



# BUREAU OF METEOROLOGY FORECASTS CLEAR SKIES WITH AAPT'S CONTENT DELIVERY, VPN AND TELEPHONY SERVICES

"The team at BOM is very happy with AAPT's service because they always make processes simple and easy."

Barry Nugent, INFRASTRUCTURE OPERATIONS MANAGER, BUREAU OF METEOROLOGY

## 1 BUSINESS CHALLENGE

The Bureau of Meteorology (BOM) is Australia's national weather, climate and water agency. It operates the country's most popular government website, bom.gov.au, which runs on AAPT's network and receives a phenomenal 2.5 billion hits a month from more than seven million unique visitors.

The website produces 40,000 updated pages daily, featuring forecasts, warnings, radar monitors and advice spanning the Australian region and Antarctic territory. Many federal and state government departments, including defence and state emergency services as well as industries such as aviation, mining and shipping, rely on these pages for their most fundamental activities.

For the past 10 years the BOM website has experienced 30% annual growth in bandwidth utilisation, primarily driven by the rise of weather apps on smartphones and tablets. According to Barry Nugent, Infrastructure Operations Manager at BOM, improvements to radar technology are also driving up bandwidth usage. "In 2013 we are upgrading our radar pages to a new weather display interface called MetEye, which enhances map granularity down to six square kilometres. This will increase our bandwidth requirements even further."

The incredible granularity provided by MetEye is cutting-edge. In fact, BOM is only the third meteorological government agency in the world to introduce this technology.

"We think MetEye will be just as popular, if not more so, than our current radar pages," says Nugent. "MetEye really takes weather information delivery to the next level."

BOM required a content delivery network (CDN) that was capable of the fastest performance and highest levels of availability to ensure the Bureau could seamlessly introduce MetEye, and continue to provide mission-critical information to governments and industries.

## 2 SOLUTION FEATURES

For more than eight years, AAPT has supplied ISP, IP virtual private network

(VPN) and voice services to BOM, as well as co-location services for its main data centres. The Bureau knew AAPT was well placed to provide an innovative solution to its rapidly increasing bandwidth requirements.

In November 2012, BOM introduced AAPT EdgeCast CDN, one of the world's fastest, most reliable CDN, to expand bandwidth capacity and enhance AAPT's existing internet services.

## KEY SOLUTION FEATURES

### 1. Internet services

AAPT has provided internet services (IP-Line) to BOM for eight years, with its website serving an average of 1TB of data a day via 85 million hits – more than 2.5 billion hits each month.

### 2. CDN enhances network scalability

The AAPT EdgeCast CDN provides BOM with the bandwidth to easily accommodate the new MetEye application, as well as traffic spikes during extreme weather events such as bushfires and cyclones.

### 3. Managed IP VPN

BOM uses AAPT IP VPN to securely share applications, communicate between its offices and increase productivity.

### 4. Voice services

The Bureau utilises a range of AAPT's inbound services such as 13, 1300 and 1800 numbers, as well as AAPT's carrier-grade national ISDN services for outbound calls.

### 5. Hosting

AAPT provides BOM with co-location services for its central data centres. In Melbourne and Sydney, which play a vital role in business continuity as the Bureau's disaster recovery systems.

### 6. Point-to-point data transfer

Based in Melbourne, BOM's national training facility draws down massive amounts of real-time data to create training modules. To efficiently carry bandwidth heavy traffic between the training facility and central data centre in Melbourne, the sites are connected via a point-to-point AAPT e-Line.



# BUREAU OF METEOROLOGY TAKES ONLINE WEATHER SERVICES TO THE NEXT LEVEL WITH AAPT

## 3 THE RESULT

“AAPT’s internet service is very fast and has extremely low latency, so it serves us well.”

Barry Nugent, INFRASTRUCTURE OPERATIONS MANAGER, BUREAU OF METEOROLOGY

With its CDN now in place, BOM will comfortably manage the 30% annual increase in traffic and its new, more bandwidth-hungry MetEye application. The Bureau also continues to benefit from other internet and voice services provided by AAPT. Further, it plans to switch its IP telephony service platform from ISDN to AAPT’s SIP Voice service in the near future.

### Superior internet services

The robustness of BOM’s web services is constantly tested by extreme weather events. For example, on 3 February 2011 when Cyclone Yasi hit the Queensland coast, BOM’s website experienced 782 million hits in one day, pushing out 7TB of data to the public.

In one day, the website experienced more

than a third of its average monthly use. “We average 30TB a month of data moving into and out of our network,” says Nugent. “AAPT’s internet service is very fast and has extremely low latency, so it serves us well.”

### Enhanced network scalability

Geographical and network proximity are the two most important factors in how quickly a website loads for an end user. AAPT EdgeCast CDN allows BOM to scale quickly and provide MetEye to millions of users, without the additional costs and delays of adding new infrastructure, people or connectivity.

“By adding the CDN to our existing internet service, we can now push our content across to the AAPT EdgeCast

caching servers, which brings that content a level closer to the end user,” says Nugent.

“Enhancing the page-loading speed means our customers stay happy with the services we provide. When BOM conducts public surveys, our website rates very highly for customer satisfaction.”

### Future plans

In the near future, BOM plans to replace its existing ISDN phone lines with AAPT’s SIP Voice service. This new IP service will triple the Bureau’s call capacity and can be adapted to meet its business requirements. For example, when extreme weather events occur, BOM can add more phone lines almost instantaneously to cope with fluctuations in demand.

## OVERVIEW

Australia’s Bureau of Meteorology required a fast, resilient and highly scalable method of managing a 30% annual increase in its bandwidth requirements. In 2012, the Bureau approached AAPT, its existing ISP and telephony service provider, to introduce AAPT EdgeCast CDN. With a CDN, the Bureau can easily manage bandwidth requirements and provide users with innovative new services such as MetEye, BOM’s advanced weather display interface.

## CHALLENGES

- Exponential growth in website popularity
- High cost of managing own CDN
- Geographically dispersed users
- Latency issues for overseas users

## SUCCESSSES

- Exceptional content streaming
- Value for money
- Fast content refreshes
- Latency dramatically reduced

[AAPT IS ONE OF AUSTRALIA’S LARGEST CORPORATE ONLY NETWORK PROVIDERS.](#)

AAPT owns and manages more than 11,000kms of fibre across our own national voice, data and internet network. We connect more than 174+ million voice calls and deliver 9073 terabytes of customer downloads every month. But the story of AAPT is about more than just statistics. Our value is not only in our network, our products and services, and our customer service, it’s also in the way we partner with you. We believe that having the best products is simply not enough.

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