



Radio Active WISP grows year after year with CACHEBOX

CHALLENGE

As the WISP's customer base grew, bandwidth congestion worsened & customer service suffered

Existing solution was unsupported, difficult to manage and couldn't cope effectively with network growth

SOLUTION

1X **CACHEBOX230** deployed in PBR

Low cost upgrade to **CACHEBOX310** after 4 years

BENEFIT

CACHEBOX: Easy to deploy and manage

Relieved strain on bandwidth, significantly improving customers' browsing experience

Long-term reliability, consistent bandwidth saving

ABOUT RADIO ACTIVE TELECOMMUNICATIONS

Radio Active Telecommunications is a Wireless Internet Service Provider (WISP) based in Hoedspruit in the Limpopo Province of South Africa. It provides wireless broadband internet services to thousands of users. It also offers point-to-point connectivity for customers with multiple branches / offices.

CHALLENGE

Radio Active initially set up in 2008 serving around 150 customers over a 10Mbps bandwidth link. As its customer base grew, this link became congested and customers would complain of slow browsing speeds.

CEO Bill Fordred decided to set up web caching - using Squid on a general purpose server - to help ease the strain on bandwidth and improve service quality levels.

Concerns about diminishing customer experience

By 2010 the WISP was serving almost 7 times as many customers, and despite a bandwidth upgrade to 180Mbps, congestion once again became an issue.

Bill comments: "We were serving close to 1,000 users and our customer base was expanding rapidly."

"Every time we had an issue with our caching server, customer services suffered. This often translated to slow browsing speeds for customers – and at times – they couldn't access content at all."

Existing caching solution unreliable, unsupported & difficult to manage

Maintaining fast, reliable internet connectivity for customers was a top priority. However, as the number of customers increased each year, it became increasingly clear to Bill that the caching solution in place couldn't cope with growing traffic demands.

"Our caching solution couldn't handle all customer traffic effectively and wasn't saving bandwidth. We also experienced a number of server management issues which often took ages to fix because the solution was unsupported – and we didn't have the expertise or resource in-house."

Another bandwidth upgrade was too expensive an option, so Bill began looking for a more affordable way to save bandwidth and ensure high levels of customer service.

He searched online and found that ApplianSys' **CACHEBOX** provided the functionality he needed at an affordable price, and would give him the safety net of a support team if required.



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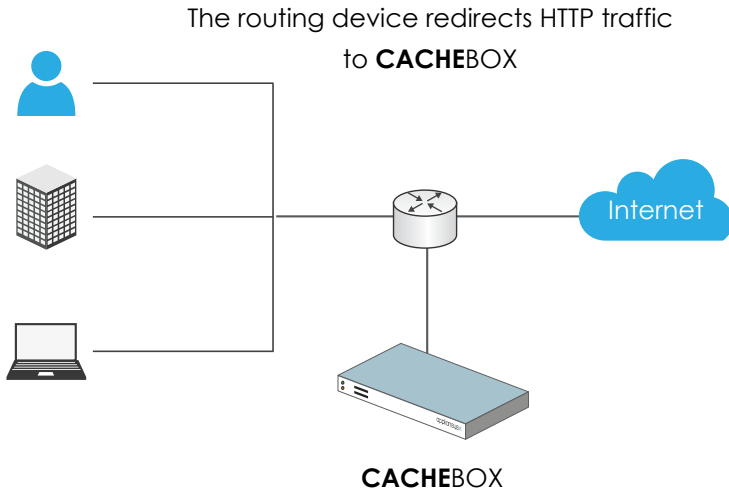


SOLUTION

In 2010, Radio Active deployed a **CACHEBOX230** appliance using policy-based redirection.

With a secure and intuitive interface, it was far easier to deploy, maintain and update than the previous solution.

“**CACHEBOX** makes caching easier. It’s quickly proven to be a high performance, dedicated caching appliance which – unlike Squid – has been fine-tuned to handle all of our network traffic.”

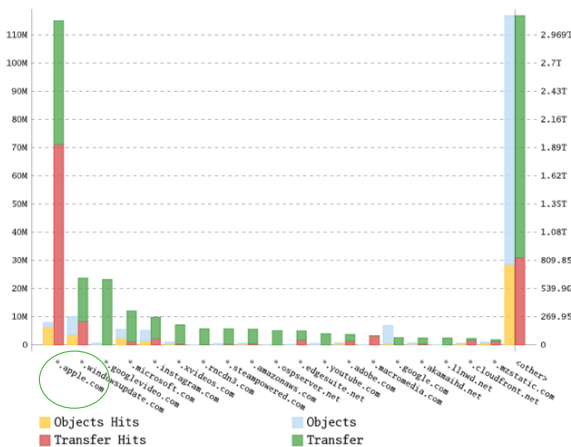


- Easy Deployment
- Affordable
- Easy Management
- Excellent Support
- High Performance

CACHEBOX: Easy Deployment, Faster Speeds, Room for Growth

Having deployed **CACHEBOX**, Bill noticed an immediate improvement in the quality of service, and reduced operating costs. **CACHEBOX** has given Radio Active the ability and confidence to scale its business rapidly.

Bill comments: “Shortly after deploying **CACHEBOX**, we were saving over 30% of our bandwidth.”



Destination	OBJECTS REQUESTED			VOLUME of DATA		
	Objects	% of total	% cached	Transfer	% of total	% cached
*.apple.com	7,883,875	5.0%	32.3%	79.4% 59,320.71MB	32.3%	61.8%
*.windowsupdate.com	9,902,235	6.3%	34.7%	36.6% 607,933.50MB	6.6%	34.7%
*.googlevideo.com	610,784	0.39%	0.01%	0.53% 594,842.10MB	6.5%	0.01%
*.microsoft.com	5,467,722	3.5%	8.6%	44.2% 209,029.45MB	3.4%	8.6%
*.instagram.com	5,147,359	3.3%	21.9%	26.1% 249,956.30MB	2.7%	21.9%
*.xvideos.com	991,732	0.63%	3.6%	34.2% 181,940.10MB	2.0%	3.6%
*.rncdn3.com	42,811	0.03%	1.6%	1.2% 146,257.39MB	1.6%	1.6%
*.mzstatic.com	926,492	0.59%	66.0%	61.6% 44,939.57MB	0.49%	66.0%
<other>	116,729,727	73.8%	26.4%	24.4% 205,141.53MB	32.8%	26.4%
Total	158,266,005	100.0%	34.7%	28.9,162,671.18MB	100.0%	34.7%

This extra capacity enabled Radio Active to extend its service to more subscribers without:

- Compromising on the quality of service for existing customers, and
- Going through an expensive bandwidth upgrade

The WISP’s customers now get much faster access to content: “Customers instantly noticed the speed increase in content served. Now, we could take on more users without worrying about whether the infrastructure could handle it. **CACHEBOX** just handled it for us.”

Low Cost Upgrade

Within four years of deploying **CACHEBOX230**, Radio Active's customer network had grown threefold to 3,000 users.

Bill comments: "During this time, **CACHEBOX230** enabled us to grow our network rapidly, and by 2014 we were taking on even more users."

As an ApplianSys support customer, Bill had the opportunity to upgrade his existing **CACHEBOX** solution to match this growth rate at just a fraction of the cost of purchasing a new unit.

"In 2014, we decided to upgrade to a **CACHEBOX310** unit, capable of handling even more users," says Bill.

Radio Active's ApplianSys Account Manager, Vasco Figueiredo comments: "This larger model (**CACHEBOX310**) is a better fit for Radio Active's more recent demand, and will help them to grow even further."

"**CACHEBOX** has proven to be very flexible, low cost and easily scalable – It's one that has worked extremely well for us," says Bill.

Long-term reliability: Consistent Bandwidth Saving

On average **CACHEBOX** has saved ~30% bandwidth for the WISP year after year for the past 6 years, reducing Radio Active's costs and allowing them to grow steadily.

"We've consistently saved 30% bandwidth and improved customer services significantly. Our network is far more resilient. All of these things have contributed to an increase in the overall Quality of Service and steady business growth," says Bill.