



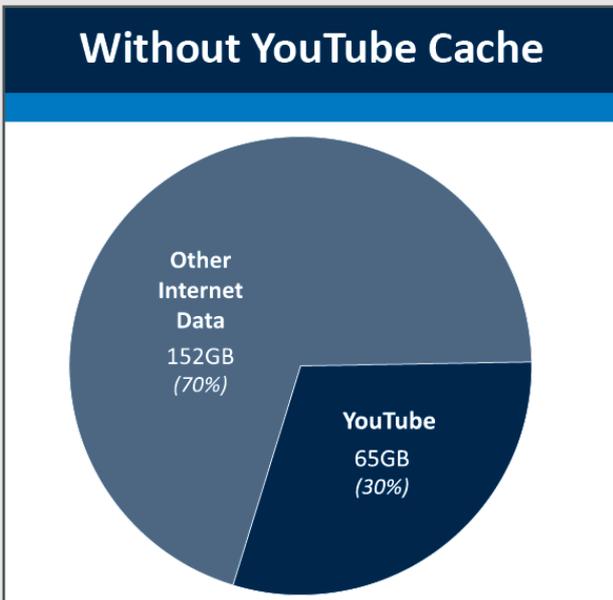
YouTube™ Cache for Education

CyberHound’s YouTube Cache enables schools to confidently embrace YouTube as a reliable and safe learning tool without placing huge bandwidth demands on internet resources. This feature allows schools to cache YouTube videos so they are only downloaded once to their network. Subsequent requests for the video (for example as part of a lesson), will be delivered quickly and seamlessly from the Content Acceleration Cache ensuring optimum learning time in the classroom. This service is a premium feature of the Content Acceleration Platform.

The Centre for Learning and Performance Technologies has ranked YouTube in the top three critical learning tools for the last 5 years. However its adoption as a learning tool is dramatically consuming the bandwidth of many schools capacity with some reporting that YouTube uses 67% of their overall internet traffic. As a result, using YouTube has not been possible for many schools as it puts pressure on already constrained internet links. CyberHound’s unique YouTube Cache enables schools to embrace YouTube as a learning tool without the need to upgrade to more expensive internet links or sacrificing other vital learning tools.

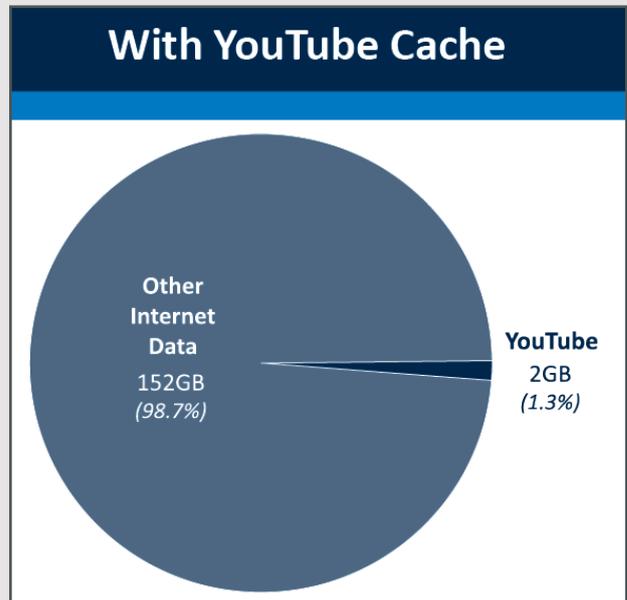
Report Comparison for an Australian School With and Without YouTube Cache (in a single day):

Without YouTube Cache



Total Data Downloaded from the Internet = 217GB
 Total YouTube Data = 65GB
 YouTube = 30% of Total

With YouTube Cache



Total Data Downloaded from the Internet = 154GB
 Total YouTube Data = 2GB
 YouTube = 1.3% of Total / 63GB saved in a single day

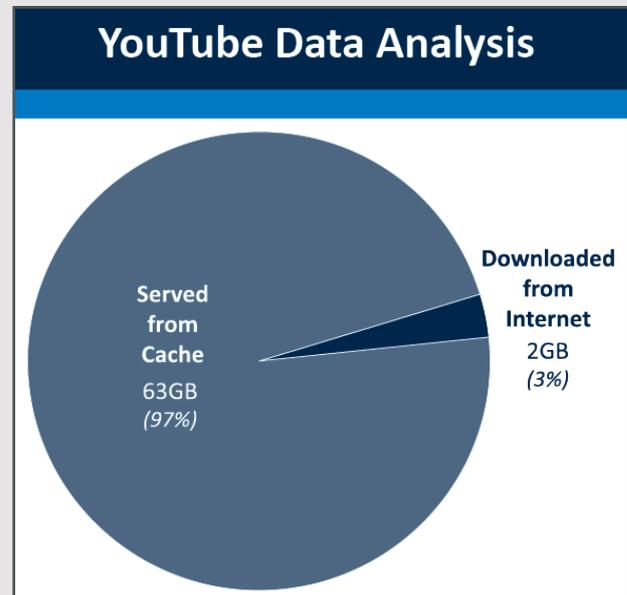
Real bandwidth and cost savings

CyberHound’s YouTube Cache feature supports over 200 different formats of YouTube videos including players for multiple browsers (such as Safari, IE, Chrome and Firefox) and platforms such as iOS (iPhone, iPad), MAC OS X, Windows and Chrome OS. After a user has downloaded a video once, any future requests from any other computer on the network receives the content from the local Content Acceleration Cache rather than from the internet.

Benefits of CyberHound’s YouTube Cache include:

- **Seamless viewing experience** – Even multiple concurrent requests are delivered without delay or buffering
- **Real and immediate cost benefits**– CyberHound’s YouTube Cache pays for itself by reducing data and bandwidth
- **Optimise learning time** – teachers can preload content by simply viewing a video prior to a lesson
- **Easy to use integrated reporting** – reporting on the effectiveness and bandwidth savings is available
- **Enhanced learning outcomes** - through having the confidence to integrate multi-media learning tools in the class.

YouTube Data Analysis





YouTube™ Cache for Education

Technical Summary:

CyberHound’s Caching Services have been designed to optimise performance through the hardware technology in use and the design of the software architecture.

The summary diagram below shows how the various caching services are optimised. Importantly, the caching services are separate processes and therefore the impact of a cache for YouTube or iOS update content does not impact overall web caching performance. This is a critical differentiator in school environments.

“ *In one day we served 1.65TB of data from the CyberHound Cache – this gave massive benefits for the school – a great product.* ”

James Andrewartha,
Christ Church Grammar School

HIGH PERFORMANCE ARCHITECTURE DESIGN

	RAM	SYSTEM DRIVE	DEDICATED CACHE DRIVE
 WEB PROXY	Default CyberHound deployment for optimum performance	Rarley used and not best practice (available if required)	Not used
 CONTENT ACCELERATION PROXY	Not used	Default CyberHound deployment	Available for Large Object Cache storage (when installed)
 YOUTUBE CACHE PROXY	Not used	Not used	Essential for YouTube cache for high performance

The following features ensure the CyberHound Caching Services are the best in the industry and are most suited to the requirements of schools:

- Each cache is a separate process – Web, Large Objects (e.g. iOS updates) and YouTube
- Separate high performance storage services ensure the optimal performance for each service and zero performance contamination from other services
- The solution supports over 265 different file formats, ensuring it really does deliver value to schools
- The solution also supports multiple browsers and any device to ensure all users receive the benefit and don’t create an unexpected burden on the network
- The Immediate Pre-caching Service delivers benefits to other

users as soon as a video is viewed – even in the first few seconds

- A full reporting platform ensures administrators and executives can see the results from the Caching service

“ *We have seen excellent results from the unique CyberHound caching services. We are serving 70-80% of all internet data from cache - saving about a 50Mbps internet link – we are getting great value.* ”

James Tuson,
John Septimus Roe ACS