



Johnston Public Schools

Technology Plan

SY 2017-2020



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Objectives:

The Mission of Johnston Public Schools, in partnership with students, families and the community, is to provide a challenging education with academic rigor and appropriate supports so that each student will possess the knowledge, skills, and character essential to productive citizenship, healthy choices, lifelong learning, and the ability to make a meaningful contribution to our global society.

Johnston Public Schools is a student-centered learning community with a diverse and well-trained staff that recognizes:

- Education is learner centered.
- Quality public education is essential to a free democratic society.
- High expectations drive positive outcomes.

- Everyone deserves to be treated with dignity and respect.
- Learning is a continuous, life-long process.
- Each student has a right to an education and the responsibility to learn.
- Educational excellence requires effective and committed leaders.
- All students, at the time of graduation, shall be prepared to pursue their life goals.
- Effective teaching and learning demand a safe and supportive environment.
- Education shall be responsive to evolving student needs in a rapidly changing world.
- Parent, family, school, and community collaboration are central to, and critical for, student academic success and awareness of the necessity for maintaining a healthy life style.

Only a school system that creates technologically literate students will produce graduates prepared to meet the challenges and expectations of today’s society. Johnston Public Schools must provide an environment that integrates into all curricular areas the application of modern communication and computing technologies leading to the creation, management, and use of knowledge. We will continue to create an educational setting that provides its students with a variety of enriching ideas and experiences that foster intellectual curiosity, achievement, and a pattern of life-long learning.

We recognize that the computer-based devices are only tools. It will be necessary to prepare our students to use the tools found in the home and the workplace. Just as we teach our students how to use pencils, paper, books, and rulers, we must teach them the proper and most effective way to utilize the technological tools necessary to be productive members of society.

The 2016 Johnston Public Schools Technology Education Plan recognizes the constant evolution of technologies available for learning and instruction.

Our document further recognizes and anticipates limited manpower and funding resources will be available to meet its objectives.

Although the term “technology” may be interpreted in a wide variety of ways, we use the term to refer broadly to computer-based tools – hardware, software, the Internet, computer-based multimedia and telecommunications.

While considerable resources within the Plan are targeted for hardware and software acquisition, the primary emphasis of this plan is improved student achievement. We also recognize that professional development is necessary for all technology implementations. Technologically savvy, professional staff members are the cornerstones to the integration of technology across all curricular areas.

Primary targets of this plan include:

- Increased efforts towards effective integration of technology into all curricular and administrative areas.
- Using data to improve student achievement in all areas.
- Transition to web-based and cloud computing applications.
- Increased outreach to and communication with the community at-large via our school website, portals and communication systems.
- Wireless access in all buildings to support expanded assessment testing and instruction for all students
- Implementation of new models of student learning including virtual learning and blended classrooms.

Instructional Technology

Since technologies are more prominent and evident in all areas of life, any learning environment geared to providing an education which meets the needs of our students must include technology. Although technology belongs in the classroom, it should not be there for its own sake. Rather it should be there as part of a positive learning environment. Technology should assist in the delivery of curriculum and contribute to increased student learning and growth. The instructional staff is the key to creating and maintaining this learning environment. Technology initiatives must focus on allowing teachers to be more effective in meeting changing student needs. As the heart of the educational process, the capabilities of the instructional staff must be developed; just as we expect to develop those of the students. Teachers should have the opportunity to combine new instructional and organizational strategies with the appropriate use of technology.

Goals:

- Students, teachers, and administrators need to become comfortable using technology and integrating instructional software into common core curriculum goals.
- Technology will support specific standards, benchmarks and learner outcomes that contribute to the primary mission of preparing students as lifelong learners.

- Technology will provide students with skills to process and manage information and support the development of critical thinking and problem solving skills.
- Technology will enable equal access to information and equal opportunity for all students to enhance knowledge.
- Technology will enhance the ability of the Johnston Public Schools to provide for the individual needs and learning styles of each student, thereby providing the opportunity for each student to reach his/her full learning potential.
- Technology will be used effectively to provide information and communication resources to students, staff, and the community.
- Technology will facilitate communication among teachers, administrators, parents, students, and the community at-large while ensuring security and confidentiality.

Technology Integration

Current educational doctrine emphasizes the importance of leveraging the power of technology in all areas of Pre K-12 education. Development of district programs should include the effective employment of technology to enhance learning and increase student achievement.

The modern classroom places less emphasis on teaching how to use technology and more emphasis on the enhancement of learning through the use of technology tools. We, therefore, acknowledge the power of curriculum initiatives that seamlessly integrate technology tools across all content areas.

Johnston Public Schools believe that technology can provide teachers with valuable tools to improve student achievement. In order to reap these rewards, the technology must be available and it must become an integral part of the instructional process.

Our teachers have input into the software and web services selection process and we promote the acquisition and use of software/web services that promotes creativity, modeling, problem-solving, and critical thinking skills. However, we recognize that true integration of technology into teaching and learning is a time-consuming process that requires substantial levels of encouragement, support, and professional development. Professional development for technology integration is most effective when it is in the context of curriculum content, effective pedagogy, and student learning, not focused on the technology itself.

Goals:

- All curriculum committee shall incorporate technology integration into its academic area.
- All school improvement teams shall implement technology integration into their plan.
- Johnston Public School students will use technology resources for solving problems and making informed decisions in technology focused classes.
- Johnston Public School personnel will be encouraged to participate in professional development to acquire instructional strategies and pedagogy necessary to facilitate learner-centered, standards-based curricula that integrate the use of technology tools.
- Johnston Public School administrators will be encouraged to participate in professional development opportunities necessary to advance the technical skills required to lead technology initiatives among students, teachers, peers, parents, and community members.
- Technology will be implemented in a way that will provide students and teachers access to information from any computer in the district.

The resulting learning environments should prepare students to:

- Communicate using a variety of media and formats
- Access and exchange information in a variety of ways
- Compile, organize, analyze, and synthesize information
- Draw conclusions and make generalizations based on information gathered
- Use information and select appropriate tools to solve problems
- Know content and be able to locate additional information as needed
- Become self-directed learners
- Interact with others in ethical and appropriate ways

Research indicates the wise use of technology is essential and can provide ways to enrich the learning environment using cooperative learning, simulations, multimedia, virtual fieldtrips, art & music activities, and more. Such variety of technology use can enable students to achieve marketable skills. It is critical that educators, administrators, parents, and the community recognize the benefits of technology for learning and employ it appropriately. Literacy has come to mean more than the ability to read and write. Technology devices have already become essential learning tools. Baseline technology skills are fast becoming indispensable for employability and upward mobility in our society. The school of the future will be a “virtual” school. Computers and technology devices, in combination with web applications, will eventually connect to create a global classroom allowing students to take advantage of the world’s resources on any subject.

Computers and related technologies will become part of the fabric of the school, much as they have become part of the fabric of our culture. Teachers and students will collaborate in reshaping the educational process and the learning environment.

Tying together school restructuring efforts and the changing cultural environment, Johnston Public Schools seeks to assimilate technology into the learning environment. Teachers and students will develop technology literacy through tools located in the classroom, school and home.

Elementary school classrooms will have technology devices available at all times. Secondary schools will have computer labs (both mobile and fixed) to accommodate whole class technology activities. They will also explore the use of other devices including BYOD (Bring Your Own Device).

All school facilities will provide students and teachers with reasonable access to support technologies including networks, telecommunications, and multi-media technologies. All technology will be integrated through the curriculum. The vision will change as technologies and our experience with them evolve.

Professional Development

Johnston Public School employees should be trained and encouraged in a supportive environment to utilize technology with content that will effectively enhance the achievement of all students regardless of gender, socioeconomic status, race, ethnicity, or special needs. Therefore, professional development is essential in order for teachers, administrators, and support staff to observe and learn about the variety of educational uses technology has in the classroom. Educators must be given the tools to learn how to organize and effectively manage students in technology based school environments.

For students to benefit fully from all they learn about information technology applications, they must have teachers who understand how to integrate those technologies into the curriculum. To accomplish this fundamental goal, a determined effort to work together, to encourage classroom staff members to take advantage of professional development opportunities in technology, and the incorporation of technology into the curriculum plans in all academic areas are essential. Professional development available at the local and district levels to provide enhanced opportunities for information technology application is the key to success.

Because of constant changes that are inherent in technology use, the essential core competencies require ongoing renewal. There is a continual need for classroom teachers and other professional staff to acquire knowledge and skills. Regular ongoing professional development for faculty and staff is encouraged and supported daily. Initial education and training or follow-up activities, which reinforce and extend workshops or courses is sustained.

Goals:

- Provide ongoing professional development to develop new learner outcomes, curricula, and assessment that use the best technologies and programs.
- Support all schools in integrating technology into the curricula.
- Provide in-service workshops for administrators in technology planning and using technology in curriculum instruction.
- Provide in-service workshops modeling the use of technology by exemplary teachers.
- Offer in-service workshops at a variety of times to meet the varying schedules of teachers.
- Offer in-services mini-courses after school hours, on weekends, and/or during vacation periods.
- Offer in-service workshops at varying knowledge and skill levels.

Network Infrastructure and Management Information Services

Goals:

- Continue all efforts to leverage the existing Federal and State technology resources available to the district in as most an efficient manner as possible.
- Continue to promote and take full advantage of Universal Services (E-Rate) telecommunications subsidies.
- Provide transparent access to school technology and network resources for students, faculty, and staff.
- Increase the current internal connection bandwidth to accommodate increase usage and incorporate new technologies and network efficiencies.
- Implement an enterprise wireless solution for the district (completed 2014).
- Upgrade the elementary schools to a virtual server environment.
- Improve network and wireless security.
- Continue to expand usage of secured wireless devices and other mobile network technologies.

- Evaluate and implement a new telephone solution.
- Increase use of online resources.
- Move to a cloud environment.

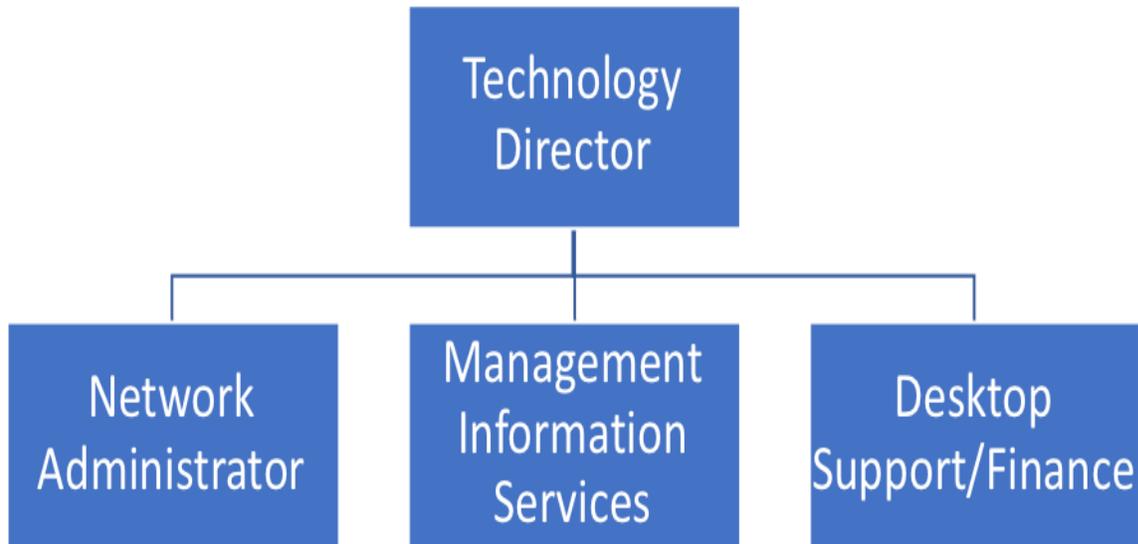
Technology Desktop Support and Maintenance

The Johnston Public Schools recognizes the importance of providing systematic services that support technology and provide for timely maintenance, repair, and replacement of equipment as well as operating system, application software, and telecommunications support. The district utilizes an electronic work order system to facilitate the timely delivery of support and maintenance. The technology department also has a help desk available to all staff. This help desk also supports parent use of the parent portal.

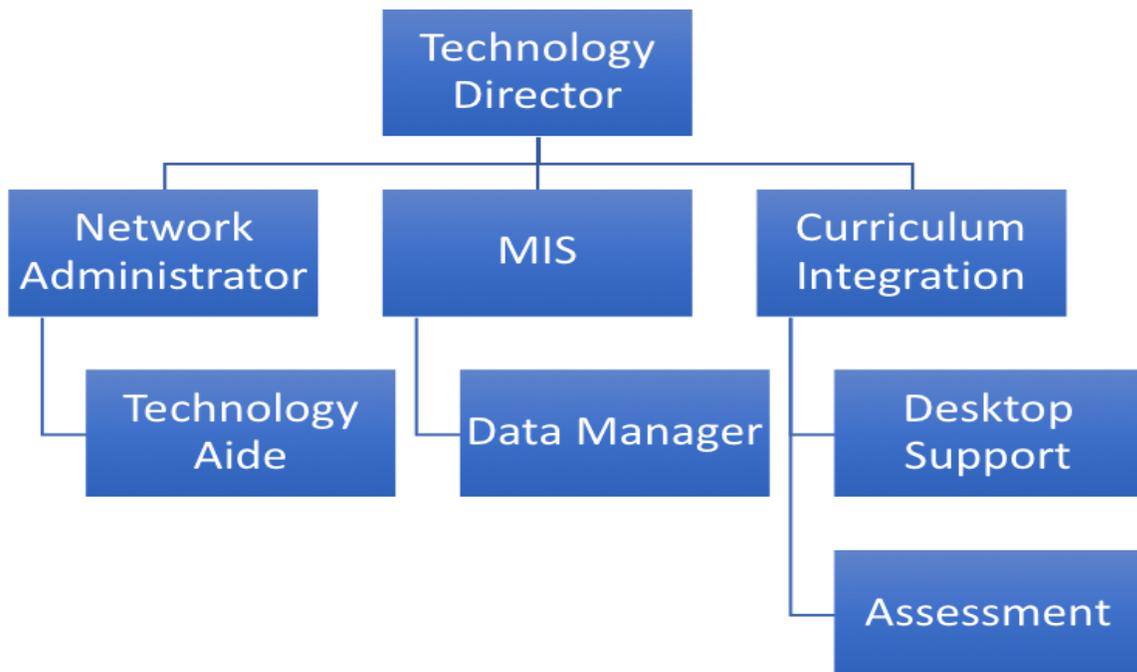
Scope/Projects

Organizational chart

2014-15 Plan
Present: 2014 – 2015



Current Plan 2017-2020



Management Information Services Support

The MIS group is responsible for data management and software used within the district for various projects including:

Programming interfaces between various system modules (imports/exports)
Software configuration and setup.
Troubleshooting and component/system testing.
Customizing user reports
Training and support, documentation, procedures and workflow

Current MIS Projects

eRide – Data submissions for Enrollment, Attendance, Discipline, TCS data

Aspen, Student Information System (SIS) – Scheduling, Grading, Student Demographics, Discipline, Attendance, SPED – IEP tracking Student and Parent Portals

RIDEMAP – Teacher caseload tracking

Rapid Notify – District Callout system

AESOP- Teacher and Staff attendance

Keystone- Financial, and Human Resources database

Google Docs- Teacher/ Student

Google Email – Staff and Student accounts

Catapault -Website District wide and School Sites

Versatrans Transportation Routing - First Student scheduling system

Maptitude GIS

Microsoft Office (Microsoft School Agreement) – Word Processing, Power Point, Excel, Access

SNAP – Health tracking system

RICAS – Student Assessment State Testing

Civil Rights Data Collection (CRDC)

Network/Infrastructure

The Network/Infrastructure group is responsible for network management functions, repairs, Inventory, helpdesk, and desktop support.

They also assist the MIS group including RICAS Assessment testing and Aspen support,

As the district moves forward towards a 1:1 computing environment, the IT Department will also be involved in remote web filtering of all take home devices in accordance with the Child Internet Protection Act (CIPA). The growth of mobile technology devices will be monitored both for usage, inventory and geographical location by way of the MDM.

As the demands increases on the Wireless network, the upgrade and implementation of a higher capacity switch network and backbone is foreseen in the near future. The growth of online data/testing and number of devices will increase dramatically over the upcoming years.

The District employs HP and Dell servers, operating Windows 2003 and 2008 Server editions. Servers include:

1. Domain Controllers (3) – HP Proliant
2. File Server(1) – HP Proliant
3. Financial/HR Server(1) – Dell PowerEdge
4. Archive Payroll Server(1) – Dell PowerEdge
5. Onsite/Offsite Backup Server(1) – Barracuda 390
6. Antivirus Server(1) – Dell Power Edge

Internal Data managed by the IT Department are as follows:

1. Financial/HR - Keystone

2. Archived Payroll - ADP
3. User Data – File Server
4. POS and Cafeteria Services - NutriKids
5. Backup data - Barracuda
6. Antivirus/Mal/Spyware – K7
7. Helpdesk – Google Sites/Docs

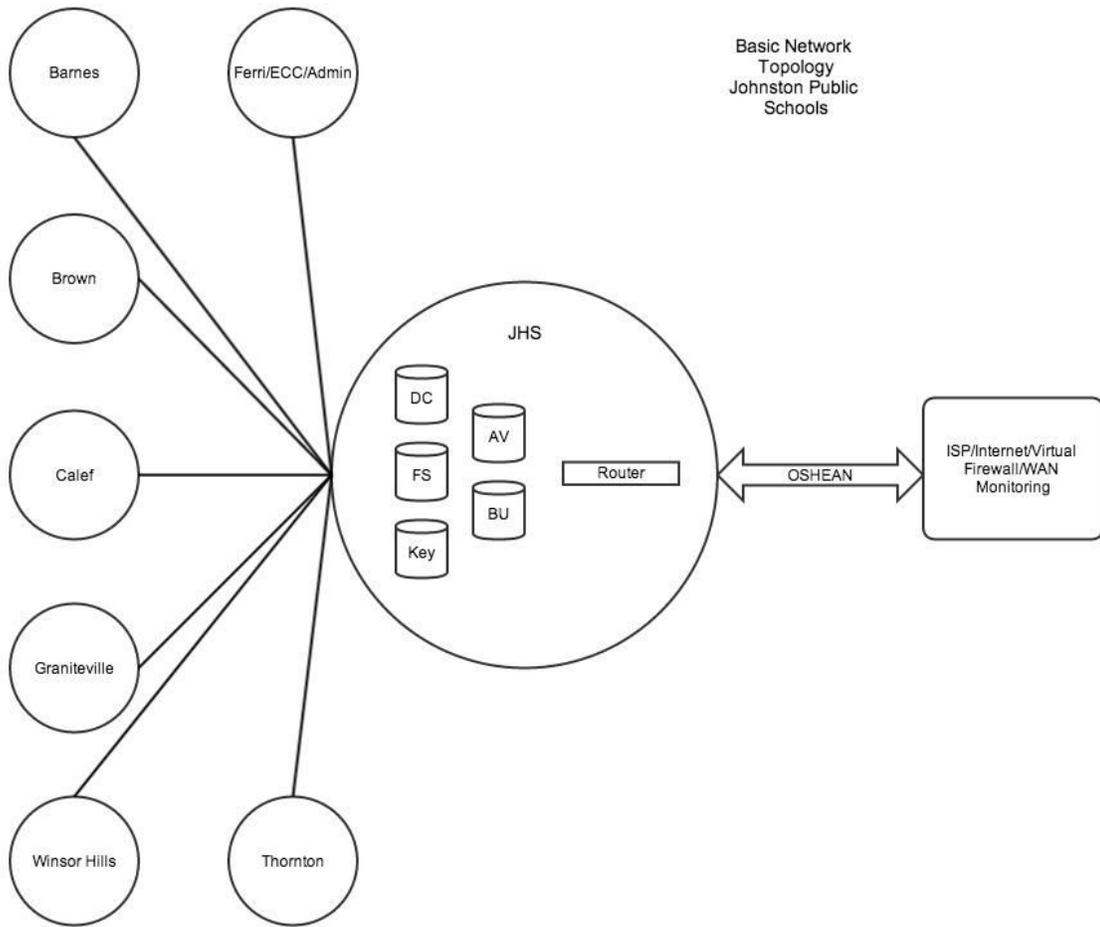
External Data (web based) managed by the IT Department as follows:

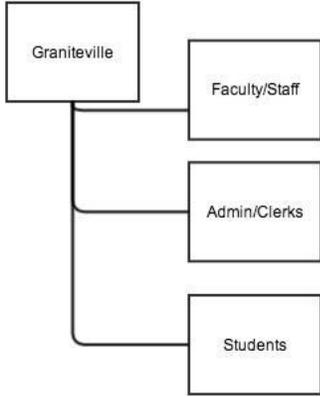
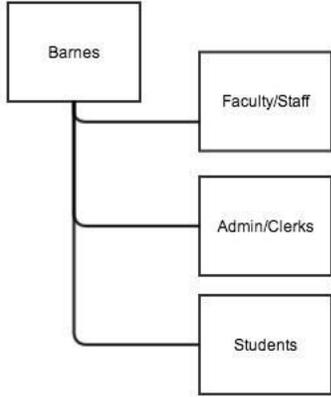
1. Student Information System - Aspen
2. State Reporting - eRide
3. Payroll - ADP
4. Offsite Backups - Barracuda
5. Virtual Firewall policies – Trustwave M86
6. Device management – Meraki Mobile Device Management
7. Email - Google
8. Email Groups and Archiving - Google Vault

Devices controlled by Cloud based management:

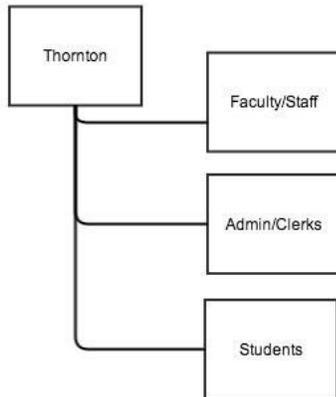
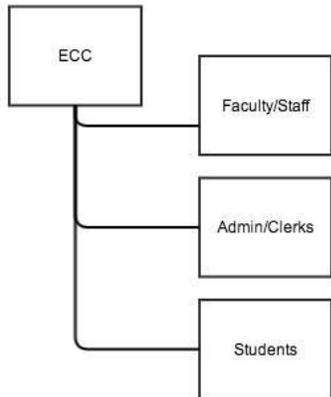
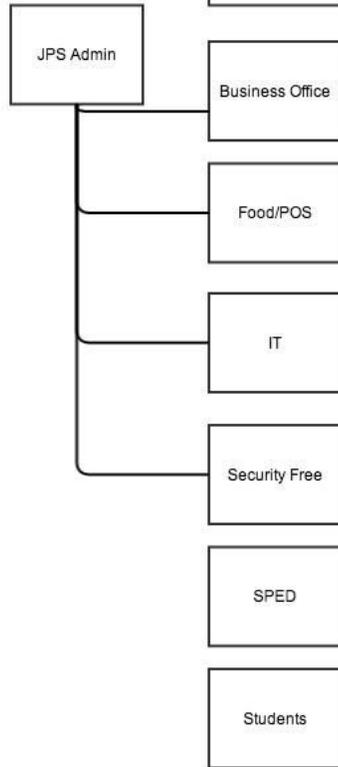
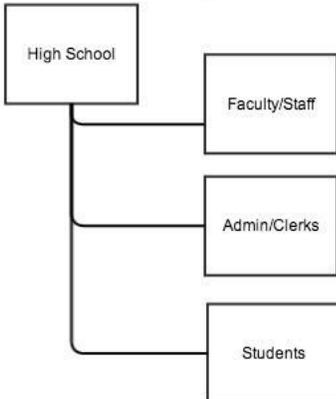
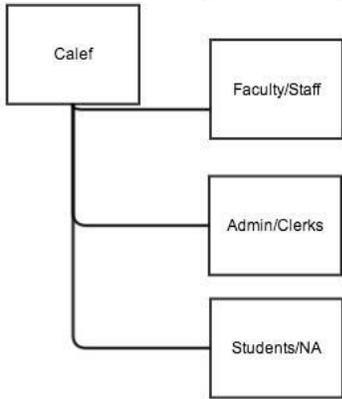
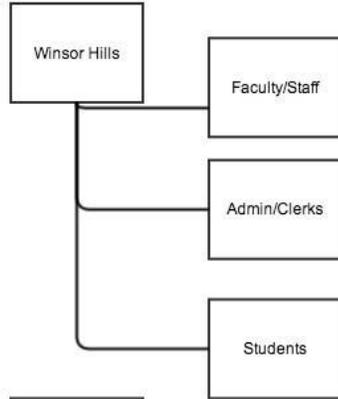
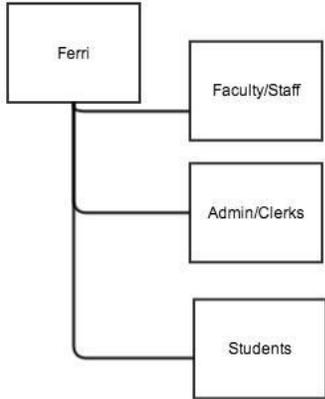
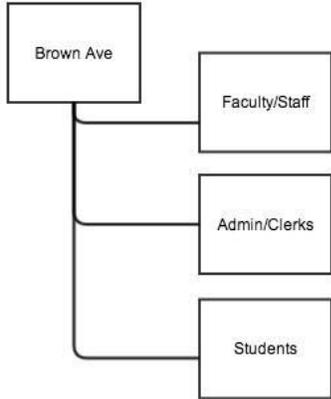
1. Cloud Control Offsite Backup - Barracuda
2. Wireless Access Points - Aruba
3. Device Management – Marki Mobile Device Management
4. Web Security – Barracuda Web Security Flex
5. Google Apps
6. Firewall – Trustwave M86

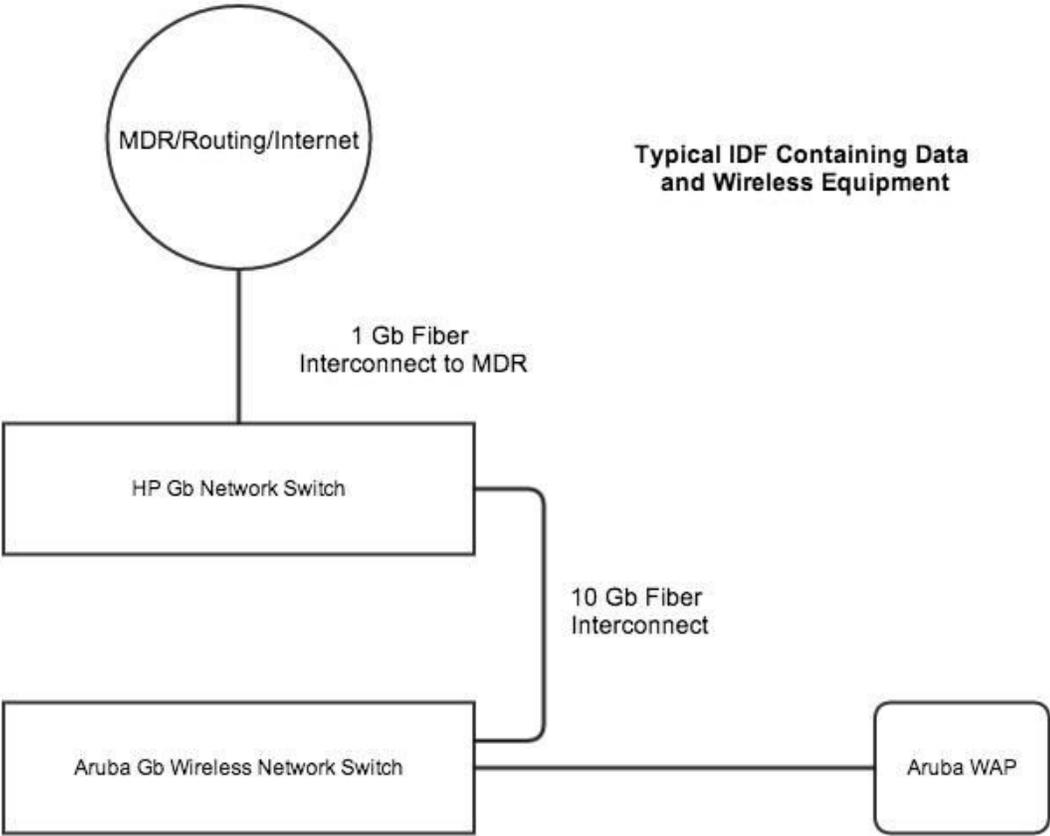
Network Schematics





GPO applied to
Faculty/Staff and Students
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Telecommunications

Johnston Public School maintains RITEAF lines in support of the district's needs. We will be reevaluating our telephone systems over the next three years. Johnston Public Schools provides cell phones to key personnel.

Print Center

The IT office provides reproduction services for all staff in our district. Two full-time clerks operate the Print Center. The Print Center has two large digital copiers, one black and white with both copiers networked and on-line providing web-based and WAN access to our district staff. Print services to our staff include reproducing classroom materials, paper sizes, weights, booklets, letterhead, note cards, or any print request needed if we can accommodate size. The Print Center offers enlargement and reduction services, black and white copying, disk storage of large handbooks and documents, district forms, in order for print requests that can be completed with on-line digital quality. There are two runs per day per school, with pickups and deliveries made with every visit in providing materials to school personnel. An ancillary service the Print Center provides is special print requests from visually impaired students within the school system to accommodate reading lists, and curriculum guides enlarged to an appropriate font. Additionally, during the summer months, the print center staff is charged with taking inventory of all hardware utilized throughout the district which requires labeling and recording serial numbers as well as managing the out of district book center. As each new school year approaches, Print Center staff are producing "opening year" documents for all of our schools; specifically, emergency cards, health cards, registration forms, and student handbooks are produced.

Curriculum Integration Projects

Rubicon Atlas Curriculum Mapping System

1:1 Initiative

