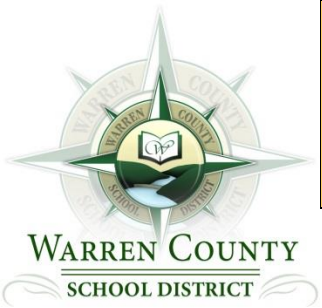


# Data Center Refresh Project

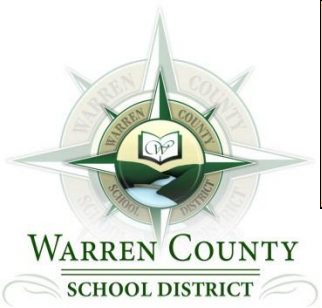
Summary & Overview  
August 31, 2015



# Technology Advisory Committee

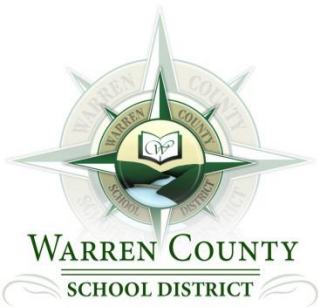
## Discussion Summary & Takeaways

- Teachers require more lenient internet policy
- Supporting consistent access to applications, desktops, and files at home and school on a multitude of devices
- Providing teachers and students adequate storage space to build multimedia rich presentations and assignments
- Flexibility to support new functionality as curriculum changes
  - Simplifying access to teachers and students
  - Ability to deploy any device to support the curriculum
- Flexibility to deploy software and content simply and securely
- Providing a cost effective solution that meets all of the needs of the district's education and business functions



# Goals

- Provide storage relational to estimated growth
- 24/7 application and desktop delivery
- Providing consistent, reliable “up time”
- Thorough backup and disaster recovery plan
- Legal compliance
- Provide a robust computing core that can support curriculum and a multitude of device deployment options
- Simplifying the user experience
- Support and management of mobile devices
- Provide budgetary responsible financing options



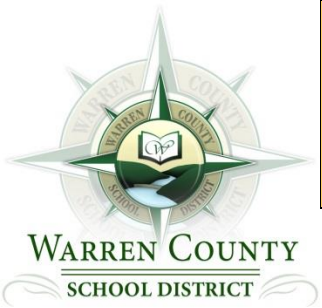
# Existing Data Center vs. Proposed Data Center

## Existing Data Center

1. Limited storage capacity
2. E-Discovery/Data Visibility issues
3. Mobile Delivery/File Sharing
4. Limited storage level failover
5. Multiple vendors
6. Disaster recovery by file replacement & re-installation
7. Multiple service platforms & support plans

## Proposed Data Center

1. Storage increased
2. File level E-Discovery Compliance, data level reporting
3. Mobile Delivery/File Sharing Enhancements
4. Full storage level failover
5. Pre-Engineered and certified "One Vendor" experience
6. Disaster Recovery options to move to cloud in event of emergency for pay per use options.
7. Consolidation of service platforms and support plans



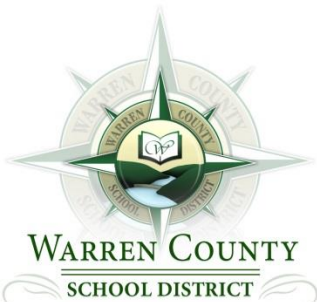
# Networking Comparisons

## Existing Data Center

1. Nearly 100 percent redundant network core
2. Mixed breed of components
3. Enterprise level firewall
4. 2 different 100 mbps Internet connections
5. Wide Area Network speeds of 1 gbps between sites
6. Centralized wireless solution with captive guest portal and network level security

## Proposed Data Center

1. Fully redundant network core
2. Certified Blueprint of multiple vendor interoperability for all components
3. Enterprise level firewall with enhanced edge security
4. Internet connection speeds and configurations to be re-bid in 2015
5. Wide Area Network speeds to be re-bid in 2015
6. Same Centralized wireless solution until wireless upgrade/full deployment occurs



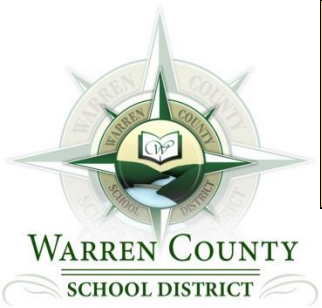
# Private & Public Cloud Usage Comparisons

## Existing Cloud Dependence

1. Email in the Cloud (Gaggle)
2. Email Archiving, Spam Filtration, E-Discovery for Email (Gaggle)
3. Limited File Sharing (Gaggle)
4. Multiple cloud based file repositories
5. Mobile device management
6. Application delivery

## Proposed Cloud Dependence

1. Email to remain (Gaggle)
  2. Email Archiving, Spam Filtration, E-Discovery for Email (Gaggle)
  3. Expansion of abilities for file sharing for our private cloud
  4. Consolidation of public cloud repositories to one district housed location
  5. Mobile device management to be removed into private cloud.
  6. Application delivery
- \*- Disaster Recovery could migrate infrastructure & data into the Cloud for immediate up-time if necessary (with payment options)



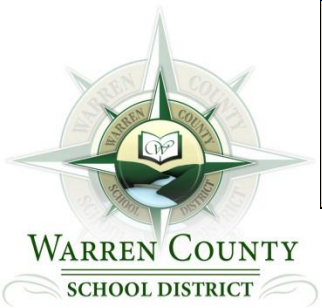
# Proposed Cloud Based Applications

## Private District Cloud

1. District Applications (Citrix)
2. District Desktops (Citrix)
3. Sungard Eschool+ (Citrix)
4. Finance+ (Citrix)
5. Successmaker (Citrix/Web Portal)
6. File Sharing (Citrix)

## Public Internet Cloud

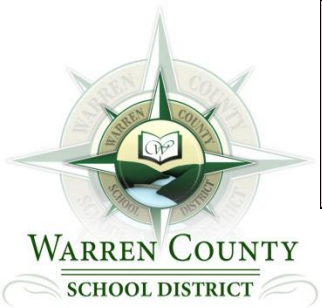
1. Sungard IEP+
2. Sungard Performance+
3. Gaggles email services and file sharing
4. Gradpoint
5. Disaster recovery options



# Functional/Technical Enhancements

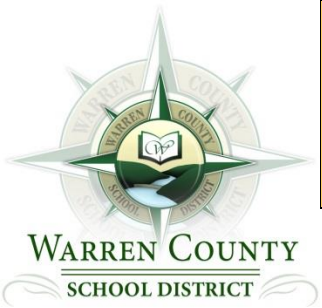
1. Enterprise level security
2. Mobile device enhancements separating personal from district
3. Mobile device remote wipe of district data
4. No public web sites facing outward without encryption
5. Additional security equipment reducing external traffic load, overall firewall and web filtration performance
6. Citrix client changes allow broader usage of computing devices
7. Storage level visibility, reporting, and easier file sharing options for staff of the district
8. Storage increased to support curricular requirements





# Direct User Level Enhancements

1. Streamlined installation of Citrix client at home
2. Consolidated cloud and district home directory repositories
3. Consolidated home directory repositories synchronize to mobile devices
4. File level visibility, internal web based file sharing functionality with graphical interface showing metrics, district file & data level reporting.
5. File archiving, file de-duplication, and enterprise level backup system
6. System wide data level snapshots to save data "on the fly"
7. User level file restoration
8. Performance improvements for desktop computers in classrooms
9. Updated and enhanced desktop/laptop imaging capabilities
10. Bring Your Own Device support and management enhancements



## Proposed Project Timeline

1. August 31- Committee Presentation & Discussion
2. September or October- Board Meeting, Financing, Quote & Final Contract Approval
3. PO's immediately after approval
4. September through December- Preparation of data center location AC/Generator/Power/Roof/Room updates
5. October- November- Wide Area Network contract bid publically for July 1 installation
6. December- January- Staging & installation
7. February- WAN contract to committee
8. March- Board meeting- WAN contract approval
9. February-May- Configuration, Migration of data center
10. May-June- Application, desktop, performance benchmark testing
11. July- New WAN contract takes effect
12. July- Data Center cutover to revolve around new WAN contract physical move of Battery Backups, Generator, Server equipment, from AVES to Anderson Building
13. July- Proposed contract completion
14. July- August- District staff final preparation for school
15. Official "Go Live Date" Aug.1,2016