

Fixing the Connectivity Problem: South Africa

Equitable access to education content in TVET colleges

THE CHALLENGE

Content from leading online learning provider The Student Hub is used in South Africa's TVET colleges. But outlying colleges with poor connectivity can't access the content, and even better-connected urban colleges suffer slow page loads at busy times.

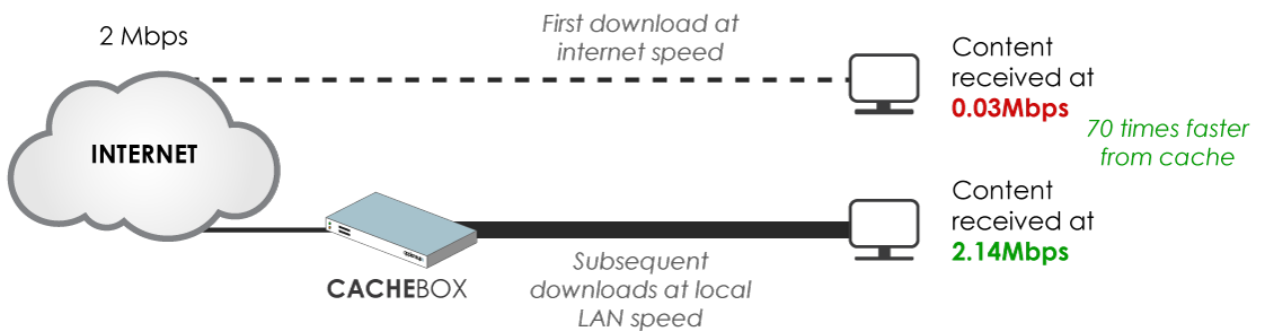
THE SOLUTION

CACHEBOX passes authentication traffic and learning progress data to the internet, but all the heavy lifting of rich content including video is served from cached memory. Students have access to the latest learning technology, while freeing up college internet connections to use The Student Hub's Learner Management System to monitor student performance.

- Without CACHEBOX:** Students need >1 Mbps each to avoid congestion
- With CACHEBOX:** 1 Mbps easily supports 20 students

Slow content – FIXED!

Content from cache is **70x faster than from the internet** – student download speeds are slashed



Simultaneous access – FIXED!

CACHEBOX saves 98% of bandwidth consumption, meaning that 20 students all accessing content at the same time consume just 1Mbps of the college's internet capacity.

Domain	% cached	AVERAGE SPEED	
		Miss	Hit
*.thestudenthub.co	98.1%	29.6 KB/s	2.14 MB/s