancement to include an approval step for the School Transformation Grant.
- Implemented an Accounts Receivable Reconciliation Enhancement that improved validation and reduced the need for back-end SQL to remove bad data.
- Three contract role processes to support employees on July, August, and September calendars.
- Applied quarterly tax updates to the system on a timely basis to ensure code is up to date for payroll process.
- Interface developed for migration of Kronos Workforce Central to Kronos' hosted solution Dimensions.
- New summer school criteria for TRS reporting

- Developed automated bulk load processes for the following to aid HR efficiency in managing changes: Position Data, State Employee Data, and General Deduction.
- Worked collaboratively with HR to support outbound/inbound interfaces to ReadySub, the new absence reporting system that will go-live January 2020.
- Developed security changes to prevent W-2 and query access from outside FBISD network to protect personally identifiable information (PII) for employees.
- Developed new report for HR to have visibility to current teacher/last teacher entry dates.
- Implemented various PEIMS enhancements to ensure data accuracy for state filings.

Data Integration

The Data Integration Team focuses on collecting data from multiple diverse source systems into a single centralized location where the data is cleansed, transformed and packaged for secure transport and loading into diverse target systems in support of a range of business initiatives and technical implementations.

Provide data modeling and data profiling support for the Response to Intervention/Instruction (RtI) district initiative in helping identify students that are struggling with reading or math. The Data Integration team collects and stores data from many sources including Renaissance 360, SuccessEd, Skyward, Child Find and eduPhoria and then transforms the data into a consolidated report for use by various district department staff and campus leadership to help better identify students in need. Securely Extract, Transform, Load, and Transfer data to/from 50+ business partners (including online textbook vendors) supporting multiple FBISD departments and services including Transportation Services, Food Services, Special Education, Curriculum, Career & Technical Education (CTE), FBISD Police Department, and Business & Finance to name a few.

Manage the centralized Student Picture Management System (SPMS) that securely collects, organizes, and distributes 76,000+ student pictures supporting multiple FBISD departments including Food Services, Nurses, Student Information Services (Skyward), Library & Media Services, and FBISD Police Department.

Web and Application Services

The Web and Application Services Team provides custom development and application support services to meet the growing needs of Fort Bend ISD. The team currently supports 150+ applications that are used throughout the District.

Application Services by the numbers

- 22,364,736 web page views
- 18,139,377 unique web page views
- 83,613 parents contacted by Blackboard Notification
- 12,233 staff contacted by Blackboard Notification
- 5,090 security camera views (180-degree cameras present four views)
- 4,928 Gifted and Talented referrals submitted through the application
- 4,317 Athletics officials paid using web app - an increase from 1,111 in 2017-2018

- 3,220,244 new visitors
- 1,084,915 returning visitors
- 242 security cameras per server
- 118 total Student Leadership applicants
- 30 days recording retentions (expanded from 18 days)
- 19 Web Community Manager trainings
- 8 SharePoint training sessions
- 8 Open Labs training sessions
- 6.7 PB security footages storage (from 2.5 PB storage)

Accomplishments:

- PrimeroEdge
 - Transitioned approximately 238 Point of Sale computers to PrimeroEdge's ExpressPoint meal service software
 - Transitioned Child Nutrition front of house operations (Student Import, Employee Import, Meal Balances, pictures, eligibility) to PrimeroEdge
 - Moved Prosperity Bank Business and Finance process to PrimeroEdge
- Docuware
 - Implemented Design and Construction Building Modification Request process to Docuware workflow. Total of 28 Building Modification Requests processed through the workflow successfully in 2018-2019 school year.
 - Created document storage file cabinet for Accounts Payable department. Total of 4,099 documents stored successfully in 2018-2019 school year.
 - Created document storage file cabinet for Police department. Total of 12,646 documents stored successfully in 2018-2019 school year.
 - Created document storage file cabinet for Special Education department. Total of 1,115 documents stored successfully in 2018-2019 school year.
- Kronos
 - 152 model 4500 devices replaced with model 9100 touch screen devices in preparation for move to Kronos Dimensions.
 - Transitioned approximately 2,276 employees over to Kronos Dimensions Cloud application.
 - Transitioned 152 InTouch 9100 Kronos clocks to Kronos Dimensions.
- Print Shop Pro
 - Transitioned Print Shop Pro software from on-site server to cloud server.
- TransFinder
 - Upgraded and transitioned software from 2003 windows server to 2012 windows server.
- VideoInsight
 - All 23 VideoInsight applications migrated to Windows Server 2016 devices and upgraded to version 7.4.2.32
 - Increase of 310 cameras -

- 5,090 security camera views (180-degree cameras present four views), average of 242 cameras per server, with storage expansion to 6.7 PB recording retentions expanded from 18 days to 30 days
- 88 SPED classroom cameras with 124-day recording retention
 - WebClient application for use by campus administrators moved to a dedicated server
 - VI HealthMonitor application moved to a dedicated server and upgraded application
- EJWard - Terminals at each of the three fueling sites replaced, application upgraded and Veeder-Root integration enabled
- WinDSX - Coordinated efforts with campus personnel to add employee IDs to staff door access accounts in preparation for integration with ScholarChip

TravelTracker - Coordinated efforts with App-Garden, Transportation and DI Team to implement this new field trip scheduling application

- RTA - Application upgrade and migration to new server
- Voices - Application used to help accept a small set of students to a program that provides students with a voice directly to the Superintendent. Providing students in the District a voice in decision making (246 total applicants).
- Student Leadership- -Application used to help accept a small set of students to a program that provides students with opportunity to directly address FBISD Board of Trustees. Providing students in the District a voice in decision making (118 total applicants).
- Web Community Manager, Refresh - redesigned and audited the District websites to meet accessibility standards and to reflect a more modern look-and-feel.
- BlackBoard Communications Mass Notifications System Implemented - Replaced the former vendor School Messenger. This mass notification system is used to contact 83,613 Parents, 12,233 Staff for district Events, Emergencies, Attendance, Lunch Balances and general notifications.
- Support Portal - Allows creation of Incident and Service Requests cases, to improve user experience as well as productivity of FBISD IT staff whilst aligning to industry best practice such as ITIL.
- Eduphoria Strive - Strive intuitively integrates staff evaluation, goal setting, and PLC collaboration. Ultimately, Strive combines two powerful applications, Workshop and Appraise, to create a true professional growth system.

PEIMS BY THE NUMBERS 2019-2020

- Total number of training sessions offered - 31
- Total number of CRM cases worked - 2,267
- Number of attendance-based audits from TEA - “0”
- Total number of campus visits—202
- Total number of attendees at professional development sessions offered - 1,934
- Summer submission - 17 days ahead of schedule.
- Extended year submission - 16 days ahead of schedule.
- Received over \$8,000 in gift cards and gifts from FBISD businesses for our Back to School Professional Conference.

- Director of Student Attendance/PEIMS achieved her ITSM certification.
- Director of Student Attendance/PEIMS presented, trained and taught two TASBO educational sessions/courses.
- Number of high schools with 96% or higher attendance rates - 9 out of 12 (75.0%)
- Number of middle schools with 97% or higher attendance rates - 9 out of 16 (56.2%)
- Number of elementary schools with 97% or higher attendance rates - 43 out of 53 (81.1%)
- Maintained fall PEIMS submission approval of being 14 days ahead of the TEA's submission deadline
- Worked with the Aloe Software Company (On Data Suite) to produce state-used Board of Trustees' Dashboard.
- FBISD PEIMS Coordinator and Campus Data Coordinator achieved their TASBO CTSBS certification!
- FBISD PEIMS Coordinator and Campus Data Coordinator taught certification courses for the 1st time at TASBO.
- Created our FBISD Attendance Webpage (www.fortbendisd.com/attendance) & had over 3,000 hits in 18-19.
- Collaborated with Student Affairs and with weekly discipline coding monitoring. We evaded Data Validation Monitoring Indicator #6 in African American DAEP assignments after six straight years.
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INFORMATION TECHNOLOGY SERVICES



Desktop Support

- Moved T-Building Technology Setup – Every year T-Buildings are moved or refurbished throughout the district. This year 18 T-Buildings that results in 36 rooms, were completely set up with the technology needed within the first week of school. This allowed teachers and students to have the technology they needed for a successful start of school.
- Meadow Technology Setup at BPE – All of Meadows technology was set up at BPE for the placement of staff and students while school is rebuilt. Start of school there had minimal impact for the staff and students, which is a success for FBISD.
- Malala Technology Setup at JSES & OCE – With Malala opening in middle of 19-20 school year, staff and student were housed at JSES and OCE. Technology was completely set up for the start of the school year with minimal impact on them. This was a success for FBISD.
- Malala Opening – Technology at Malala was completely set up for a middle of the school year opening. There was minimal impact for the staff and the students, which was a huge success for FBISD as this was the first new school opening in the middle of a school year.
- HBMS and MCMS Verizon Innovation Labs – VILS was a partnership with FBISD, Verizon, Digital Promise, and others. These two Middle Schools were selected to open the labs, which combine technology with hands-on learning experiences for the students to learn such as 3D printing and design, coding with robots, and virtual reality. All Technology was set up, tested for the successful ribbon ceremony at both schools. With the success of this program, it could potentially allow FBISD to open more VILS in other Middle School.

Desktop Technology

- Bond Refresh Phase I Labs & Libraries for all campuses plus Phase I Classrooms. Over 30,000 laptops and over 7000 apple devices were deployed. This effort replaces old and out of date PC's and Tablets and places the District in a better position to meet the Classroom Toolkit

requirements of 2:1 device ratio's for students with devices that can be used in a collaborative environment.

- Adobe Upgrade to Adobe 2019 cc. This upgrade distributed the latest version of the Adobe Cloud Applications. This will enable productivity and creativity efforts in both the office and the classroom.
- Cafeteria Point of Sales Upgrade of 285 Devices. With the replacement of older Point Of Sales hardware, this project upgraded each cafeteria with new systems that allow for cloud-enabled POS transactions.
- Reese Career and Technology Center Deployment. As the showcase facility for Career and Technology Education, this facility stands at the forefront in the Districts efforts to provide skills-based training to students from Culinary to Engineering programs.
- Upgraded SCCM Platform to latest Release v1906. The SCCM Platform manages the distribution and maintenance of all Windows PCs. The upgrade to this platform better positions the platform to support Windows 10 devices and the future direction of cloud-based device management.
- Windows 10 Upgrades on over 20,000 PCs. Microsoft has ended its support of the Windows 7 Operating System. The upgrade of eligible devices to Windows 10 further aligns the District Windows devices with current and future Operating System releases
- Lending Library Deployment of 800 student laptops with hotspots to 4 High Schools and 1 Middle School
- CTE High School Agriculture Program PC Deployment 330 Laptops for 11 High Schools
- Stem/Equip/Robotics Deployment 1008 iPads, 348 Macbooks, 2376 Laptops.

Data Center and Server Management

- Deployed SPED Storage (Isilon) – Provided the ability to store video recording to meet SB507 mandate as defined by district stakeholders.
- Launched MyFortBendISD portal introduced Password Self-Serv – Provided an efficient means to resetting user passwords due to account lockout or forgotten password situations.
- Migrated Legacy File Share Server to NAS (Isilon) – Provided with a more current and advanced means for on-premise file share service.
- Upgraded Virtual Infrastructure to version 6.5 – To keep the district's virtual infrastructure safe from security vulnerabilities and leverage new features within the virtual technology.
- Implemented New Password Policy to enhance security – Strengthened overall security posture of our district.
- Implemented Quad 9 for to enhance DNS security – Enabling ability to prevent users from accessing domains that are blacklisted due to nefarious activities observed by various network security agencies.
- Replaced all legacy Video Insight Servers with new – Upkeep of district resources as needed.
- Began Windows 2008 Server migrations to more current OS – Upkeep of district resources and strengthening overall security posture.

- Increased RAM on all Virtual Servers to support demand – To meet the on-going demand of servers from the virtual infrastructure.
- Introduced new and sunset legacy Domain Controllers – Upkeep of district’s Active Directory and strengthening overall security posture.
- Implemented Location-Based Access Restriction on Office 365 resources to be accessible only from United States - Strengthened overall security posture of our district.
- Introduced new and sunset Domain Certificate Authority servers to issue internal certificates – Upkeep of district resources and strengthening overall security posture.
- Deployed Security Camera Expansion (Isilon) – To meet growing video recording storage demand from district’s security camera installations.
- Upgraded SolarWinds from legacy to current version – Upkeep of Network monitoring solution and strengthening overall security posture.
- Upgraded Commvault to V11 SP15 – Upkeep of data backup solution and strengthening overall security posture.
- Upgraded Virtual Infrastructure to version 6.7 – To keep the district’s virtual infrastructure safe from security vulnerabilities and leverage new features within the virtual technology.
- Decommissioned VBrick on the onset of Discover Video project – Released unnecessary and unsupported resources to relieve support demand.
- Complete implementation of Device-Based Subscription (DBS) for Office 365 Pro Plus – Upkeep of district resources and strengthening overall security posture.
- Implemented Preferred Name options to both Add and Remove via ID Auto Workflow – Service enhancement to meet user demand.
- Completed Windows 2008 Server migrations to more current OS – Upkeep of district resources and strengthening overall security posture.

Network Services

- Implemented Hudl camera in RPHS gym: Athletics uses this to record games and pays a subscription service to provide analytics of the videos to help coaches improve team performance. This device had sat unused for a year until Long provided the budget to get the camera the power and data up the wall of the gym to get the device in use.
- Completed Phase 1 of HVAC project at 17 campuses: This was to provide standalone HVAC units in campuses to keep the networking equipment functional. Campuses rely on their network connections for all internet-based instructional tools, printing, phones, wireless connectivity, etc. Without the additional cooling, we were seeing higher equipment failures and outages that impacted administrative functions and instructional time.
- Implemented Manitou in the cloud: The previous system was on obsolete physical servers at PFC and had only two phone lines into the system for all alarms across the District to report in or alert on. Alarms were constantly in an unknown state because there were too many to effectively call in and “check-in” on those two analog lines. Moving Manitou to the cloud removed the risk of those servers failing without any backup solution, provided a redundant, resilient system, and allows the alarm panels over 200 call paths so there are no more busy signals or collisions on inbound calls to the cloud system.

- Installed network and wireless at Wheeler Fieldhouse and Mercer Stadium Press box: Network Services simply implemented network connectivity someplace for Athletics Department where it was not available before. The Athletics Department uses these connections to stream games over the internet and other uses.
- Implemented Clearpass as the radius server for the District-issued laptops, ipads, and Chromebooks: The project got the District off old Cisco ACS radius server systems that have been EOS for several years. If these servers had failed, the District would have had a challenging time recovering wireless for instructional use across the District because it was the go-between for authentication for all wireless devices except BYOD. Second, it improved the District security for wireless by allowing the Network Services team to shut down Virtual Science, which was a simple mac-auth wireless network with no true user or machine authentication. Third, it streamlined management for wireless by allowing all district-issued devices to use one wireless network (DISTRICT_DEVICES) by integrating with both AD and with the IOS Mobile Device Management platform (MDM) JAMF.
- Implemented Uplinx Automation for CUCM: This automation was implemented to streamline the creation of phone profiles for new users. This system watches AD for the creation of a new user account and then automatically creates their phone and associated profile in the CUCM Telephony system. Before, this was a completely manual process and it could take two staff members many months to get all done from the beginning of the hiring season in July to around October when it ends. This system is saving the District at least \$30K/year in contractor resources that typically engaged at the start of every Fall to help deal with the large number of new hires.
- Implemented network, wireless, and voice services at MYE and JRCTC.