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## IoT malware and ransomware attacks on the incline: Intel Security

Intel Security has released a five-year retrospective report on industry threats, finding people have become dependent on devices at the cost to their security and privacy, allowing malware and ransomware attacks to rapidly grow.



By [Asha Barbaschow](#) | September 2, 2015 -- 01:11 GMT (09:11 GMT+08:00) | Topic: [Security](#)

Graphics processing units (GPU)-based malware and ransomware attacks are growing rapidly, due to the increase in data, bigger networks, and the Internet of Things (IoT), according to Intel Security's five-year retrospective threat report.

The [report \[PDF\]](#) (<http://www.mcafee.com/us/resources/reports/rp-quarterly-threats-aug-2015.pdf>), titled



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claims, online

since 2010. It

compares what researchers thought would have happened five years ago to what has happened in hardware and software security threats.

"We all thought that more users, more data, bigger networks, and many more types of devices and other targets like the cloud, combined with more attacks, clever new malware, and increasingly sophisticated actors were creating a perfect security storm," the report said.

"Most of these predictions came true. If anything, the adoption of cloud computing, IoT devices, and mobile devices moved faster than we expected; our 2010 prediction of 31 billion internet-connected devices by 2020 now seems an underestimate."

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The report also said people have become dependent on devices in their environments, and are willing to sacrifice security and privacy.

"Consumers have very quickly adopted cool technology, we did it with mobile phones, then smartphones, tablets, and now wearables.

"We believed -- and continue to believe -- that whenever enough devices of a certain type create a lucrative market, attacks on those devices will begin."

According to Intel Security, IoT devices are just beginning to be exploited. The report found the variety of devices, operating systems, and versions provides a near-term resistance to attacks, as few have a large enough installed-base to attract online thieves.

"We are seeing just the beginnings of attacks and breaches against them," Intel Security said.

"It is only a matter of time until IoT device threats are widespread. Attackers are not after the devices themselves, but the data or gateway capability that they enable -- [they] want the easiest way in, and these devices often provide under-defended access to target-rich networks."

Intel Security said it analysed real-world attack patterns in the second quarter of 2015, which provided insight into the attack volumes that customers were experiencing.

The analysis found that ransomware continued to grow rapidly, with the number of new ransomware samples rising 58 percent in Q2. According to Intel Security, the total number of ransomware samples also grew by 127 percent year-on-year, with the company attributing the increase to fast-growing new families such as [CTB-Locker](http://www.zdnet.com/article/windows-10-scam-email-will-encrypt-your-files-for-ransom/) (<http://www.zdnet.com/article/windows-10-scam-email-will-encrypt-your-files-for-ransom/>) and [CryptoWall](http://www.zdnet.com/article/cryptowall-ransomware-costs-victims-millions-dollars-fbi/) (<http://www.zdnet.com/article/cryptowall-ransomware-costs-victims-millions-dollars-fbi/>).

"Only one year in, the Cryptowall ransomware has already claimed \$18 million from computer users, and it's only likely that this will continue," Mike Sentonas, vice president and CTO, Security Connected, Intel Security said.

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"Paying attention to cyber security has never been more important and we fully expect to see a rise in attacks across both personal and corporate environments in the next quarter and beyond."

The analysis also found that every hour more than 6.7 million attempts were made to entice customers into connecting to risky URLs, via emails and browser searches; more than 19.2 million infected files were exposed to customers' networks; an additional 7 million PUPs attempted installation or launch; and 2.3 million attempts were made by its customers to connect to risky IP addresses or those addresses attempted to connect to customers' networks.

The release of the report marks the five-year anniversary since [Intel Security purchased McAfee](http://www.zdnet.com/article/why-did-intel-buy-mcafee-for-7-7-billion/) (<http://www.zdnet.com/article/why-did-intel-buy-mcafee-for-7-7-billion/>) for \$7.7 billion.

"Five years ago, we saw security as a looming impediment," Intel Security said of the purchase.

"If people started to lose confidence in their devices, connections, or services because of the loss of privacy, security, or even safety, it would slow the rest of the market.

"Unlike some of the hardware-specific issues that were straightforward for Intel to address organically, we concluded that we could not do this alone, and that we needed McAfee's security expertise to help remove that growth barrier."

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## NBN fires back: Fixed wireless, satellite affordable and accessible in remote Australia

NBN's satellite and fixed-wireless solutions are delivering higher-speed broadband than remote areas have ever seen before, making these services both accessible and affordable, the company has argued.



By [Corinne Reichert](#) | September 2, 2015 -- 06:12 GMT (14:12 GMT+08:00) | Topic: [NBN](#)

The company rolling out Australia's National Broadband Network (NBN) has hit back at claims that its services in remote areas are too expensive and don't offer enough data, saying its fixed-wireless network is providing high-speed broadband in rural and Indigenous areas at an accessible price, and its soon-to-be-launched long-term satellite solution will extend this.

Speaking at the annual Australian Communications Consumer Action Network (ACCAN) national conference, Gavin Williams, general manager of fixed wireless and satellite at NBN, said the company's fixed-wireless service is making progress in equalising broadband access throughout the country.

"Before fixed wireless, homes and businesses were supported with low-quality DSL, with high-cost mobile broadband, potentially with satellite ... or with nothing," he pointed out on Wednesday morning.

He said the NBN has now reached almost 300,000 premises with the fixed-wireless network, at a penetration rate of 22 percent. The network is marketed as a 25Mbps down/5Mbps up service, but is now trialling 50Mbps/20Mbps services, according to Williams, who added makes it "equal to the best in the world".

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#### **NBN under fire for affordability, accessibility**

Speaking via a pre-recorded video at Tuesday's ACCAN conference, Communications Minister Malcolm Turnbull acknowledged that while the technology exists to roll out high-speed broadband to the entire country, affordability still prevents access in some areas.

"The biggest barrier to internet access, as I've always said, is not technology; it is affordability. It's income, or lack of income. So making sure that broadband is affordable, and telecoms generally is affordable, as I've said, is critical.

"That is a very important part of our agenda with the NBN."

The minister pointed towards fixed-wireless networks now being implemented in regional and remote areas, as well as the new satellite service launching in October.

"We will have the whole country covered," he said.

Australian Competition and Consumer Commission (ACCC) chairman Rod Sims also noted that once the rollout has been completed, the NBN will provide less of a discrepancy in access due to affordability.

"With the rollout of the NBN, broadband will become available to all Australians and will be considered essential much in the same way as the home telephone previously," he said.

Fixed wireless and satellite [will each cover](http://www.zdnet.com/article/nbn-october-map-update-extending-to-three-year-outlook/) 5 percent and 3 percent of Australian premises, respectively, once the rollout is complete. For the government, these two services are the most expensive in terms of the cost per premises out of all the technologies being implemented.

Satellite and fixed wireless cost AU\$7,900 and AU\$4,900 per premises, respectively; fibre to the premises in existing premises costs AU\$4,400, with new premises less than half the cost, at AU\$2,100; fibre to the node costs AU\$2,300 per premises; and hybrid fibre-coaxial

[\(http://www.zdnet.com/article/nbn-under-fire-for-affordability-accessibility/\)](http://www.zdnet.com/article/nbn-under-fire-for-affordability-accessibility/)

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(HFC) is the cheapest technology, at AU\$1,800 per premises.

The completion date for fixed wireless should fall in line with the NBN rollout by 2020 -- "but we think it will be a little bit sooner for fixed wireless", Williams suggested.

NBN's satellite service on Tuesday [came under fire](http://www.zdnet.com/article/nbn-under-fire-for-affordability-accessibility/) (<http://www.zdnet.com/article/nbn-under-fire-for-affordability-accessibility/>) for its current inability to provide equal access to services in remote, rural, and Indigenous areas due to a lack of competition, the high cost of satellite services, and the low data allowances provided under these services.

Michelle Rowland, Shadow Assistant Minister for Communications, claimed that the Coalition government is rolling out a network that is "fundamentally unfair", as prices have increased and charges have been added on to services.

"This government has introduced a new range of NBN taxes and charges that will fall on young families and vulnerable Australians," she argued.

"And under the Coalition, the quality of your broadband will be determined by your location."

In order to remedy the issue of a lack of affordable access in remote areas, NBN [brokered a deal](http://www.zdnet.com/article/optus-to-operate-nbn-co-satellites/) (<http://www.zdnet.com/article/optus-to-operate-nbn-co-satellites/>) with Optus' satellite division in February last year, with the federal government providing [millions of dollars in funding](http://www.zdnet.com/article/nbn-co-brings-back-regional-broadband-subsidy/) (<http://www.zdnet.com/article/nbn-co-brings-back-regional-broadband-subsidy/>) for the new project.

The government last month revealed [the launch date](http://www.zdnet.com/article/nbn-satellites-set-for-october-1-launch/) (<http://www.zdnet.com/article/nbn-satellites-set-for-october-1-launch/>) for the first of the two new AU\$620 million Ka-band satellites would be October 1, with commercial services availability expected within [the first six months of 2016](http://www.zdnet.com/article/first-nbn-satellite-to-be-launched-in-september/) (<http://www.zdnet.com/article/first-nbn-satellite-to-be-launched-in-september/>). The second satellite is planned for launch in 2016.

The two new satellites will enable high-speed broadband access for the 3 percent of the Australian population not living within the fixed-wireless, fibre, and HFC NBN network footprint, and will replace the [interim satellite service](http://www.zdnet.com/article/nbn-awards-300m-interim-satellite-tender/) (<http://www.zdnet.com/article/nbn-awards-300m-interim-satellite-tender/>) put in place by the former Labor government -- which has seen [so many sign-ups](http://www.zdnet.com/article/nbn-interim-satellite-service-a-victim-of-its-own-so-many-sign-ups/) (<http://www.zdnet.com/article/nbn-interim-satellite-service-a-victim-of-its-own-so-many-sign-ups/>)



[success/](#)) that broadband speeds for satellite customers slowed to a crawl.

Williams admitted the interim satellite service had seen less than desirable results in terms of speeds and download allowance.

"I'm the first to acknowledge the bad rap the interim satellite service has had," he said. "So, I can understand a level of scepticism that many users in regional and remote Australia have about the nature of the [new] satellite service."

However, he said that the long-term satellite service will remedy the situation, providing more accessible broadband for those in rural areas.

"These [satellites] were designed ground up for the job at hand: To connect regional and remote Australia. The aggregate capacity supported by these satellites is 135 gigabits per second.

"To put it in perspective, the full capacity of the interim satellite service is ... closer to 3 gigabits per second."

The new satellite service, once launched, will also each have IP address' usage capped to prevent capacity being outstripped by demand again.

"We will institute a new stringent 'fair use' policy to ensure a minority of very heavy users cannot crowd out the majority," [Turnbull said](http://www.zdnet.com/article/government-stumps-up-18-4m-to-fix-nbn-satellite-service/) (<http://www.zdnet.com/article/government-stumps-up-18-4m-to-fix-nbn-satellite-service/>) in March last year.

Deena Shiff, director of the Regional Telecommunications Independent Review Committee, argued on Tuesday that it is unfair to criticise heavy users of satellite services, as it is their only link to broadband, while those living in urban areas can spread their usage over several plans and internet access points.

"A satellite user is going to be paying a lot more," she said. "In practice, where there's choice of offerings, clearly, you will shop around for the best offer and you will optimise your usage between Wi-Fi, VoIP, fixed, and mobile. And that opportunity simply doesn't exist for a lot of regional users.

"When people talk about data hogs on satellite, it's a bit offensive because they rely so



much on communications for their basic needs, and also their business use and their consumer use within a homestead is really sitting within the one plan, so they tend naturally to be above the average users."

Despite this cap, Williams said speeds will be significantly higher for remote users than any service they have seen before.

"This does represent a very significant investment. It's the biggest deal so far for communications in the bush. It'll offer wholesale speeds up to 25-meg down, 5-megabits up; it's the best consumer broadband service by far that's ever been available in these areas," he said.

Andrew Scholl, GM of Public Affairs at NBN, said on Wednesday that these speeds prove that access to broadband will be equal thanks to the NBN, and that the caps are conversely in place to ensure this equality.

"In terms of speeds and accessibility, the NBN provides an equal service to everybody. We are mandated by the government to deliver 25Mbps speeds to every Australian, whether they're located in the city or the bush," he said in a statement to ZDNet.

"In terms of prices, retail prices for the interim satellite service start at AU\$24, so it's hard to see how they could be characterised as expensive or unaffordable. RSPs are in the midst of developing a range of plans for the long term satellite platform -- from entry-level plans through to plans with larger data allowances that are more suitable for heavy end users.

"The fair use provisions are there to enable a fair go for all. Satellite capacity is a finite resource; we have to make absolutely sure that people are not unfairly disadvantaged."

Turnbull has previously said that the launch of the new satellites will provide higher speeds for those living in regional and remote areas.

"The NBN long-term satellite service will be a game changer for those living in the bush, and will help bridge the digital divide currently experienced by many," Turnbull said in July.

"These next-generation Ka-band satellites will deliver world-class performance and peak speeds of up to 25 megabits per second regardless of where people live."

Williams also referred to the issue of distance education being reliant on satellite services, outlining plans by NBN to improve this in the future.

"One area that's quite exciting is the potential for this technology to do a much better job of serving kids who are learning at home for distance learning," he said.

"We're working on a concept with the Department of Education and groups like the Isolated Children's Parents' Association on utilisation of a second dedicated port on the network device in the home that can be allocated to distance education applications, supporting a direct link to an education department to support video conferencing, and utilisation of allowances distinct from anything else that they might use."

Speaking in Sydney recently, Parliamentary Secretary for Communications Paul Fletcher also said that a [distance education working group](http://www.zdnet.com/article/nbn-satellites-set-for-october-1-launch/) (<http://www.zdnet.com/article/nbn-satellites-set-for-october-1-launch/>) has been established in Canberra to examine how the new NBN satellites could be leveraged to improve distance education.

"One of the things NBN is looking at is: Could you use the long-term satellite when it launches next year, take advantage of the fact that the customer equipment will have multiple ports?" he said.

"So over the first port, you'd have your standard consumer-grade service, and over the second port, that could be set aside for an education network, which is administered in each state by the relevant education department."

Williams lastly pointed towards NBN initiatives that are aimed at providing internet access for Indigenous communities, saying the company is piloting a hotspot trial in several remote communities in the Northern Territory wherein members of a community could share internet access at a single point.

"We're committed to giving regional and remote Australia world-class broadband," Williams said.

"The fixed-wireless service is delivering that today, being halfway through its rollout. There's a massive investment in these technologies, and, rightly, it will leave regional and remote Australians with access to great broadband at affordable prices."

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