



BUREAU OF METEOROLOGY

IMPROVING THE RESPONSIVENESS AND
PRODUCTIVITY OF AUSTRALIA'S LEADING
WEATHER ADVISORY BODY



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01

INTRODUCTION

The Bureau of Meteorology (Bureau) has been relied on by Australians for weather updates and advisories for more than 100 years. Through regular forecasts, warnings, monitoring and advice spanning the Australian region and Antarctic territory, the Bureau provides one of the most fundamental and widely used government services in the country.

The Bureau maintains a network of offices across seven regions (located within each state and territory capital), as well as field offices on neighbouring islands and across Antarctica. With such a disparate and remote collection of regional offices, connectivity is essential.

The Bureau's network infrastructure, consisting of a domestic IP network and satellite network, and ability to collect and transfer data in all weather conditions are crucial to providing weather services and warnings to Australians across the country.

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THE CHALLENGE

The Bureau required a satellite solution that would provide an exclusive infrastructure environment and connect remote sites across the organisation. The platform also needed to work seamlessly with the Bureau's domestic network.

In its search for a provider of the required solution, the Bureau commenced a tender process, and at the conclusion of the competitive process, Telstra was appointed to deliver the infrastructure driving improved connectivity across the organisation.

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THE SOLUTION

Telstra delivered a satellite solution by creating a fully managed IVPN Network for the Bureau. This solution provides increased bandwidth and capacity, and works seamlessly with the organisation's existing domestic network.

The solution centres on Telstra's V-SAT bandwidth sharing satellite platform, which can be scaled as demand dictates to provide the Bureau with a high level of control and monitoring capabilities allowing it to dynamically provide capacity where required.

Another crucial consideration for the Bureau's selection was the change from Ku band to C band frequency, which offers better performance and reliability during inclement weather, such as heavy rain. The change in frequency also provides complete coverage from a single satellite covering vast expanses of the Australian continent.

During implementation, the true geographical isolation of some sites and the importance of connective technology became apparent. For example, in order to deploy the solution on Willis Island, where an overnight ferry service operates once every six months, careful planning of staff and infrastructure deliveries needed to be undertaken.

Telstra overcame these unique and challenging implementation situations and finalised the deployment and testing of the Satellite VSAT Private Lease Services in eight sites – Lord Howe Island, Willis Island, Cocos Island, Townsville, Captains Flat, Giles, Mt Koonya and Warruwi.

The network is based on iDirect INFINITI platform, and C-band capacity on JSAT-2A satellite.

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THE BENEFITS

Considering the isolation in which many sites operate, one of the key benefits of the solution is improvement of staff welfare, responsiveness and productivity.

The solution provides the flexibility and bandwidth required to transfer data to the Bureau's data centre, and makes video conferencing possible between sites to enable improved collaboration. For instance, all employees can now participate in all staff meetings and video conference in to meetings with colleagues – something not previously an option.

This solution gives the Bureau greater flexibility to share bandwidth between sites too. If, for example, an extreme weather event occurs in a specific area, extra bandwidth can be devoted to that site by Telstra changing the pool allocation.

Such flexibility is not viable in a standard point-to-point VSAT solution. Staff productivity has also improved with faster network access, which allows staff at these sites to access data faster.

"This solution has provided the extra capacity we needed to operate efficiently, with the added benefit of connecting staff in remote sites to a faster network and enabling them to interact with their colleagues via video conference. The data we need for analysis is now more reliable thanks to the C band solution, and we are able to expand the solution without incurring additional operational costs, giving us even greater flexibility across our network."

Barry Nugent
CTO, Bureau of Meteorology

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