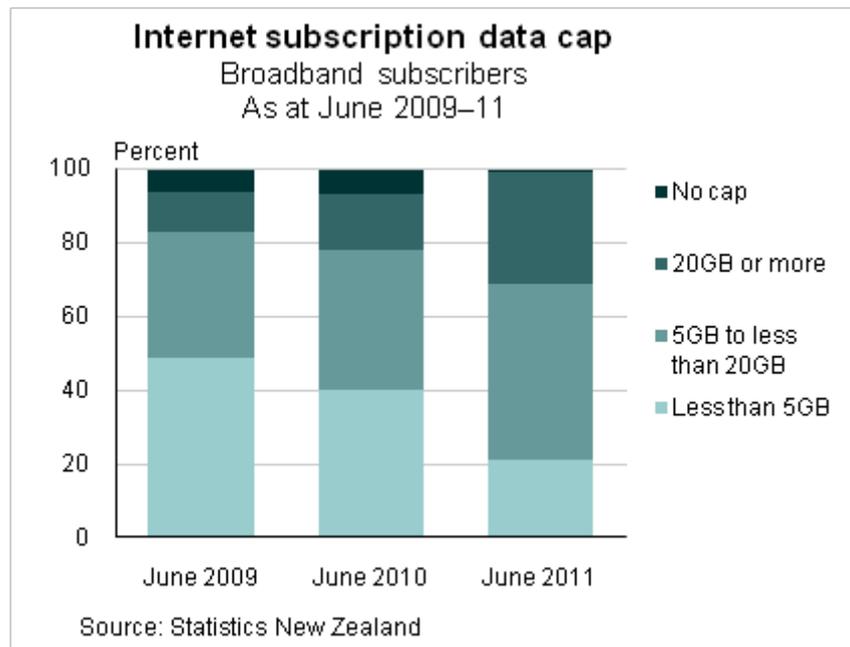


# Internet Service Provider Survey: 2011

Embargoed until 10:45am – 14 October 2011

## Key facts

- The total number of broadband subscribers increased by 14 percent, to almost 1.5 million between June 2010 and June 2011.
- The largest growth rate of all broadband connections was in cellular, cable, and satellite connections. When combined, these increased almost 50 percent since June 2010.
- Almost 80 percent of broadband subscribers at June 2011 had a data cap of 5 gigabytes (GB) or more, with the most common cap between 5 and 20GB.
- The number of subscribers with an upload speed of 1.5Mbps or more increased by almost three quarters since 2010.
- The average subscriber consumed 9GB of data per month between June 2010 and June 2011.
- In the three months prior to 30 June 2011, 1.9 million New Zealanders had active Internet subscriptions via a mobile phone.



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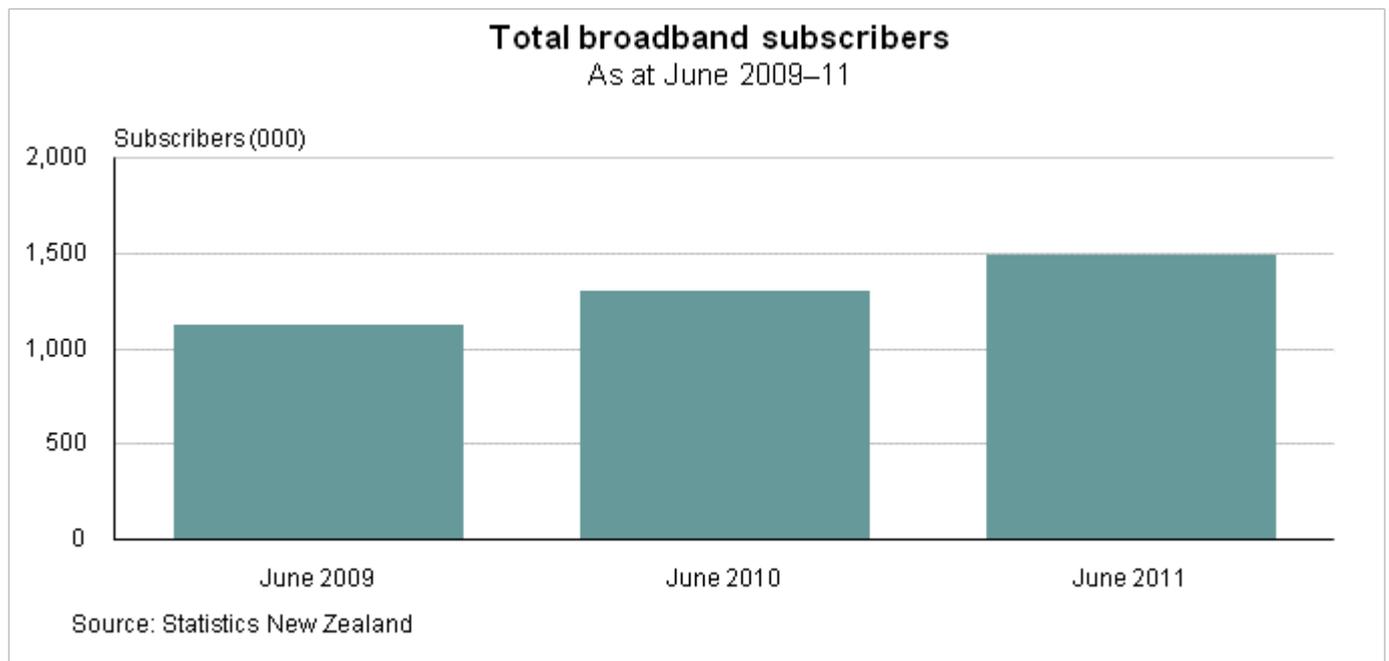
## Commentary

- [Number of broadband subscribers and connection types](#)
- [Consumers choosing plans with larger data allowance](#)
- [Unmetered data](#)
- [More of us have faster Internet](#)
- [Mobile phone connections becoming more popular](#)
- [Botnets the most commonly monitored Internet security threat](#)
- [Most providers introducing Internet Protocol version 6 within two years](#)

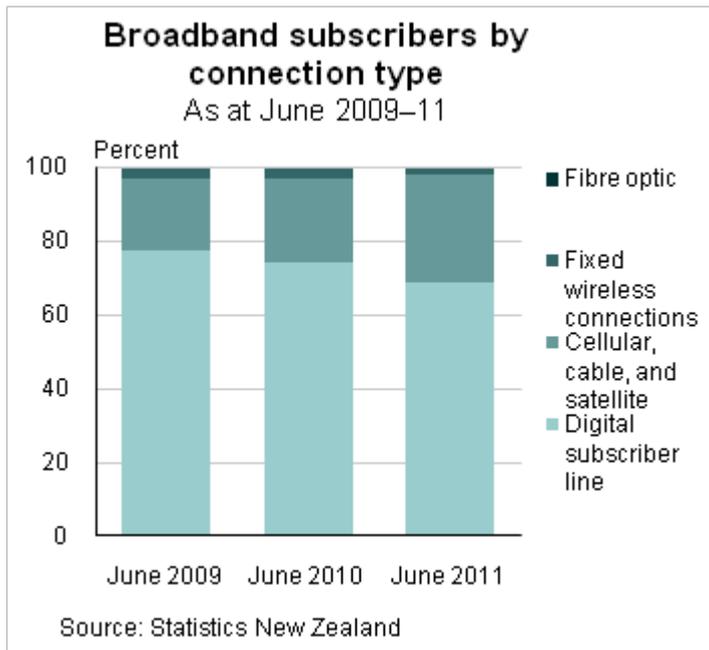
The Internet Service Provider (ISP) Survey collects information on the provision of Internet access to New Zealand households and businesses. For more information on the purpose of this survey and what data is collected, see the [Definitions](#) section.

### Number of broadband subscribers and connection types

The total number of broadband subscribers increased by 14 percent between June 2010 and June 2011, to almost 1.5 million. Broadband subscribers accounted for over 85 percent of all Internet connections.



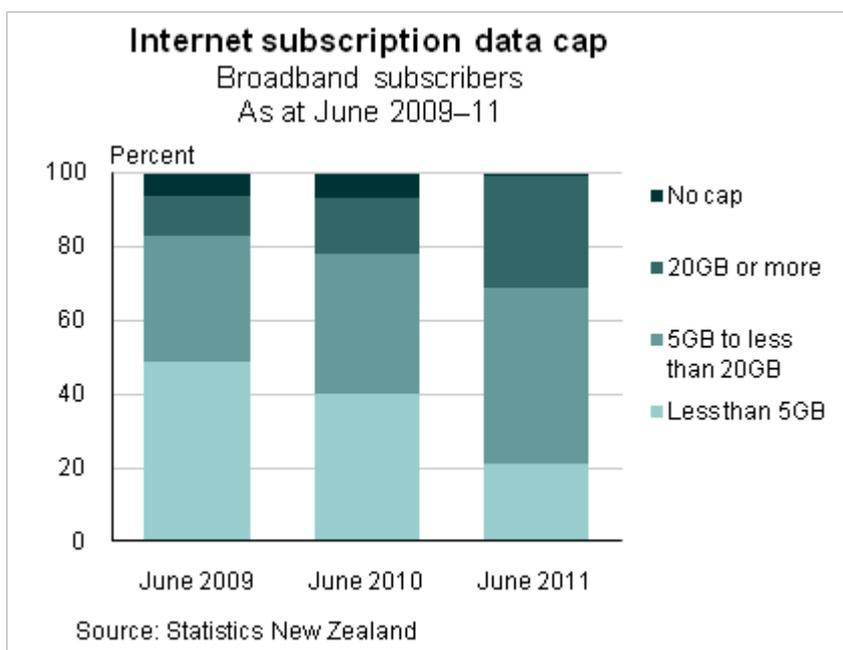
Digital Subscriber Line (DSL) continued to be the most popular broadband connection type, with over 1 million subscribers at 30 June 2011. However, the proportion of broadband subscribers with DSL has declined each year since 2009, while alternative connection types such as cellular, cable, and satellite continue to increase from year to year. Although fibre optic connections remain the least common connection type, the number of subscribers increased by over 40 percent in the year ended June 2011.



## Consumers choosing plans with larger data allowance

Internet subscribers are opting for plans that allow them to download and upload more data at a fixed cost. In the year ended June 2011, there was a 134 percent increase in the number of subscribers with a data cap of 20 to 50 gigabytes (GB) per month – 20GB of data is the equivalent of watching about 100 hours of streaming video.

In 2009 and 2010 the most common data cap among broadband subscribers was less than 5GB. However, with over 700,000 subscribers at June 2011, the most common data cap became 5 to 20GB. In the year ended June 2011, more subscribers opted for plans with mid-range data caps. This was due to a general shift to larger caps, as well as a sharp decrease in the number of subscribers with no data cap, down 75 percent. This pushed more subscribers into the mid-range data caps.



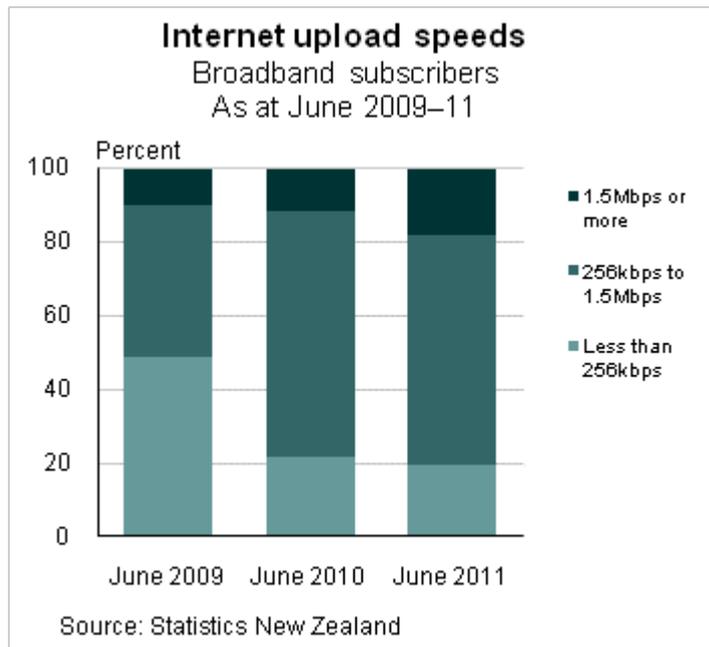
## Unmetered data

Data is unmetered if it is not being charged to subscribers and is not metered for a data cap. New Zealand-based 'on demand' websites such as TVNZ Ondemand are often unmetered by ISPs. In the year ended June 2011, the average amount of unmetered data consumed per subscriber was 0.8GB per month.

## More of us have faster Internet

The proportion of subscribers with upload speeds of greater than 1.5 megabits per second (Mbps) increased by 73 percent in the year ended June 2011, while the slower speed categories declined. With an upload speed of 1.5Mbps, it would take about 15 seconds to upload a photo to the Internet. In 2009, subscribers with an upload speed of less than 256 kilobits per second (kbps) accounted for half of all broadband subscribers. This dropped to less than 20 percent in 2011.

The proportions of subscriber download speeds remained similar between 2010 and 2011.



## Mobile phone connections becoming more popular

In the three months prior to 30 June 2011, over 1.9 million New Zealanders had a dedicated subscription (via a mobile phone) or used a mobile phone to access the Internet. An active mobile handset subscriber is a subscriber who has used a mobile phone to connect to the Internet within the last three months. Casual and incidental browsing is included. Ten percent of mobile subscriptions at June 2011 were dedicated data subscriptions. A dedicated data subscription is a subscription over a mobile network which is purchased separately to voice services. The majority (90 percent) of mobile phones accessing the Internet used standard mobile subscriptions.

## **Botnets the most commonly monitored Internet security threat**

Forty-five percent of ISPs monitor Internet traffic for signs of compromised security. These can include botnets, pharming, phishing, and trojans. Nearly one-third of ISPs who monitored security threats reported their most common activity was monitoring for botnets. A botnet is a collection of compromised computers that, although their owners are unaware of it, have been set up to forward transmissions (including spam or viruses) to other computers on the Internet.

In the year ended June 2011, of ISPs that monitor for security, 4 percent of subscribers showed signs of compromised security.

## **Most providers introducing Internet Protocol version 6 within two years**

Every computer system and device connected to the Internet is assigned an Internet Protocol (IP) address, which is similar to having a telephone number. The current process of distributing IP addresses is called Internet Protocol version 4 (IPv4). IPv4 is gradually being replaced by IPv6, a newer version of IP that greatly expands the available address space.

At June 2011, 30 percent of ISPs already had IPv6 available to subscribers, 45 percent intended to have it available within two years and a further 10 percent within four years. Fifteen percent of ISPs had no plans to make it available.

Forty-three percent of ISPs that hadn't yet moved to IPv6 reported a lack of user demand as a barrier to installing it. A lack of resources, and business needs taking priority were the second-largest barriers, with 36 percent of ISPs reporting both.

## Definitions

### About the Internet Service Provider Survey

The Internet Service Provider (ISP) Survey collects information on the provision of Internet access to New Zealand households and businesses. This information allows us to measure the global connectivity of New Zealanders, which is regarded as an important factor in accelerating economic growth and social wellbeing. Measuring New Zealand's global connectivity will help individuals, communities, businesses, and government understand the role of information and communication technology in the economy and society.

### Further definitions

**Active subscriber:** this is a customer who within the last 90 days has accessed the Internet or paid for access to the Internet through an ISP. Under this definition, the following inclusions and exclusions are made:

Includes:

- all subscribers who obtain access to the Internet through an ISP
- both dial-up and broadband connection subscribers.

Excludes:

- web-hosting-only subscribers
- email-only subscribers

**Active mobile handset subscriber:** a subscriber who has used a mobile phone to connect to the Internet within the last three months.

**ANZSIC06:** Australia and New Zealand Standard Industrial Classification 2006 codes. These are the codes used to classify and categorise all businesses on the Statistics New Zealand Business Frame. See [Data quality](#) for the specific codes used to classify Internet Service Providers Survey data.

**Business Frame:** a register maintained by Statistics NZ of all economically significant businesses operating in New Zealand.

**Broadband:** for the purpose of this survey, broadband is defined as those technologies that provide an 'always on' service. This includes digital subscriber line (DSL), cable, fibre optic, satellite, cellular and fixed wireless.

**Data cap:** an Internet subscription data cap is a method employed by ISPs to limit the volume of data downloaded and/or uploaded by subscribers during a fixed period, normally a month. Once a fixed data cap has been reached, lower speed or extra access charges may apply. Also referred to as a data allowance.

**Dial-up connection:** connection to the Internet via a dial-up modem and software utilising the public switched telephone network (PSTN). Includes integrated services digital network (ISDN) and analog connections.

**Economically significant enterprises:** enterprises that are engaged in the production of goods and services in New Zealand. They must meet at least one of the following criteria:

- annual expenses or sales subject to GST of more than \$30,000
- two-month rolling mean employee count of greater than three
- part of a group of enterprises
- registered for GST and involved in agriculture or forestry
- over \$40,000 of income recorded in the IR10 annual tax return (this includes some businesses in residential property leasing and rental).

**Enterprise:** a business or service entity operating in New Zealand. It can be a company, partnership, trust, estate, incorporated society, producer board, local or central government organisation, voluntary organisation, or self-employed individual.

**Gigabyte (GB):** a measure of the volume of data. Gigabyte represents a data unit of one billion bytes.

**Internet protocol (IP):** a system for assigning a unique identifier to all devices connected to the Internet. Each device is assigned, and can be identified by, a unique address; a series of numbers (similar to a phone number).

**Internet Protocol version 6 (IPv6):** the next generation Internet Protocol which greatly expands the IP number space and is the approved standard to replace IPv4.

**Internet Service Providers (ISPs):** Businesses that supply Internet connectivity services to individuals, households, businesses and other organisations. We breakdown the results of the Internet Service Providers Survey by size of provider. There are five sizes:

- Very small: Providers with between 1 and 100 subscribers
- Small: Providers with between 101 and 1,000 subscribers
- Medium: Providers with between 1,001 and 10,000 subscribers
- Large: Providers with between 10,001 and 100,000 subscribers
- Very large: Providers with 100,001 or more subscribers.

**Mbps and kbps:** Mbps and kbps are measures of download and upload speed. Mbps stands for megabits per second (1,000,000 bits per second) and kbps stands for kilobits per second (1,000 bits per second).

**Rolling mean employment (RME):** This is the 12-month moving average of the monthly employment count, derived from employer monthly schedule data.

## **Related links**

### **Upcoming releases**

Internet Service Providers Survey: 2012 will be released in October 2012. The release calendar lists all our upcoming information releases by date of release.

### **Past releases**

See [Internet Service Provider Survey – Information releases](#) for links to past releases.

### **Related information**

[Information and Communication Technology Supply Survey](#) is released every two years and measures the sale of goods and services from businesses associated with Information and Communication Technology (ICT) industries.

[Household Use of Information and Communication Technology](#) is released every three years and provides information on the access households and individuals have to ICT.

[Government Use of Information and Communication Technology](#) was a one-off release that looked at government computer and Internet use, website features, and expenditure on ICT.

[Business Operations Survey \(BOS\) – Business Use of Information and Communication Technology](#) provides information on the current state of ICT use by businesses as well as considerations, activities, and outcomes. Every second year a Business Use of ICT module is included in the annual Business Operations Survey.

## Data quality

### Period specific information

This section has information about data that has changed since the last release.

- Population size
- Response rates
- Consistency with other periods or datasets
  - Data source
  - Scope
  - Target population
  - Survey population
  - Methodology
  - Questionnaire changes
- Timing of published data

### General information

This section contains information about data that has not changed between releases.

- Reference period
- Accuracy of the data
- Consistency of terms and variables
- Confidentiality
- More information

## Period specific information

### Population size

The population size has remained stable since 2009 when the Internet Service Provider (ISP) Survey moved to an annual collection from six-monthly. As the ISP Survey is a census of all Internet Service Providers in New Zealand, this is expected. Small changes in the population size can be explained by:

- new businesses being created and others going out of business, including ISPs absorbing other ISPs
- change in definition of the scope of the survey
- gaps in population selection method.

### Response rates

The target response rate for the Internet Service Provider Survey: 2011 was 85 percent overall. A 100 percent response rate was required for key respondents. The overall response rate achieved was 91 percent and 100 percent for key respondents.

## **Consistency with other periods and datasets**

Changes have been made to the Internet Service Provider Survey: 2011, which affect comparability of data to previous surveys.

### ***Data source***

The Internet Service Provider Survey is a survey sent to all New Zealand-based Internet Service Providers. This release provides the results of the ISP Survey: 2011.

### ***Scope***

Connections to the Internet via mobile phone were included for the first time in 2011 (see Questionnaire changes below). As such, the scope of the questionnaire no longer requires Internet connectivity to be “permanent or regular”. Mobile phones are becoming a preferred method to access the Internet and in order for the ISP Survey to cover all businesses that supply Internet connectivity, this change was required. The purpose of this change is to improve the coverage of ISPs despite the device used for Internet access.

### ***Target population***

The target population is defined as: 'All resident New Zealand Internet Service Providers', where Internet Service Provider were defined as economically significant businesses that supply Internet connectivity services to individuals, households, businesses, and other organisations in New Zealand. As above, the words “permanent and regular” (Internet connectivity) have been removed from the target population definition to accommodate the inclusion of mobile phone connections.

For a definition of economically significant businesses, please refer to the Definitions section.

### ***Survey population***

Businesses who provide Internet connections via a mobile phone are now included in the survey population.

Businesses that provided other Internet services such as web and domain hosting, but who did not provide ISP services, were excluded from the population. This was because the above businesses were not strictly classified as ISPs. Web-hosting units do not interact directly with the public. Since the public access their website through an ISP, the web-hosting units' activity was already covered by the survey. Including these businesses would have resulted in double counting.

Businesses that provided occasional or unmetered access (including Internet cafes, kiosks, libraries, and universities) were also excluded. The activity of this group was covered by the ISP each business subscribed to, so they did not need to be surveyed separately.

### ***Methodology***

Several changes were made to the population selection process. In the past (2005–2009) lists of ISPs obtained from NetGuide and Internet NZ were used to select the population. From 2010 onwards the population was sourced from the Statistics New Zealand Business Frame. The population was defined in terms of the ANZSIC06. It specifically included businesses in:

**ANZSIC J591000:** this code classifies Internet service providers and web search portals. It includes businesses mainly engaged in providing Internet access services. Also included are businesses which provide web search portals used to search the Internet.

**ANZSIC J580100:** this code classifies wired telecommunications network operation. It includes businesses mainly engaged in operating, maintaining, or providing access to facilities for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Businesses primarily operate fixed (wired) telecommunications infrastructure, but may also utilise other types of technologies in order to deliver services.

**ANZSIC J580200:** this code classifies other telecommunications network operations. It includes businesses mainly engaged in operating and maintaining switching and transmission facilities that provide omni-directional or point-to-point communications via wireless telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies, including communications via airwaves and through satellite systems.

**ANZSIC M70000:** this code classifies computer system design and related services. It includes businesses mainly engaged in providing expertise in the field of information technologies such as writing, modifying, testing, or supporting software to meet the needs of a particular consumer; or planning and designing computer systems that integrate computer hardware, software, and communication technologies.

These ANZSIC codes are used in conjunction with previous final survey lists and a key word search.

Two new words were added to the key word search: "mobile" and "cellular". This was to ensure that ISPs who provided Internet connections via a mobile handset were captured.

## ***Questionnaire changes***

The following changes have been made to the ISP questionnaire for 2011:

- The definition of an ISP has changed. The words "permanent or regular" have been removed from the previous definition. It now reads: "ISPs are defined as businesses that supply Internet connectivity services to individuals, households, or other organisations."
- A comment has been included under the "cellular technology" connection type to indicate that mobile handset connections should not be included here and will be included in a later question.
- Question 12 is a new question and asks for the average amount of data consumed per subscriber.
- Question 13 is a new question and asks for the percentage of broadband data that is unmetered. Data is unmetered if it is not being charged to subscribers and is not metered for a data cap.
- The number of speed categories has increased. The speed category "24Mbps to less than 100Mbps" from previous surveys has been split into two categories: "24Mbps to less than 50Mbps" and "50Mbps to less than 100Mbps".
- In the upload speeds section, the slowest speed category has been removed ("less than 128kbps") and speed category "1.5Mbps or greater" has been divided into: "1.5Mbps to less than 10Mbps" and "10Mbps or greater".
- Question 16 is a new question and asks for the number of subscribers that had connections via a mobile handset (copied from Australian Bureau of Statistics (ABS)).
- New security questions have been added and the filtering content question was removed.

## **Timing of published data**

The close off date for data collection of the ISP Survey: 2011 was 31 August 2011.

## **General information**

### **Reference period**

The reference period for the survey is 30 June, which aligns with the reference period used by other Organisation for Economic Co-operation and Development (OECD) member countries. Prior to 2009 data was collected in March and September each year. As a result of the change to the June reference date, there is a 15-month gap between the 2008 and 2009 ISP Surveys.

### **Accuracy of the data**

#### **Data collection**

The Internet Service Provider Survey is a postal survey of all businesses meeting the population selection criteria.

#### **Non sampling error**

The ISP Survey is a census rather than a sample, therefore the data is not subject to sample error. Other inaccuracies, such as non-sampling errors, may affect the data. These non-sampling errors may arise from sources such as:

- errors in the reporting of data by respondents
- errors in capturing or processing of data
- lack of imputation for missing data.

Every effort has been made to reduce non-sampling error to a minimum by careful design and thorough testing of questionnaires, efficient operating systems and procedures, and appropriate methodology. Non-sampling errors may still occur and are not quantifiable.

#### **Imputation**

Where data was missing or required clarification, respondents were contacted in the first instance. When necessary, missing data for individual questions was imputed based on historical data collected. No adjustment was made to account for businesses who did not respond to the survey.

### **Consistency of terms and variables**

Terms and variables can differ between data sets and over time and may not be directly comparable. See the [Definitions](#) section for terms and variables used in this release.

### **Confidentiality**

Confidentiality measures have been put in place to ensure the anonymity of respondents and to safeguard against any individual data being released.

## More information

More information about the [Internet Service Provider Survey](#) is available on our website.

## Liability

While all care and diligence has been used in processing, analysing, and extracting data and information in this publication, Statistics NZ gives no warranty it is error-free and will not be liable for any loss or damage suffered by the use directly, or indirectly, of the information in this publication.

## Timing

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

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## **Revisions**

Improved editing of data collected in 2010 has led to small amendments being made to Table 4 – Internet subscription data cap, Table 9 – Barriers to installation of Internet Protocol version 6, and Table 13 – Internet subscriber type.

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## Tables

The following tables are included with this release. They are available in Excel format from the 'Downloads' box of *Internet Service Providers Survey: 2011* on the Statistics NZ website. If you do not have access to Excel, you may use the [Excel file viewer](#) to view, print, and export the contents of the file.

1. Broadband connection type, At 30 June 2009–11
2. Internet subscriber download and upload speeds, Broadband subscribers, At 30 June 2009–11
3. Size of Internet service providers, At 30 June 2009–11
4. Internet subscription data cap, Broadband subscribers, At 30 June 2009–11
5. Internet subscriber average data consumption, Broadband subscribers, June 2011
6. Unmetered data, Broadband subscribers, June 2011
7. Mobile handset subscribers, At 30 June 2011
8. Availability of Internet Protocol version 6, June 2010–11
9. Barriers to installation of Internet Protocol version 6, June 2010–11
10. Other business activities of Internet service providers, Year ended June 2009–11
11. Internet security, Dial-up and broadband subscribers, June 2011
12. Internet subscriber compromised security, Dial-up and broadband subscribers, June 2011
13. Internet subscriber type, Dial-up and broadband subscribers, At June 2009–11