



Cabarrus County Information Technology Services

County Collaborative Technology Services with Local Education Agencies

PROGRAM TITLE

County Collaborative Technology Services with Local Education Agencies

PROGRAM INITIATION

October 2011

ABSTRACT OF PROGRAM

Cabarrus County Government has engaged in a strategic partnership with the Cabarrus County Schools (CCS) and Kannapolis City School System (KCS) for collaborative technology services (CTS). An Inter local agreement between each Local Education Agency (LEA) and Cabarrus County government was executed in October of 2011. A CTS team was formed with financial and technology representatives from the three agencies to ensure that funds for technology are directed toward the agencies enterprise priorities. The CTS team works to implement IT strategies and resource allocations that support the strategic vision and goals of Cabarrus County and the LEAs.

- ✓ Cabarrus County Schools Vision to provide 21st Century resources through responsible and efficient use of funding.
- ✓ Kannapolis City Schools Strategic Goal to ensure appropriate funding to educate 21st Century learners.
- ✓ Cabarrus County Board of Commissioner's Strategic Goal to use resources wisely and responsibly by protecting assets, minimizing risk, creating partnerships and using technology to maximize the value of county investments, expenditures and services.

In November of 2011 the Cabarrus County Board of Commissioners authorized funding of \$115,300.00 to fund the co-location of the each school systems infrastructure in Cabarrus County's data centers.

NEED FOR THE PROGRAM

Both LEAs identified a need for improved technology disaster recovery and high availability in a qualified data center. Cabarrus County has invested in two qualified data centers with the flexibility, scalability, support and capacity to offer managed colocation to the LEAs. Migration to the managed data center infrastructure allows the LEAs to achieve several goals noted in the NC Education Cloud Work Plan and positions each for consumption of additional cloud services as them become available.

Cabarrus County School System (CCS) identified a need to replace their technology center which housed the core main data facility for the school system. The core data facility was located in a closet in the Ralph A. Glenn Center Opportunity School. The construction of a new



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technology center building was put on hold indefinitely due to lack of funding. In January 2010 the CCS technology committee recommended the construction of a secondary core data facility for system disaster recovery at a high school under construction. CCS requested to establish and fund the secondary data facility with construction savings; the cost was estimated at \$360,000. After reviewing this request Cabarrus County suggested Co-location of data centers and applied the construction savings to school construction debt. In addition to the need for establishing qualified data centers the inability to fill a recently vacated engineering position at CCS highlighted the need for additional depth for system technology infrastructure support.

Kannapolis City Schools (KCS) also identified a need for improved disaster recovery, high availability services, and additional depth in technology infrastructure support personnel. The KCS core main data facility was located in a closet at the A L Brown High School. KCS specifically noted concerns of maintenance on the LEA core network switch and disaster recovery of servers distributed at school locations. KCS also requested technical support and guidance from the County technology staff.

Each LEA's core data facility was located in an older school building. The Ralph A Glenn Center built in 1923 and an A. L. Brown building built in 1967. Consequently each had many challenges in hosting a 21st Century data centers. Budgets for LEA qualified data centers with adequate space, cooling, power, redundancy; non-water fire suppression and security were nonexistent.

DESCRIPTION OF THE PROGRAM

In May of 2011 a team of financial and technology representatives from Cabarrus County Government, Cabarrus County Schools, and Kannapolis City Schools began meeting to collaborate on technology strategies and resource allocation. A draft Inter local agreement to establish collaborative technology services was presented to all three boards in July and August. After incorporating changes requested by the Boards an Inter local agreement was executed between Cabarrus County and each School Board in October. In November of 2011 the Cabarrus County Board of Commissioners authorized funding of \$115,300.00 to fund the co-location of the each school systems infrastructure in Cabarrus County's data centers.

The Cabarrus County data centers are designed and built with reliability, redundancy and resiliency in mind. They have fully-redundant power and cooling capacities, integrated UPS systems, door access controlled security and fire protection systems to a provide secure and dependable infrastructure. The data centers provide mission critical electrical, mechanical, and high capacity network systems for all county government voice and data services, public safety, and county E911 systems. Cabarrus County trained staff includes facility and electrical maintenance engineers, data center operations experts, and network engineers committed to providing on-site support and operations for our facilities.



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The technology staff of all three agencies worked together to make the changes required to facilitate the sharing of infrastructure and co-locate in shared data centers. Cabarrus County Schools successfully moved their core network and server infrastructure from the Glenn Center into Cabarrus County's data center in January of 2012. Cabarrus County ITS working with Kannapolis City Schools staff began virtualizing and transitioning KCS server infrastructure into the Cabarrus County data center in February 2012. Kannapolis City Schools successfully moved their core network infrastructure into Cabarrus County's data center in April of 2012.

Cabarrus County ITS and Kannapolis City Schools worked closely over the summer of 2012 repurposing existing network hardware to provide wireless access in every classroom and consolidating servers to free up hardware to be used for a desktop virtualization project.

USE OF TECHNOLOGY

- DELL Compellent SANs
- FM 200 Fire protection
- Physical Door Access security
- Environmental Monitoring
- Cooling
- UPS
- Generator
- Servers
- Routers
- Switches
- Firewall
- Content filter
- VPN concentrator
- Packeteer.
- VMWARE
- DELL Servers

COST OF THE PROGRAM

Migration

Existing excess capacity of Cabarrus County cloud infrastructure was shared with LEAs for the initiation phase of this project. Operational and maintenance costs of the qualified data centers will remain a Cabarrus County expense; building, electrical, HVAC, UPS, generator, physical security, fire suppression and dark fiber between data center sites.



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Migration Costs

Item	Total Cost Estimate	Project
Server Racks	\$ 6,000.00	CCS 1: Data Center Relocation
AS400 Consulting	\$ 0.00	CCS 1: Data Center Relocation KCS 1: Network Preparation
TimeWarner Services	\$ 3,000.00	CCS 1: Data Center Relocation KCS 1: Network Preparation
Dell M620 Servers	\$ 31,500.00	CCS 2: SAN Integration KCS 2: Server Virtualization
VMware Enterprise Acceleration Kit	\$ 17,000.00	CCS 2: SAN Integration KCS 2: Server Virtualization
TimeWarner Construction	\$ 3,000.00	CCS 1: Data Center Relocation KCS 1: Network Preparation
TW Recurring Costs Thru 6/30/2012	\$ 30,800.00	CCS 1: Data Center Relocation KCS 1: Network Preparation
Storage Lease Costs Thru 6/30/2012	\$ 24,000.00	KCS 2: Server Virtualization CCS 2: SAN Integration
Total:	\$ 115,300.00	

RESULTS OF THE PROGRAM

Collaborative technology services with Cabarrus County Government allows the LEAs to realize the benefits of full featured technology services. Collaboration of personnel with technical expertise and sharing of infrastructure permit the County and schools to efficiently employ the technology services required by our citizens, staff and students.

Increase LEA IT Reliability

- Improve disaster recovery and high availability for LEAs using existing County resources
- Provide secondary Internet connection to eliminate an LEA single point of failure
- Servers hosted in data centers with reliable and resilient power, cooling and network
- Data backed up and distributed across two data centers
- Server infrastructure secured physically and logically

Increase LEA IT Efficiency

- Reduce redundant costs and promote the use of Green IT by reducing the overall energy and real estate footprint of multiple agency data centers
- Leverage virtualization and data center technologies to reduce data center operational costs
- Allow the County and LEAs to make future IT investments in shared computing platforms and technologies
- Align technology infrastructure investments with LEA, County and State strategic business line objectives



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Kannapolis City Schools' Director of Instructional Technology, Brenda McCombs, says the partnership has been extremely valuable. "Our level of technology planning and service has improved dramatically because we can now take a longer and more strategic view instead of just struggling to keep an aging system in operation. The partnership also frees up more money for classrooms because equipment and services that we used to buy are provided as part of the partnership."

WORTHINESS OF AN AWARD

In January 2010 CCS estimated it would take \$360,000 to build out a secondary data facility for one LEA. This estimate did not include data center operations, needed enhancements to the primary data center or ongoing operational funding. The colocation plan provided two LEAs colocation at qualified primary and secondary centers for disaster recovery and high availability services for \$244,700 less than the initial request for one LEA.

The LEA's have chosen to migrate their core network, file, domain and directory services into the County managed private cloud to ensure their resources are hosted in a secure, reliable and redundant environment. This project provided the LEAs with a strong foundation for implementation of virtual desktop projects, transition to a cloud centric services and the consumption of NCEDCloud services.

"The collaboration has improved our technology, increased resources to classrooms, and saved taxpayers money. It is a tremendous benefit for children, teachers, and the community."
- Dr. Pam Cain, KCS Superintendent.

CONTACT INFORMATION

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Concord, NC 28025
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SUPPLEMENTAL MATERIALS

[CCS Inter local Agreement and Project Schedule Detailed](#)

[KCS Inter local Agreement and Project Schedule Detailed](#)

**INTERAGENCY AGREEMENT
FOR COLLABORATIVE
TECHNOLOGY
SERVICES**

Interagency Agreement for
Collaborative Technology Services

Between

County of Cabarrus

And

Cabarrus County Board of Education

Adopted By

Cabarrus County

Date:

Cabarrus County Board of Education

Date:

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Article I – Authority

The undersigned agencies hereby enter into this Agreement as of the dates specified below in accordance with the authority granted by their respective Boards under Article 20 of Chapter 160A of the North Carolina General Statutes (the “**Interlocal Act**”), municipalities and counties are authorized to enter into interlocal cooperation undertakings with other units of local government for the joint exercise, or the contractual exercise by one unit for another unit, of any power, function, public enterprise, right, privilege, or immunity of local governments in North Carolina.

Article II – Purpose

- 2.1 Cabarrus County Government, Cabarrus County Schools, and Kannapolis City Schools have launched an initiative called “Collaborative Technology Services” with the goal of providing a variety of cooperative technology services.
- 2.2 A Collaborative Technology Services Team will work to align common information technology investments with Cabarrus County Government and, Cabarrus County School District’s strategic objectives to ensure that funds for technology are directed toward member agencies enterprise priorities. The team will review member agencies applicable and commonly related IT purchases and services to ensure they are consistent with the overall collaborative plans and initiatives. Technology project recommendations that will be fully described in work statement schedules that will be appended and made part of this Agreement when executed by the respective member agencies.

Article III – Definitions

As used in this Agreement, the following terms shall have the following meanings:

- 3.1 Participant shall mean the undersigned entities.
- 3.2 Provider shall mean a Participant that offers a good or service for use by Participants.
- 3.3 Subscriber shall mean a Participant that receives goods or services provided by a Provider.
- 3.4 License Holder shall mean the participant that has legal right to a service for which they are named in a license agreement
- 3.5 Fiscal Year is a period used for calculating annual ("yearly") financial statements from July 1 through June 30.

- 3.6 Technology Standards shall mean criteria or rules to be agreed upon by all Participants for the operation, documentation and management of applicable and commonly related technology. The following types of standards to be addressed are:
- Infrastructure Level Hardware, System-level Software and Related Interface
 - Systems Operation standards for security, archiving and maintenance
- 3.7 Transition Services shall mean services provided by a Provider for a specified time beyond the Termination Date of an agreement.
- 3.8 Transition Period shall mean the amount of time Transition Services are to be provided by a Provider beyond the Termination Date of an agreement.
- 3.9 Expiration Date shall mean the last date of the Term or the Renewal Term.
- 3.10. Termination Date shall mean the date specified in any notice of termination given by a Provider or Subscriber.

Article IV - Term and Termination

- 4.1 This Agreement is effective from the date it is accepted by all parties. The term of this Agreement shall be one (1) year commencing on _____, 2011 (the "Term") unless otherwise terminated as provided in this Agreement.
- 4.2 This Agreement shall automatically be extended annually unless one of the parties notifies the other of its intention not to renew prior to commencement of the succeeding Renewal Term through an advanced written notification to the other parties, to be sent no later than Ninety (90) days prior to the expiration of the Term.
- 4.3 Termination rights in this Agreement, this Agreement may be terminated in accordance with the following provision: (a) either Participant may terminate this Agreement with less than the required notice period in Article 4.2 in the event the Initiative and/or the Services for the Initiative is prohibited by or rendered illegal by any Federal and/or State of North Carolina law or regulation (b) if this Agreement extends for several fiscal years, continuation of this Agreement is subject to appropriation of funds for the provision of Services identified in the various Schedules. If funds to enable a Participant to effect continued payment or service delivery under this Agreement are not appropriated or otherwise made available, that Participant shall have the right to terminate this Agreement at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to all other Participants. A written notice of such non-appropriation within thirty (30) days after it receives notice of such non-appropriation.
- 4.4 At the Termination or Expiration Date of the Agreement, a Provider may agree to continue existing services or a portion thereof for a period of time and/or otherwise provide parallel services for testing as part of the transition process to a new 3rd party provider for a Subscriber (hereafter "Transition Services"). Transition Services to be provided shall be by separate written agreement between the Provider and Subscriber and shall at minimum include provisions identifying the transition services and scheduled costs for same.

- 4.5 If Provider terminates a Scheduled Service, the notice of termination to a Subscriber shall provide for a 12 month Transition Period (“Transition Period”). This twelve month Transition Period is intended to provide Subscriber with adequate time to procure and establish an equal replacement service for the Scheduled Service being terminated by Provider . The Provider shall pay the costs of the replacement service. All equipment shall be returned to the Participant who transferred it.

Article V - General Obligations and Relationship of the Parties

- 5.1 The Parties agree to appoint representatives to a GovEd Technology Infrastructure Team (GET-IT) in order to align information technology infrastructure investments with Cabarrus County Government, Cabarrus County School District and Kannapolis City School District strategic and business line objectives to ensure that funds for technology are directed toward member agencies enterprise priorities. The GovEd Technology Team will implement IT strategies, resource allocations, and strategic projects for their value to the return on investment and enterprise infrastructure.
- 5.2 Each Provider acknowledges and agrees that all Services are being provided to all Participants in their “as is” physical condition without any representations or warranties of any kind or nature, express or implied, except as expressly and specifically described in provision 5.2 .
- 5.3 Each Provider agrees that it shall at all times maintain its Services in good repair so as not to unreasonably prohibit Participant’s use of such Services.
- 5.4 Each Subscriber agrees to provide its Provider with necessary access to Subscriber systems as required to perform Services requested in a duly executed Schedule between them, in accordance with the applicable laws and policies governing the Subscriber.
- 5.5 Each Provider warrants that it has all the skills, experience, and professional licenses necessary to perform the Services provided under this Agreement.
- 5.6 The relationship of a Provider and a Subscriber under this Agreement and any applicable Schedule is and will continue to be that of an independent contractor. No liability or benefits, such as workers’ compensation, pension rights, or insurance rights, arising out of, or related to a contract for hire or employer/employee relationship accrues to either Participant or either Participant’s agent, subcontractor or employee as a result of this Agreement. No relationship, other than that of independent contractor will be implied between the parties, or either Participant’s agent, employee, or subcontractor.
- 5.7 When a Subscriber’s equipment is located at a Provider’s facility, the Provider shall insure the equipment for the benefit of the Subscriber.
- 5.8 When doing work under this Agreement, each Participant and its employees, agents, and contractors will follow the laws and policies applicable to each Participant. The Participants understand and agree that highly sensitive and confidential information is maintained on each Participants information technology, and that this confidentially will be strictly observed and enforced.

- 5.9 Each Participant may exclude from this Agreement any information technology investments which are purchased from restricted funds, or are eligible for reimbursement based on restrictions or requirements.
- 5.10 No work will commence on any Schedule adopted under this Agreement until the designated representatives of each Participant have approved the scope and schedule of the work.

This Agreement has been negotiated on behalf of the Parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies and is executed with the approval of the respective governing bodies.

Cabarrus County

By _____
John Day, County Manager

Cabarrus County Board of Education

By _____
Holly Blackwelder, Board Chair

This is a Schedule issued under the terms and conditions of Interagency Agreement for Collaborative Technology Services, effective _____, 2011. Delivery of Services under this Schedule shall be performed in accordance with the general terms and conditions of the above referenced Interagency Agreement and more particularly as described below:

Service Title: Data Center Co-Location

Service Description:

Data Center Co-Location - Cabarrus County will provide primary data center with the following items:

- FM 200 Fire protection
- Physical security
- Monitored Environmental
- Cooling
- UPS
- Generator
- Power outlets (voltage and connection types to match CCS equipment)
- Rack space to hold physical equipment (Including but not limited to the following: servers, routers, switches, firewall, content filter, VPN concentrator, and Packeteer.

This agreement is, in all respects, conditional upon the subscriber being satisfied that the provider's service is suitable for the subscriber's requirements following a due diligence verification of the service, including by way of example and without limitation to the following:

1. The condition of the data center(s), including compliance with building and local authority regulations;
2. The level of technical and structural support for the re-location;
3. The impact on the subscriber of the relocation.

If subscriber's due diligence determines the relocation should not occur, subscriber may cancel this Schedule; provided such determination is made is no less than five (5) working days prior to project implementation. The parties acknowledge that this due diligence condition is inserted for the sole benefit of the subscriber and may at any time prior to this agreement be waived by the subscriber by giving written notice of waiver to the provider.

Roles and Responsibilities:

Resource	Role	Responsibilities
Kelly Propst	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Debbie Brannan	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Todd Shanley	Project Executive	1. Provide oversight and guidance regarding project planning and execution. 2. Vendor management tasks as needed.
Nick Roberts	Project Manager	1. Facilitate communication, planning and execution as needed.
Michael Stocks	Project Lead	1. Coordinate and execute power cycling test for all CCS equipment scheduled to be relocated. 2. Document CCS equipment to be relocated. 3. Document power cycling procedures based on successful testing. 4. Coordinate, schedule, and execute physical move of CCS equipment to CC data center with assistance from project team members as needed.
Project Team Members	Resource	1. Assist with physical relocation of CCS equipment as needed
CCS staff	Resource	1. Assist with power cycling test and documentation as needed.

Provider: Cabarrus County

Provider Responsibilities:

- Rack with adequate space to hold all of CCS equipment.
- Fiber connection for NCREN internet connection
- Fiber connection for Metro Ethernet Aggregate port
- Assist in relocation of CCS datacenter to Cabarrus County datacenter
- 24:7 Designated work space for CCS technical staff
- Request additional funding for 100 mg fiber connection (Glenn Center) needed to replace fiber connection being moved to the county.

Subscriber: Cabarrus County Schools

Subscriber Responsibilities:

- Schools relocate datacenter to Cabarrus County datacenter.

- CCS staff will move the following equipment to the County's data center: *
- 3 Cyber Power PR6000LCDRTL5U(if necessary)
- 1 Bradford NS9200
- 1 Bradford NS2200
- 1 Dell M1000e Blade Server
- 2 Dell PowerEdge 2950 servers
- 1 Barracuda Spam and Virus firewall 600
- 1 Barracuda Spam and Virus firewall 400
- 1 Barracuda Message Archiver 850
- 4 EMC KTN-STL4 disc Arrays
- 1 EMC power distribution block
- 1 EMC CX4 Storage Processor
- 1 Apple Xserve
- 1 Dell ML6000 tape autoloader
- 1 HP Procurve 5406ZL
- 1 Packeteer PacketShaper 10000
- 1 Cisco VPN 3000 Concentrator
- 1 8e6 Internet Filter
- 1 8e6 Enterprise Reporter
- 1 M86 Security 500
- 1 M86 Security 700
- 1 Sonic Wall e7500

CCS will make all attempts to provide a replicable test environment prior to the movement of the CCS SAN.

Performance Expectations:

The Cabarrus County School IT Staff will have on-going 24:7 access to the CCS Server Environment Datacenter for as long as the CCS servers are located at the agreed upon County data center location(s). Employee access will be approved by Cabarrus County IT Director and Cabarrus County Schools Assistant Superintendent.

- Install and test Fiber connections
- Install rack
- Install power outlets
- Physically move CCS servers

Once physical migration begins, no more than 72 hours should occur before CCS network is operational at the Cabarrus County data center.

Maintenance Schedule:

Non-critical maintenance is performed after business hours between 8PM and 6AM on weekdays, but anytime on the weekend or non-working days for CCS students and staff.

Scheduled maintenance notification sent by provider to subscriber personnel listed in communications protocol at least 24 hours in advance.

Critical maintenance notifications sent by provider to subscriber personnel listed in communications protocol as soon as required maintenance is discovered.

Outage notifications sent by provider to subscriber personnel listed in communications protocol as soon as outage is discovered.

Communications Protocol:

Provider

Cabarrus County ITS 704.920.2154

Debbie Brannan ITS Director ofc 704.920.2155 m 704.702.6526
dabrannan@cabarruscounty.us

Todd Shanley ITS Manager ofc 704.920.2838 m 704.791.3512
tmshanley@cabarruscounty.us

Subscriber

Cabarrus County Schools Technology 704.788.6120

Katherine Propst Assistant Superintendent ofc 704.688.6100 m 980.521.0078
katherine.propst@cabarrus.k12.nc.us

Michael Stocks ITS Engineer ofc 704.788.6115 m 704.791.7129
michael.stocks@cabarrus.k12.nc.us

Role of Contractors:

Cost:

Time Warner Cable will provide fiber connection for both internet and metro ethernet.

Whereas the Interagency Agreement for Collaborative Technology Services Schedule has been negotiated on behalf of the parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies, this schedule shall be appended to the Interagency Agreement for Collaborative Technology Services Agreement and is effective.

This Agreement has been negotiated on behalf of the Parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies and is executed with the approval of the respective governing bodies.

Cabarrus County

By _____
John Day, County Manager

Cabarrus County Board of Education

By _____
Holly Blackwelder, Board Chair

This is a Schedule issued under the terms and conditions of Interagency Agreement for Collaborative Technology Services, effective _____, 2011. Delivery of Services under this Schedule shall be performed in accordance with the general terms and conditions of the above referenced Interagency Agreement and more particularly as described below:

Service Title: Data Migration to Shared SAN (Storage Area Network)

Service Description:

Movement of Cabarrus County Schools primary data storage to a shared SAN. Cabarrus County Schools is moving from an EMC SAN to a Compellent SAN.

Cabarrus County will provide adequate disk space for initial movement of data, as well as provide additional space for needed growth. Terabytes of space allotted for CCS will be reviewed prior to each fiscal year by the Collaborative Technology Team and presented to Commissioners for funding. Initially 15TB of SAN storage will be available to CCS. CCS may purchase additional space by other funding sources if needed.

SAN administration is a shared responsibility. CCS, Cabarrus County, and Kannapolis City Schools will identify one administrator each. The GovEd team will verify each administrator is appropriately trained before granting global administrator logins – specific to each agency’s SAN connections. The global administrative account will only be used to address critical issues and approved configured modifications.

This agreement is, in all respects, conditional upon the subscriber being satisfied that the provider’s service is suitable for the subscriber’s requirements following a due diligence verification of the service, including by way of example and without limitation to the following:

1. The condition of the data center(s) which will house the SAN, including compliance with building and local authority regulations;
2. The level of technical and structural support for the data migration;
3. The impact on the subscriber of the data migration.

If subscriber’s due diligence determines the migration should not occur, subscriber may cancel this Schedule; provided such determination is made is no less than five (5) working days prior to project implementation. The parties acknowledge that this due diligence condition is inserted for the sole benefit of the subscriber and may at any time prior to this agreement be waived by the subscriber by giving written notice of waiver to the provider.

Project Schedule #2: Roles and Responsibilities

Resource	Role	Responsibilities
Kelly Propst	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Debbie Brannan	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Todd Shanley	Project Executive	1. Provide oversight and guidance regarding project planning and execution. 2. Vendor management tasks as needed.
Nick Roberts	Project Manager	1. Facilitate communication, planning and execution as needed.
Jason Reece	Project Lead	1. Develop technical plan for SAN integration 2. Mentor CCS staff regarding SAN administration 3. Execute SAN integration tasks
Michael Stocks	Resource	1. Contribute to SAN integration plan as technical expert for CCS equipment and applications.
Greg Keller	Resource	1. Contribute to SAN integration plan as technical expert for CC network.
Edward Watson	Resource	1. Contribute to SAN integration plan as technical expert for CCS network.

Provider: Cabarrus County

Provider Responsibilities:

- Add disk storage to existing Compellent SANs at primary and secondary data centers for schools.
- Provide training to CCS IT personnel as needed on Compellent SAN
- Provide fiber channel module “directly” from Cabarrus County SAN
- Provide Cabarrus County Schools with administrator access to Cabarrus County SAN

Subscriber: Cabarrus County Schools

Subscriber Responsibilities:

- Provide Cabarrus County with administrator access to Cabarrus County Schools SAN

Performance Expectations:

The Cabarrus County School IT Staff will have on-going 24:7 access to the CCS Server Environment Datacenter for as long as the CCS servers are located at the agreed upon County data center location(s). Employee access will be approved by Cabarrus County IT Director and Cabarrus County Schools Assistant Superintendent.

Maintenance Schedule:

Non-critical maintenance is performed after business hours between 8PM and 6AM on weekdays, but anytime on the weekend or non-working days for CCS students and staff.

Scheduled maintenance notification sent by provider to subscriber personnel listed in communications protocol at least 24 hours in advance.

Critical maintenance notifications sent by provider to subscriber personnel listed in communications protocol as soon as required maintenance is discovered.

Outage notifications sent by provider to subscriber personnel listed in communications protocol as soon as outage is discovered.

Communications Protocol:

Provider

Cabarrus County ITS 704.920.2154

Debbie Brannan ITS Director ofc 704.920.2155 m 704.702.6526
dabrannan@cabarruscounty.us

Todd Shanley ITS Manager ofc 704.920.2838 m 704.791.3512
tmshanley@cabarruscounty.us

Subscriber

Cabarrus County Schools Technology 704.788.6120

Katherine Propst Assistant Superintendent ofc 704.688.6100 m 980.521.0078
Katherine.propst@cabarrus.k12.nc.us

Michael Stocks ITS Engineer ofc 704.788.6115 m 704.791.7129
Michael.stocks@cabarrus.k12.nc.us

Role of Contractors:

Cost:

Storage Area Network Expansion for Cabarrus County Schools and Kannapolis City Schools – increase Cabarrus County lease amount by \$2000/month.

Whereas the Interagency Agreement for Collaborative Technology Services Schedule has been negotiated on behalf of the parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies, this schedule shall be appended to the Interagency Agreement for Collaborative Technology Services Agreement and is effective.

Cabarrus County

By _____
Mike Downs, Interim County
Manager

Cabarrus County Board of Education

By _____
Holly Blackwelder, Board Chair

This is a Schedule issued under the terms and conditions of Interagency Agreement for Collaborative Technology Services, effective _____, 2011. Delivery of Services under this Schedule shall be performed in accordance with the general terms and conditions of the above referenced Interagency Agreement and more particularly as described below:

Service Title: Disaster Recovery and High Availability

Service Description:

Cabarrus County Schools requires disaster recovery services through off-site data replication. In order to achieve full disaster recovery and high availability, the CCS data must be stored on the same SAN Cabarrus and KCS will utilize. In addition, all three agencies must merge networks and have a common IP language. Cabarrus County will provide access to disaster recovery with the following items:

- Primary and secondary data centers
- Primary and secondary SAN Systems

Disaster Recovery procedures are applied at specific tier levels. Tier 1 applications and services are most critical and will be configured as highly available where technology permits. Tier 2 and 3 applications and services are respectively less critical and will be managed based on existing service level agreements.

All applications and services will be highly available based on near real time replication. These primary and secondary sites are geographically dispersed per High Availability /Disaster Recovery best practice. In the event both data centers are critically affected disaster recovery goals are as follows:

Disaster	recovery	within four hours.
Disaster	recovery	within 1 – 3 days.
Disaster	recovery	within 4 – 31 days.

Disaster recovery procedures will be tested and verified to plan twice per year.

This agreement is, in all respects, conditional upon the subscriber being satisfied that the provider’s service is suitable for the subscriber’s requirements following a due diligence verification of the service, including by way of example and without limitation to the following:

1. The condition of the disaster recovery center(s), including compliance with building and local authority regulations;
2. The level of technical and structural support for the disaster recovery center(s);
3. The impact on the subscriber from using provider’s disaster recovery.

If subscriber’s due diligence determines that provider’s disaster recovery is no suitable, subscriber may cancel this Schedule; provided such determination is made is no less than five (5) working days prior to project implementation. The parties acknowledge that this due diligence condition is inserted for the sole benefit of the subscriber and may at any time prior to this agreement be waived by the subscriber by giving written notice of waiver to the provider.

Project Schedule #3 Roles and Responsibilities

Resource	Role	Responsibilities
Kelly Propst	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Debbie Brannan	Project Executive	1. Provide oversight and guidance regarding project planning and execution.
Nick Roberts	Project Manager	1. Facilitate communication, planning and execution as needed. 2. Contribute to Network integration plan as technical expert regarding database administration.
Todd Shanley	Project Lead	1. Provide oversight and guidance regarding project planning and execution. 2. Vendor management tasks as needed. 3. Plan
Michael Stocks	Project Lead	1. Contribute to Network integration planning and execution as technical expert for systems administration. 2. Contribute to Disaster Recovery / High Availability plan as technical expert for CCS systems and applications.
Greg Keller	Resource	1. Develop technical plan for Network integration 2. Execute Network integration tasks 3. Contribute to Disaster Recovery / High Availability plan as technical expert for network technology.
Edward Watson	Resource	1. Develop technical plan for Network integration 2. Execute Network integration tasks 3. Contribute to Disaster Recovery / High Availability plan as technical expert for network technology.
Jason Reece	Resource	1. Contribute to Network integration planning and execution as technical expert for systems administration. 2. Contribute to Disaster Recovery / High Availability plan as technical expert for systems administration and SAN administration.

Provider: Cabarrus County

Provider Responsibilities:

- Add disk storage to existing Compellent SAN at primary and secondary data centers for

schools.

- Collaborate with CCS IT personnel with planning and configuration for disaster recovery and high availability

Subscriber: Cabarrus County School System (CCS)

Subscriber Responsibilities:

- Collaborate with Cabarrus County IT personnel with planning and configuration for disaster recovery and high availability.

Performance Expectations:

The Cabarrus County School IT Staff will have on-going 24:7 access to the CCS Server Environment Datacenter for as long as the CCS servers are located at the agreed upon County data center location(s). Employee access will be approved by Cabarrus County IT Director and Cabarrus County Schools Assistant Superintendent.

Maintenance Schedule:

Non-critical maintenance is performed after business hours between 8PM and 6AM on weekdays, but anytime on the weekend or non-working days for CCS students and staff.

Scheduled maintenance notification sent by provider to subscriber personnel listed in communications protocol at least 24 hours in advance.

Critical maintenance notifications sent by provider to subscriber personnel listed in communications protocol as soon as required maintenance is discovered.

Outage notifications sent by provider to subscriber personnel listed in communications protocol as soon as outage is discovered.

Communications Protocol:

Provider

Cabarrus County ITS 704.920.2154

Debbie Brannan ITS Director ofc 704.920.2155 m 704.702.6526
dabrannan@cabarruscounty.us

Todd Shanley ITS Manager ofc 704.920.2838 m 704.791.3512
tmshanley@cabarruscounty.us

Subscriber

CCS Technology 704.788.6120

Katherine Propst Assistant Superintendent ofc 704.688.6100 m 980.521.0078
Katherine.propst@cabarrus.k12.nc.us

Michael Stocks ITS Engineer ofc 704.788.6115 m 704.791.7129
Michael.stocks@cabarrus.k12.nc.us

Role of Contractors:

Cost:

Increase of size of core switch blades to handle additional network connections \$18K.

There may be some additional network costs pending the Time Warner report.

Whereas the Interagency Agreement for Collaborative Technology Services Schedule has been negotiated on behalf of the parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies, this schedule shall be appended to the Interagency Agreement for Collaborative Technology Services Agreement and is effective.

Cabarrus County

By _____
Mike Downs, Interim County
Manager

Cabarrus County Board of Education

By _____
Holly Blackwelder, Board Chair

**INTERAGENCY AGREEMENT
FOR COLLABORATIVE
TECHNOLOGY
SERVICES**

Interagency Agreement for
Collaborative Technology Services

Between

County of Cabarrus

And

Kannapolis City Board of Education

Adopted By

Cabarrus County

Date:

Kannapolis City Board of Education

Date:

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Article I – Authority

The undersigned agencies hereby enter into this Agreement as of the dates specified below in accordance with the authority granted by their respective Boards under Article 20 of Chapter 160A of the North Carolina General Statutes (the “**Interlocal Act**”), municipalities and counties are authorized to enter into interlocal cooperation undertakings with other units of local government for the joint exercise, or the contractual exercise by one unit for another unit, of any power, function, public enterprise, right, privilege, or immunity of local governments in North Carolina.

Article II – Purpose

- 2.1 Cabarrus County Government, Cabarrus County Schools, and Kannapolis City Schools have launched an initiative called “Collaborative Technology Services” with the goal of providing a variety of cooperative technology services.
- 2.2 A Collaborative Technology Services Team will work to align common information technology investments with Cabarrus County Government and, Kannapolis City School District’s strategic objectives to ensure that funds for technology are directed toward member agencies enterprise priorities. The team will review member agencies applicable and commonly related IT purchases and services to ensure they are consistent with the overall collaborative plans and initiatives. Technology project recommendations that will be fully described in work statement schedules that will be appended and made part of this Agreement when executed by the respective member agencies.

Article III – Definitions

As used in this Agreement, the following terms shall have the following meanings:

- 3.1 Participant shall mean the undersigned entities.
- 3.2 Provider shall mean a Participant that offers a good or service for use by Participants.
- 3.3 Subscriber shall mean a Participant that receives goods or services provided by a Provider.
- 3.4 License Holder shall mean the participant that has legal right to a service for which they are named in a license agreement
- 3.5 Fiscal Year is a period used for calculating annual ("yearly") financial statements from July 1 through June 30.

- 3.6 Technology Standards shall mean criteria or rules to be agreed upon by all Participants for the operation, documentation and management of applicable and commonly related technology. The following types of standards to be addressed are:
- Infrastructure Level Hardware, System-level Software and Related Interface
 - Systems Operation standards for security, archiving and maintenance
- 3.7 Transition Services shall mean services provided by a Provider for a specified time beyond the Termination Date of an agreement.
- 3.8 Transition Period shall mean the amount of time Transition Services are to be provided by a Provider beyond the Termination Date of an agreement.
- 3.9 Expiration Date shall mean the last date of the Term or the Renewal Term.
- 3.10. Termination Date shall mean the date specified in any notice of termination given by a Provider or Subscriber.

Article IV - Term and Termination

- 4.1 This Agreement is effective from the date it is accepted by all parties. The term of this Agreement shall be one (1) year commencing on _____, 2011 (the "Term") unless otherwise terminated as provided in this Agreement.
- 4.2 This Agreement shall automatically be extended annually unless one of the parties notifies the other of its intention not to renew prior to commencement of the succeeding Renewal Term through an advanced written notification to the other parties, to be sent no later than Ninety (90) days prior to the expiration of the Term.
- 4.3 Termination rights in this Agreement, this Agreement may be terminated in accordance with the following provision: (a) either Participant may terminate this Agreement with less than the required notice period in Article 4.2 in the event the Initiative and/or the Services for the Initiative is prohibited by or rendered illegal by any Federal and/or State of North Carolina law or regulation (b) if this Agreement extends for several fiscal years, continuation of this Agreement is subject to appropriation of funds for the provision of Services identified in the various Schedules. If funds to enable a Participant to effect continued payment or service delivery under this Agreement are not appropriated or otherwise made available, that Participant shall have the right to terminate this Agreement at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to all other Participants. A written notice of such non-appropriation within thirty (30) days after it receives notice of such non-appropriation.
- 4.4 At the Termination or Expiration Date of the Agreement, a Provider may agree to continue existing services or a portion thereof for a period of time and/or otherwise provide parallel services for testing as part of the transition process to a new 3rd party provider for a Subscriber (hereafter "Transition Services"). Transition Services to be provided shall be by separate written agreement between the Provider and Subscriber and shall at minimum include provisions identifying the transition services and scheduled costs for same.

- 4.5 If Provider terminates a Scheduled Service, the notice of termination to a Subscriber shall provide for a 12 month Transition Period (“Transition Period”). This twelve month Transition Period is intended to provide Subscriber with adequate time to procure and establish an equal replacement service for the Scheduled Service being terminated by Provider . The Provider shall pay the costs of the replacement service. All equipment shall be returned to the Participant who transferred it.

Article V - General Obligations and Relationship of the Parties

- 5.1 The Parties agree to appoint representatives to a GovEd Technology Infrastructure Team (GET-IT) in order to align information technology infrastructure investments with Cabarrus County Government, Cabarrus County School District and Kannapolis City School District strategic and business line objectives to ensure that funds for technology are directed toward member agencies enterprise priorities. The GovEd Technology Team will implement IT strategies, resource allocations, and strategic projects for their value to the return on investment and enterprise infrastructure.
- 5.2 Each Provider acknowledges and agrees that all Services are being provided to all Participants in their “as is” physical condition without any representations or warranties of any kind or nature, express or implied, except as expressly and specifically described in provision 5.2 .
- 5.3 Each Provider agrees that it shall at all times maintain its Services in good repair so as not to unreasonably prohibit Participant’s use of such Services.
- 5.4 Each Subscriber agrees to provide its Provider with necessary access to Subscriber systems as required to perform Services requested in a duly executed Schedule between them, in accordance with the applicable laws and policies governing the Subscriber.
- 5.5 Each Provider warrants that it has all the skills, experience, and professional licenses necessary to perform the Services provided under this Agreement.
- 5.6 The relationship of a Provider and a Subscriber under this Agreement and any applicable Schedule is and will continue to be that of an independent contractor. No liability or benefits, such as workers’ compensation, pension rights, or insurance rights, arising out of, or related to a contract for hire or employer/employee relationship accrues to either Participant or either Participant’s agent, subcontractor or employee as a result of this Agreement. No relationship, other than that of independent contractor will be implied between the parties, or either Participant’s agent, employee, or subcontractor.
- 5.7 When a Subscriber’s equipment is located at a Provider’s facility, the Provider shall insure the equipment for the benefit of the Subscriber.
- 5.8 When doing work under this Agreement, each Participant and its employees, agents, and contractors will follow the laws and policies applicable to each Participant. The Participants understand and agree that highly sensitive and confidential information is maintained on each Participants information technology, and that this confidentially will be strictly observed and enforced.

- 5.9 Each Participant may exclude from this Agreement any information technology investments which are purchased from restricted funds, or are eligible for reimbursement based on restrictions or requirements.
- 5.10 No work will commence on any Schedule adopted under this Agreement until the designated representatives of each Participant have approved the scope and schedule of the work.

This Agreement has been negotiated on behalf of the Parties by their respective officers pursuant to authority delegated to them and by their respective governing bodies and is executed with the approval of the respective governing bodies.

Cabarrus County

By _____
John Day, County Manager

Kannapolis City Board of Education

By _____
Danita Rickard, Board Chair

Collaborative Technology Services

Collaborative Technology Services

Kannapolis City Schools and Cabarrus County

Project 1 – Network Preparation

*This is a Project Schedule under the
Interagency Agreement for Collaborative Technology and Services effective 9/19/2011.*

Collaborative Technology Services

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Collaborative Technology Services

Document Control

Author	Date	Version	Notes
Nick Roberts	September 19, 2011	1.0	Initial Draft

Services Description

This initial CTS project for Kannapolis City Schools will prepare the existing network infrastructure for downstream projects including network integration, server virtualization and SAN migration. Network integration between Cabarrus County, Kannapolis City Schools and Cabarrus County Schools cannot proceed with current infrastructure specifically because of:

- overlap in Internet Protocol addressing and
- overlap and contention in Virtual LAN naming conventions
- critical issues noted during MCNC network assessment

This project is designed in three phases.

1. Admin VLAN IP Conflict Resolution
2. Access VLAN IP Conflict Resolution
3. MCNC Network Assessment and Response

Roles and Responsibilities

General responsibilities are outlined herein. A detailed project work plan schedule will be developed and updated during the project lifecycle. The project work plan will include detailed tasks, expected durations, dependencies, assigned resources, milestones and deadlines. The work plan document is continually updated to reflect project status.

Provider

Cabarrus County

Provider Responsibilities

1. Collaborate with subscriber to plan, execute and control the project based on best practices and in coordination with corporate goals, policies and procedures.
2. Allocate resources as needed – both staff and material – to successfully complete project tasks based on adopted schedules and work plans.
3. Facilitate project control via project management best practices.
4. Provide consultation as subject matter experts regarding network infrastructure and virtualization technology.

Subscriber

Kannapolis City Schools

Subscriber Responsibilities

1. Collaborate with provider to plan, execute and control the project based on best practices and in coordination with corporate goals, policies and procedures.
2. Allocate resources as needed – both staff and material – to successfully complete project tasks based on adopted schedules and work plans.

Collaborative Technology Services

3. Provide detailed and inclusive information regarding existing network infrastructure as background for planning and executing the project phases.
4. Communicate all known and potential risks to project success based on KCS-specific constraints. For example, *“KCS staff overtime is under scrutiny and needs to be managed closely”*.

Budget Impact and Planning

1. Possible third party Vendor support costs – TBD
2. Manage impact to E Rate program

Role of Contractors

1. Third party Vendors will likely be engaged to provide assistance regarding configuration of application connectivity to servers. KCS will list all applications where connectivity maintenance is questionable as part of the project planning.

Document Acceptance

The undersigned agree to all assumptions and statements defined herein. Modifications to the document after acceptance will be recorded as additional versions and may or may not require additional signatures.

Kannapolis City Schools	Cabarrus County	Version
<hr/> <i>Will Crabtree, Assistant Superintendent</i>	<hr/> <i>Debbie Brannan, IT Director</i>	

Collaborative Technology Services

Collaborative Technology Services

Kannapolis City Schools and Cabarrus County

Project 2 – Server Virtualization and Hosting

*This is a Project Schedule under the
Interagency Agreement for Collaborative Technology and Services effective 9/19/2011.*

Collaborative Technology Services

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Collaborative Technology Services

Document Control

Author	Date	Version	Notes
Nick Roberts	October 7, 2011	1.0	Initial Draft

Services Description

The objective of this project is to integrate Kannapolis City Schools and Cabarrus County networks to facilitate implementation of server virtualization and hosting for Kannapolis City Schools' infrastructure. The virtualization objectives include:

- Consolidation of Active Directory structures
- Development of KCS-specific virtual environment
- Creation of specific virtual servers
- Migration of existing physical servers to new virtual servers
- Implementation of high availability and disaster recovery standards

Roles and Responsibilities

General responsibilities are outlined herein. A detailed project work plan schedule will be developed and updated during the project lifecycle. The project work plan will include detailed tasks, expected durations, dependencies, assigned resources, milestones and deadlines. The work plan document is continually updated to reflect project status.

Provider

Cabarrus County

Provider Responsibilities

1. Collaborate with subscriber to plan, execute and control the project based on best practices and in coordination with corporate goals, policies and procedures.
2. Allocate resources as needed – both staff and material – to successfully complete project tasks based on adopted schedules and work plans.
3. Facilitate project control via project management best practices.
4. Provide consultation as subject matter experts regarding network infrastructure and virtualization technology.
5. Provide technical infrastructure appropriate to accommodate KCS infrastructure including sufficient SAN storage and server capacity.
6. Purchase infrastructure equipment as needed to support project goals.

Subscriber

Kannapolis City Schools

Subscriber Responsibilities

1. Collaborate with provider to plan, execute and control the project based on best practices and in coordination with corporate goals, policies and procedures.

Collaborative Technology Services

2. Allocate resources as needed – both staff and material – to successfully complete project tasks based on adopted schedules and work plans.
3. Provide detailed and inclusive information regarding existing network infrastructure as background for planning and executing the project phases.
4. Communicate all known and potential risks to project success based on KCS-specific constraints. For example, “KCS staff overtime is under scrutiny and needs to be managed closely”.
5. Provide detailed and inclusive information regarding existing server infrastructure including application connectivity and opportunities for consolidation.

Budget Impact and Planning

1. Manage impact to E Rate program - The GovEd Team works closely with KCS E Rate specialist and State agencies to ensure this project will not negatively impact the overall E Rate benefit.

Role of Contractors

Not Applicable

Document Acceptance

The undersigned agree to all assumptions and statements defined herein. Modifications to the document after acceptance will be recorded as additional versions and may or may not require additional signatures.

Kannapolis City Schools	Cabarrus County	Version
<hr/> <i>Will Crabtree, Assistant Superintendent</i>	<hr/> <i>Debbie Brannan, IT Director</i>	