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Telstra Plagued With Series of Outages

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Australia's major communications company, Telstra, has had a bad string of months. During the four month period from February 2016 to May 2016, Telstra has suffered seven outages. Some of these have denied millions of customers access to voice and data services for hours.

Telstra

Telstra Corporation Limited is Australia's largest telecommunications and media company. It provides voice, mobile, and Internet services as well as pay television and other entertainment products. It builds and operates the telecommunication networks used to deliver these services

Telstra's Troublesome Four Months – February through May, 2016

Telstra's mobile network had five major communication outages in February and March. These were followed by two more ADSL[1] outages in May. To compensate its mobile customers, Telstra offered two 'free data' days to its customers.

In an effort to improve its service, Telstra is investing AU$50 million into network improvements to improve monitoring for faults, to shorten recovery times, and to increase the capacity and path diversity of its critical signaling channels.

The multiple outages over this four-month period are described below. Telstra constantly stresses in its marketing messages the dependability of its network. However, it is clear that Telstra's network is as prone to failure as any other network.

February 22

Telstra's first outage in this period occurred on February 22, 2016. Embarrassingly, it was a human error.[2] There was evidence of an increasing degradation in the health of one of the nodes in the network, and the decision was made to isolate the node from the network. A Telstra engineer took the node down for maintenance, but he failed to follow the correct procedure for rerouting traffic. Rather than transferring the customers connected to that node to other nodes in the network, he reconnected them to the malfunctioning node.

[1] Asymmetric digital subscriber line (ADSL) is a type of digital subscriber line technology that enables faster data transmission over copper telephone lines than a conventional modem can provide.
[2] Australia's Telstra Downed by Fat Finger, *Availability Digest*; March 2016. http://www.availabilitydigest.com/public_articles/1103/telstra_outage.pdf

Suddenly, about 10% of Telstra's customers – about 1.5 million businesses and individuals – were without mobile service or home telephone service. They could not access their data. They could not make calls, browse the Internet, or check social media.

It took two hours for Telstra to restore voice services. Data services were restored 90 minutes later.

March 1

Just one week later, on March 1, a second outage caused widespread issues across the telco's prepaid mobile network. Customers had limited ability to make calls and to access data services.

March 17

On Thursday, March 17th, Telstra suffered an hours-long national voice and data outage that lasted into Friday, March 18th. This was the third outage in less than a month. Up to 8 million Telstra users sporadically lost Internet, phone, and SMS service. This represents about half of Telstra's 16.7 million mobile customers. Furthermore, with no Internet service, merchants' POS terminals were out of service. They could not accept credit cards or debit cards for payment.

With no Internet service, Uber drivers could not find their destinations. Users of Amazon Web Services could not connect to Amazon. They had no access to the Amazon web services they needed to conduct their business nor access to their data stored on Amazon.

No one could contact Telstra to find out what was going on because Telstra used its own Internet service.

Four days later, a half-million people in Victoria and Tasmania were taken off of the grid for a few hours.

March 22

On March 22, voice calls for Telstra mobile and landline customers were down for several hours in Victoria and Tasmania. This outage was caused by a card failure in one of Telstra's Victorian gateways.

May 2

On May 2, another outage hit Telstra's ADSL network in Queensland. This outage again was caused by a hardware fault. It was repaired in thirty minutes.

May 20

Telstra lost its ADSL network Friday morning, May 20th. The outage was due to a "complex network management device fault." The "management device" controlled the interaction between the network and all of the different types of modems used by its customers.

Service was restored that evening, but customers had to reset their ADSL modems in order to get back online. This procedure was not obvious to many Telstra customers. Telstra pointed them to a support page that provided the procedure for resetting modems. However, it took until Tuesday for many customers to reconnect to the network.

May 22

Telstra customers also lost mobile data services on Sunday, May 22nd, after a hardware fault.

Telstra's Move for Improvement

Customer Compensation

In an effort to compensate customers for the outages, Telstra offered them a pair of 'free data' Sundays on which customers could download any amount of material they desired. The first free data day on Sunday, February 14th, was quite successful. Telstra customers downloaded 2.3 million movies. It was Telstra's busiest day ever.

Its second free data day on Sunday, April 3rd, backfired. Heavy demand caused massive delays. Many downloads took hours to complete or even failed to start. Thousands of customers took to social media to lambast Telstra for the Internet delays.

Network Improvements

More and more people are working at home, all adding to Internet traffic. Telstra's data traffic is up 50% in the last year, putting greater strain on its network.

The patience of its users is running out. Other providers are luring disgruntled customers. Vodafone has offered a free month of service for customers who move to its services. Telstra did not rank in the top five of a customer satisfaction survey of mobile services conducted by Choice, an Australian online community offering paid surveys for market research.

Following a review of its outages by internal and external specialists, Telstra has committed to spend AU$50 million on upgrading its network. AU$25 million will be spent on improving monitoring of its network, and AU$25 million will be targeted towards improving recovery times.

Telstra is also adding capacity to its core networks and is increasing the number of redundant links to its nodes. It has added new software features that limit the number of customers who would be required to re-register following a fault as well as increasing the capacity to handle a large number of re-registrations occurring simultaneously. It is making other network changes to reduce the impact of international IP traffic on domestic traffic.

Summary

Telstra has suffered a string of outages over the last few months due to a number of causes, from human errors to hardware failures. The telco is aggressively investing in major improvements in its network to stem the flow of customer loss to competing services.

Acknowledgements

Information for this article was taken from the following sources:

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