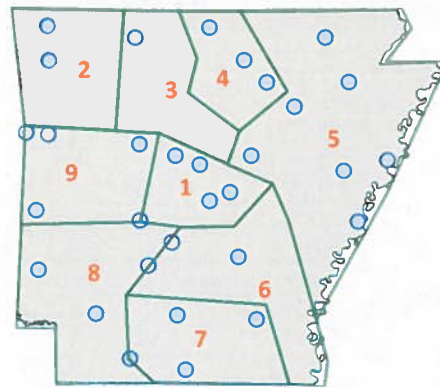


# Proposed FASTER Arkansas Network

Current K-12 Education Network



Unified K-20 Network



**NOTE:** Both the current and proposed networks route traffic through leased private provider lines.

## Challenge

**High construction costs:** Districts shoulder cost of extending fiber cable to isolated schools or facilities.

**Limited access:** Districts or schools located beyond existing provider fiber paths lack access.

**No Internet2 content:** Arkansas students have no access to Internet2, a premier provider of educational content and digital learning resources.

**Poor service quality:** Districts purchase less costly consumer-grade connectivity that is subject to throttling during peak usage periods.

**Wasteful spending:** The State pays more in monthly recurring costs for K-12 connectivity than neighbor states and receives less service.

**Static E-Rate reimbursements:** Arkansas share of federal E-Rate funding has remained steady while other states have doubled or tripled E-Rate receipts.

**Less safe and secure:** Districts purchase filtering and firewall equipment for each school; multiple points of potential failure.

**Decentralized, reactive management:** State procures upgraded connections to each school or district facility upon request.

**Unequal resource distribution:** District facilities span multiple provider territories with differing pricing options.

**Professional development and technical support:** Educators and local technical support staff need access to professional development for digital learning techniques, online content, and devices.

**State law:** Act 1050 of 2011 prohibits the state from using its existing research and education backbone network to serve K-12.

## Solution

Establish regional service areas to pool construction costs and reduce the burden on individual districts.

Require State-contracted, regional service providers to serve 100% of K-12 facilities in their territory(ies).

Allow private providers to partner with ARE-ON, the only Arkansas entity authorized by USCAN to carry Internet 2 traffic.

Offer affordable, dedicated State backbone network capacity with caching and scalability for peak usage periods; not subject to throttling.

Reallocate existing State resources. Buy robust, middle-mile fiber connectivity instead of costly, last-mile copper connections.

Optimize federal E-Rate support. Seek E-Rate reimbursement for high-quality, high-value provider services and for K-12's use of the ARE-ON backbone.

Provide filtering on the State backbone network. Districts can lease or purchase firewall equipment for a single district hub.

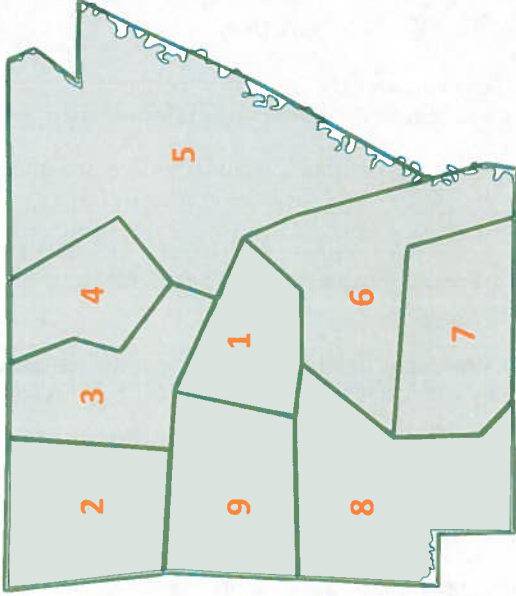
Procure higher base-level services for all K-12 locations, centrally monitor usage, and proactively increase capacity.

Encourage districts to connect school buildings to a single district hub with a local area network (LAN) or metropolitan area network (MAN).

Dedicate some existing Arkansas Department of Education professional development funds to improving digital literacy and instructional technology use among educators and support staff.

Restore the exemption for educational entities previously included in State law. Allow districts to choose between the status quo and the FASTER Arkansas Network.

## Current Monthly APSCN/CIV Network Prices by FASTER Region



Region (Number Entities)	A: Transport		B: Internet		C: Content Filtering		D: Routers		Total= A+B+C+D
	Cost per Mb Low/High	Average Cost per Mb	Cost per Mb Low/High	Average Cost Mb	Cost per Mb Low/High	Average Cost per Mb	Cost per Router Low/High	Average Cost per Mb	
Region 1 (22)	\$40.00	\$167.89	\$26.50	\$23.17	\$5.30	\$6.26	\$52.80	\$7.81	\$205.13
Region 2 (20)	\$38.25	\$70.37	\$19.00	\$19.92	\$3.83	\$4.88	\$52.80	\$2.24	\$97.41
Region 3 (18)	\$77.50	\$278.19	\$8.41	\$21.84	\$5.50	\$6.08	\$52.80	\$9.08	\$315.18
Region 4 (20)	\$82.00	\$215.29	\$22.50	\$22.17	\$4.75	\$6.28	\$52.80	\$6.34	\$250.08
Region 5 (56)	\$40.00	\$198.53	\$27.80	\$22.68	\$5.30	\$6.38	\$52.80	\$6.81	\$234.40
Region 6 (21)	\$26.80	\$204.60	\$22.50	\$22.73	\$4.75	\$6.31	\$52.80	\$7.21	\$240.86
Region 7 (23)	\$37.80	\$350.88	\$26.17	\$24.03	\$5.30	\$6.13	\$52.80	\$14.46	\$395.50
Region 8 (29)	\$26.80	\$170.51	\$22.50	\$22.86	\$4.75	\$6.18	\$52.80	\$5.92	\$205.47
Region 9 (35)	\$48.00	\$207.07	\$27.50	\$21.41	\$5.30	\$6.04	\$52.80	\$6.31	\$240.83
<b>Statewide</b>	<b>\$26.80</b>	<b>\$208.45</b>	<b>\$8.41</b>	<b>\$22.44</b>	<b>\$3.83</b>	<b>\$6.08</b>	<b>\$52.80</b>	<b>\$7.54</b>	<b>\$244.51</b>

The above chart shows APSCN/ CIV connectivity charges for the nine proposed FASTER regions as of April 2014. The prices outlined in green indicate the lowest average price and the prices outlined in orange indicate the highest average price. Arkansas schools pay high prices compared to national averages but prices are also inconsistent within regions and across the state. School districts in Regions 3 and 7 are particularly hard-hit, facing costs per megabit that are 300 to 400 percent higher than school districts in Region 2.