



Public Schools of North Carolina

# **DPI Connectivity Services**


## **Regional Fall 2010 Updates**

Michael Ramsey & John Warf

<http://www.ncpublicschools.org/connectivity/>

# Regions

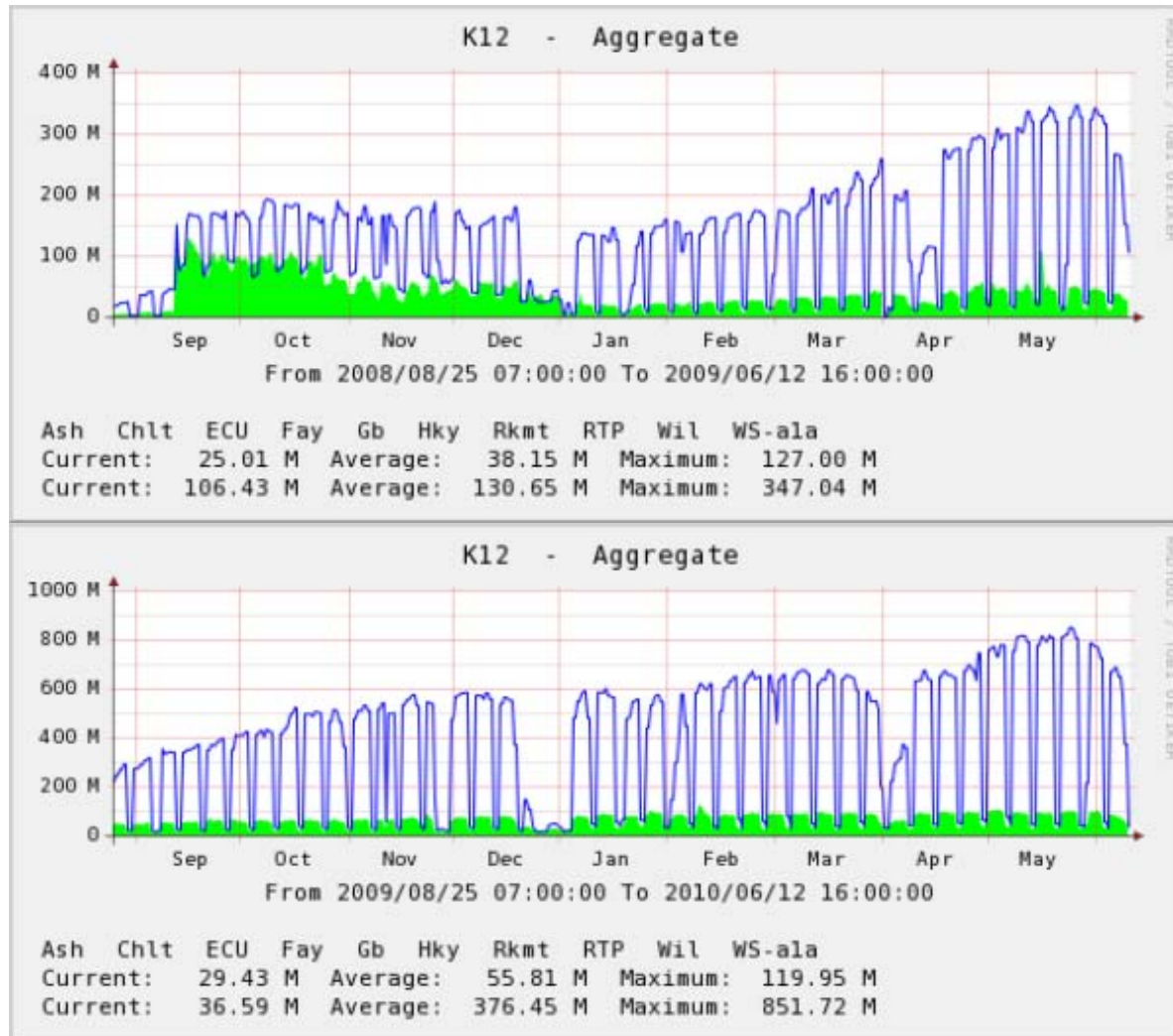


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# Year Trends

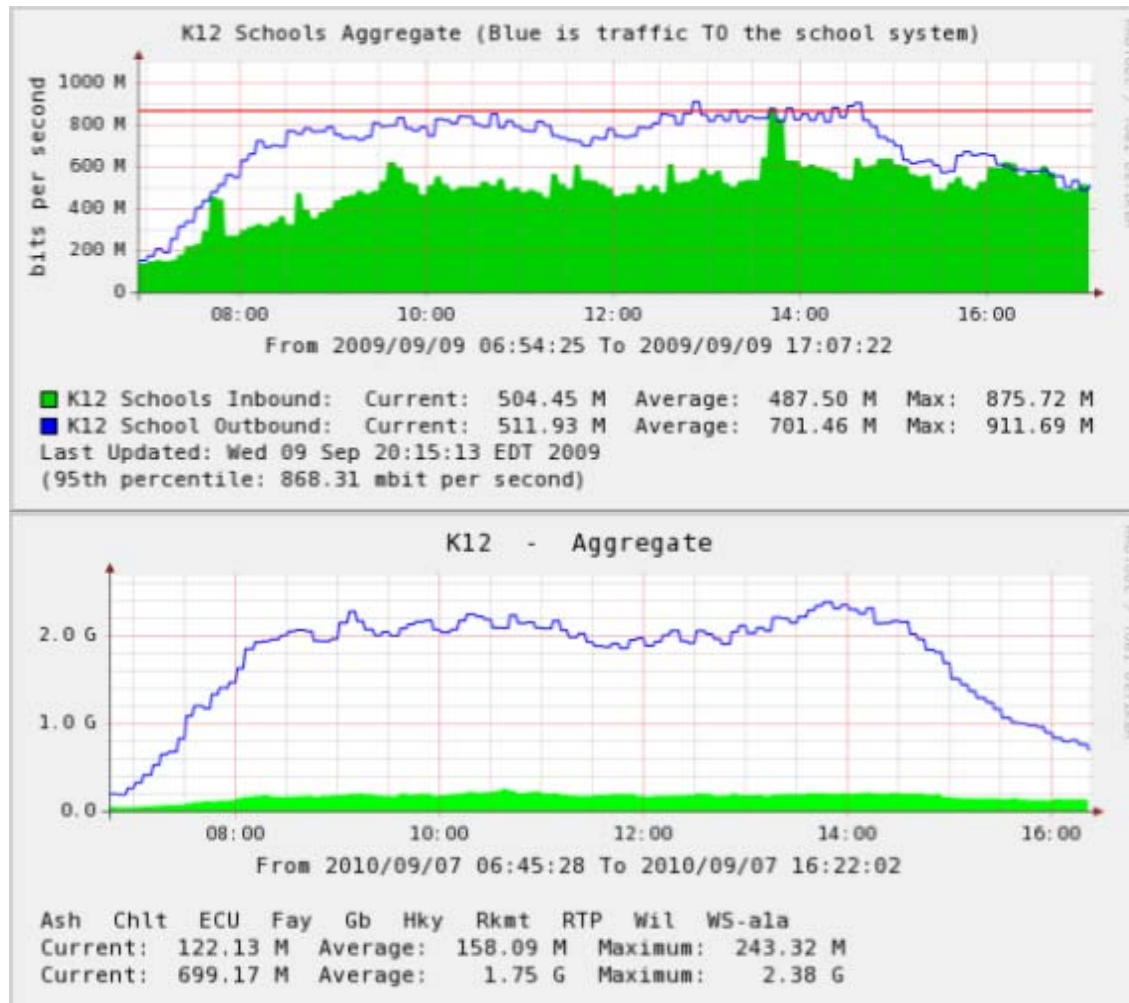


2008/09  
Nearly  
400M

2009/10  
Over  
800M



# Daily Trend



Max 912 M

Max 2380 M

Nearly  
3x growth



# Then to Now

- Low Usage at Start of Year
- High Usage End of the Year
- Year to Year: bandwidth utilization at 260%
- Monitoring throughout the Year
- Room to Grow with NCREN
- 24 / 7 / 365 Advanced Monitoring / Support



# NCREN RPOP Uptime

<b>Down Time By Site:</b>	<b>Down Time Per Site (hours)</b>	<b>% Of Up Time Per Site</b>
Asheville	0	100.000
Charlotte	0.25	99.997
Fayetteville	0	100.000
Greensboro	0	100.000
Greenville	0	100.000
Hickory	0	100.000
MCNC	0	100.000
Raleigh	1.33	99.985
Wilmington	0	100.000
Winston-Salem	0	100.000
<b>Total Down Time for 12 Months</b>	<b>1.58</b>	<b>99.998</b>



# K-12 Uptime / Outages

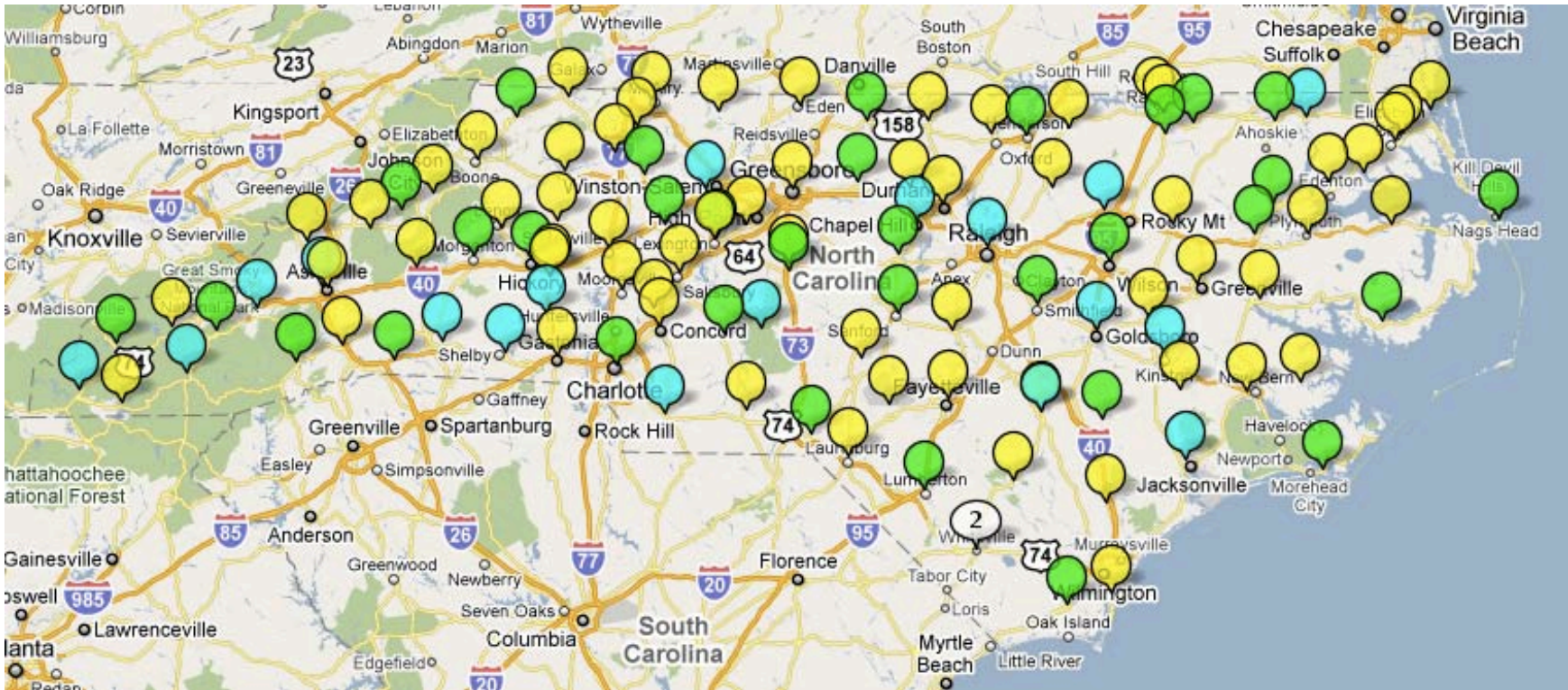
**K12\_Uptime\_Report.xls**

Reason for Outages (Total Hours)				
Type - Category - Source of Impact	Apr-10	May-10	Jun-10	Jul-10
Unscheduled Outage - Power - Telco	0.43	0.00	0.03	6.85
Unscheduled Outage - Circuit - Telco	19.93	41.53	25.45	17.28
Unscheduled Outage - Configuration - Telco	0.00	0.00	0.00	1.42
Unscheduled Outage - Circuit - Undetermined	0.00	0.02	0.00	0.00
Unscheduled Outage - Hardware - Telco	0.28	0.00	0.00	0.00
Unscheduled Outage - Hardware - Vendor	5.77	0.00	0.00	0.00
Unscheduled Outage - Power - Internal	0.00	0.00	3.13	0.00
Unscheduled Outage - Power - Customer	36.95	52.60	83.35	28.63
Unscheduled Outage - Circuit - Customer	4.90	0.00	0.73	0.00
Unscheduled Outage - Other - Customer	0.07	0.00	0.00	0.00
Scheduled Maintenance - Circuit - Telco	2.83	9.52	0.00	0.00

Power at Customer/LEA Outages Issues?



# How are Districts Connected



● All Traffic   ● Load Balancing   ● NCREN I2   ● State Only

63

18

0

34

=115



# Why Districts Switch for All Internet

- PRC 073 Funding for Secondary Internet Ends in 2013
- State-Provided Circuit, plenty of bandwidth
- 24 / 7 / 365 Monitoring with NCREN
- District Access to MCNC/CNE Resources

**PLEASE DON'T WAIT UNTIL THE LAST  
MINUTE TO MIGRATE**



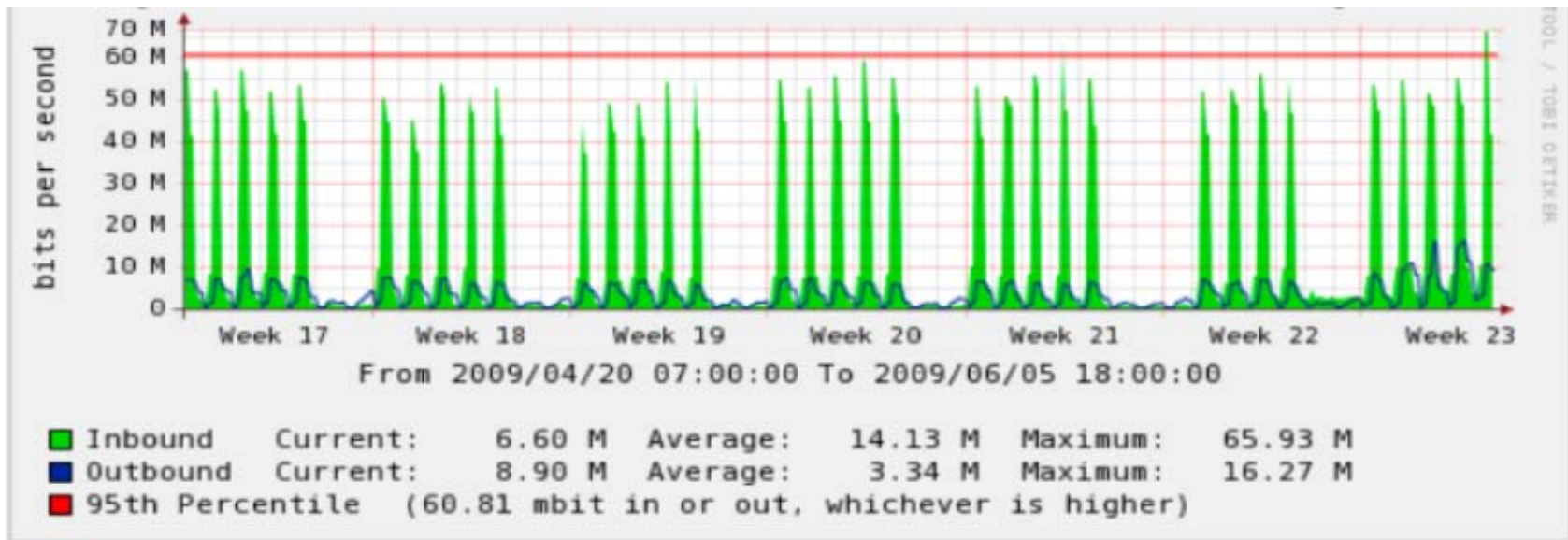
# Public Charter Schools

- PRC 036 Funding for Connectivity
- May Now Opt In For State Provided Circuit
- LEA-level service
  - Start with 10Mb Circuit
  - Bandwidth to Support Schools Needs
  - 24 / 7 / 365 Monitoring with NCREN
  - CNE Services



# Additional Bandwidth

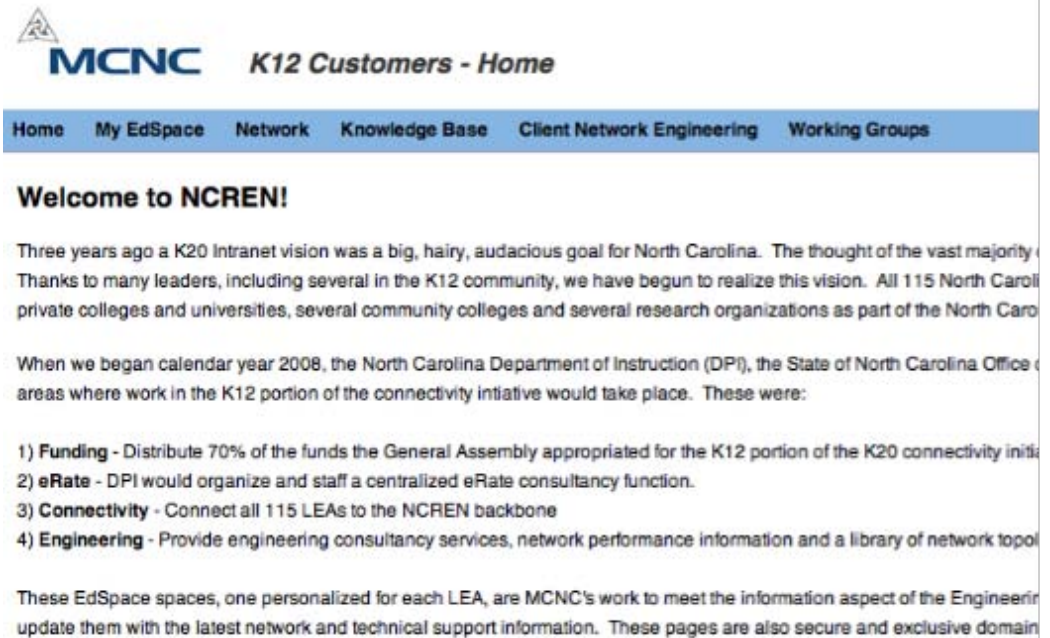
- DPI Connectivity Services Reviews Status of Connections Each Month
- 60% of Bandwidth in the 95th Percentile




# So How Much Are You Using?

## EdSpace

- Your NCREN Tickets
- Your Latency and Bandwidth Graphs
- See DPI Connectivity Website for details



 **MCNC** *K12 Customers - Home*

Home My EdSpace Network Knowledge Base Client Network Engineering Working Groups

### Welcome to NCREN!

Three years ago a K20 Intranet vision was a big, hairy, audacious goal for North Carolina. The thought of the vast majority of North Carolina's K12 schools being connected to the Internet was a dream. Thanks to many leaders, including several in the K12 community, we have begun to realize this vision. All 115 North Carolina public schools, private colleges and universities, several community colleges and several research organizations as part of the North Carolina K12 Connectivity Initiative.

When we began calendar year 2008, the North Carolina Department of Instruction (DPI), the State of North Carolina Office of Information Technology (SIT) and the State of North Carolina Office of Information Security (SOIS) were the areas where work in the K12 portion of the connectivity initiative would take place. These were:

- 1) **Funding** - Distribute 70% of the funds the General Assembly appropriated for the K12 portion of the K20 connectivity initiative.
- 2) **eRate** - DPI would organize and staff a centralized eRate consultancy function.
- 3) **Connectivity** - Connect all 115 LEAs to the NCREN backbone
- 4) **Engineering** - Provide engineering consultancy services, network performance information and a library of network topology information.

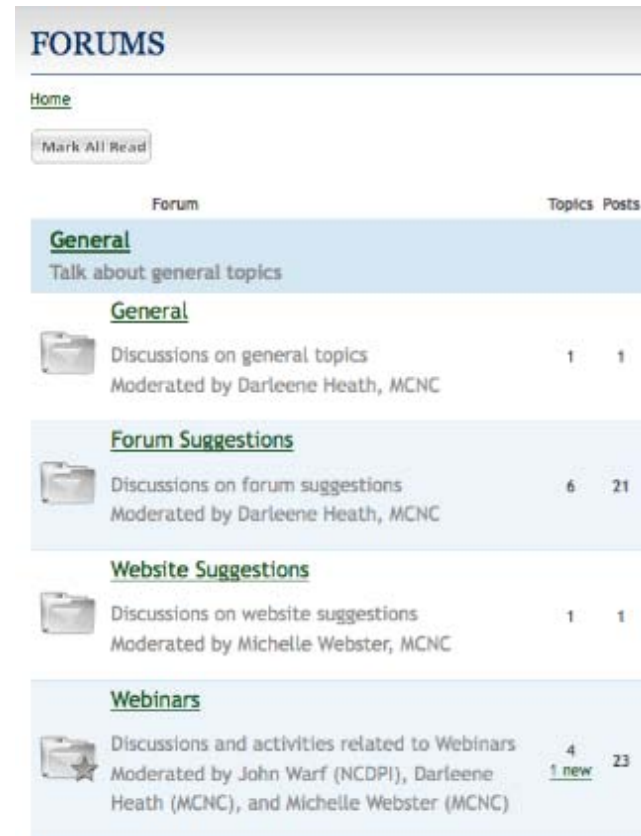
These EdSpace spaces, one personalized for each LEA, are MCNC's work to meet the information aspect of the Engineering Initiative. We will continue to update them with the latest network and technical support information. These pages are also secure and exclusive domain pages.

<http://www.ncpublicschools.org/connectivity/>



# MCNC Forums

- Open to All K-12
- Instructional Tech Info
- K12 Applications
- Community Support and information
- Training
- Technical Topics



The screenshot shows the MCNC Forums page with the following structure:

- FORUMS** header
- [Home](#) link
- 
- Table with columns: Forum, Topics, Posts
- General** section: Talk about general topics
- General** forum: Discussions on general topics, Moderated by Darleene Heath, MCNC (1 topic, 1 post)
- Forum Suggestions** forum: Discussions on forum suggestions, Moderated by Darleene Heath, MCNC (6 topics, 21 posts)
- Website Suggestions** forum: Discussions on website suggestions, Moderated by Michelle Webster, MCNC (1 topic, 1 post)
- Webinars** forum: Discussions and activities related to Webinars, Moderated by John Warf (NCDPI), Darleene Heath (MCNC), and Michelle Webster (MCNC) (4 topics, 23 posts, with 1 new post)

<http://www.mcnc.org/forum>



# Connectivity / MCNC Services

- Network Health Assessments
- Security Assessments
- Wireless Planning / Troubleshooting
- Vendor Neutral Recommendations
- RFP Assistance
- Trainings
- No Cost to LEA or Charter



# Program Report Code (PRC) 073

- Just under \$10million to LEA's Last Year
- Connectivity Funding
- Currently verifying information
- Expect release in October
- Contact Mike/John if you haven't submitted your information



Public Schools of North Carolina  
State Board of Education | Department of Public Instruction  
School Connectivity PRC 073

School Connectivity LEA Allocations  
As of Allotment Revision 28  
FY 2008-09

LEA#	LEAName	FY 2008-09 Allotment	One-Time Allocation	Required Reduction (Rev. 16)	Allowable C/O	Required Reversion Transfer (Rev. 28)	Total
010	Alamance County	168,948		0			168,948
020	Alexander County	37,303		0			37,303
030	Alleghany County	26,935		0			26,935
040	Anson County	37,598		0			37,598
050	Ashe County	39,686		0			39,686
060	Avery County	29,857		0			29,857
070	Beaufort County	45,732		0			45,732
080	Bladen County	39,082		0			39,082
100	Brunswick County	29,088		0			29,088
110	Buncombe County	155,144	950	0	5		156,099
111	Asheville City	20,132		(10,000)			10,132
120	Burke County	81,912		0			81,912
130	Cabarrus County	198,424		0			198,424
132	Kannapolis City	22,680		0		(747)	21,933
140	Caldwell County	81,722		0	1,089		82,811
160	Carteret County	102,468		0			102,468
170	Caswell County	36,474		0	25		36,474
180	Catawba County	213,825	950	0	5,386		220,163
181	Hickory City	37,144		0			37,144
182	Newton-Conover City	12,870	2,763	0			15,633
190	Chatham County	95,880		0			95,880
200	Cherokee County	23,862		0			23,862
220	Clay County	14,820		0			14,820
220	Cleveland County	93,183		0		(1,257)	91,926
240	Columbus County	32,303		0	1		32,304
241	Whiteville City	9,888		0			9,888
250	Craven County	73,891		0			73,891
260	Cumberland County	317,172		(298,119)	260	(18,313)	0
270	Cumtuck County	81,960		0		(5,000)	76,960



# Connectivity Website

<http://www.ncpublicschools.org/connectivity/>

- Constantly Adding Info
- Connectivity Presentations
- Connecting to EdSpace
- Funding / Code Information
- State IT Contracts
- Staff Directory / Contacts
- FAQ

PUBLIC SCHOOLS OF NORTH CAROLINA | State Board of Education | Department of Public Instruction

## CONNECTIVITY SERVICES

CALENDAR QUICK LINKS

### CONNECTIVITY SERVICES

**MISSION** ::The School Connectivity Program is the culmination of several years of vision surrounding the 21st century classroom, and developing a North Carolina workforce poised to meet the challenge of a global economy. The North Carolina Department of Public Education is proud to be the sponsor of this collaborative effort. Through a partnership between MCNC, Friday Institute, ITS and DPI the North Carolina Research Education Network (NCREN) has been extended to the K-12 community of schools. All districts in North Carolina now have a high speed direct connection to this robust education networking infrastructure. Recurring funding has been allocated from the General Assembly to support this effort. These funds shall be used for broadband access, equipment, and support services that create, improve, and sustain equity of access for instructional opportunities for public school students and educators.

**UPCOMING EVENTS**

[Printer Friendly Version](#)

DPI HOME ABOUT DPI STATE OF NC DIRECTIONS LEGAL NOTICES NC OPENBOOK CONTACTS



# Questions

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