Using AWS in the Context of New Zealand Privacy Considerations

December 2016

(Please consult https://aws.amazon.com/compliance/aws-whitepapers/ for the latest version of this paper)



© 2016, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Notices

This document is provided for informational purposes only. It represents AWS's current product offerings and practices as of the date of issue of this document, which are subject to change without notice. Customers are responsible for making their own independent assessment of the information in this document and any use of AWS's products or services, each of which is provided "as is" without warranty of any kind, whether express or implied. This document does not create any warranties, representations, contractual commitments, conditions, or assurances from AWS, its affiliates, suppliers, or licensors. The responsibilities and liabilities of AWS to its customers are controlled by AWS agreements, and this document is not part of, nor does it modify, any agreement between AWS and its customers.



Overview

This document provides information to assist customers who want to use AWS to store or process content containing personal information, in the context of key privacy considerations and the New Zealand Privacy Act 1993 ("Privacy Act"). It will help customers understand:

- The way AWS services operate, including how customers can address security and encrypt their content
- The geographic locations where customers can choose to store content and other relevant considerations
- The respective roles the customer and AWS each play in managing and securing content stored on AWS services

Scope

This whitepaper focuses on typical questions asked by AWS customers when they are considering the implications of the New Zealand Privacy Act on their use of AWS services to store or process content containing personal information. There will also be other relevant considerations for each customer to address, for example a customer may need to comply with industry specific requirements and the laws of other jurisdictions where that customer conducts business. This paper is not legal advice, and should not be relied on as legal advice. As each customer's requirements will differ, AWS strongly encourages its customers to obtain appropriate advice on their implementation of privacy and data protection requirements, and more generally, applicable laws relevant to their business.

When we refer to content in this paper, we mean software (including virtual machine images), data, text, audio, video, images and other content that a customer, or any end user, stores or processes using the AWS services. For example, a customer's content includes objects that the customer stores using Amazon Simple Storage Service, files stored on an Amazon Elastic Block Store volume, or the contents of an Amazon DynamoDB database table. Such content may, but will not necessarily, include personal information relating to that customer, its end users or third parties. The terms of the AWS Customer Agreement, or any other relevant agreement with us governing the use of AWS services, apply to customer content. Customer content does not include information that a customer provides to us in connection with the creation or administration of its AWS account, such as a customer's names, phone numbers, email addresses and billing information—we refer to this as account information and it is governed by the <a href="https://www.aws.numbers.com/www.aws.numbers



Customer Content: Considerations relevant to privacy

Storage of content presents all organisations with a number of common practical matters to consider, including:

- Will the content be secure?
- Where will content be stored?
- Who will have access to content?
- What laws and regulations apply to the content, and what is needed to comply with these?

These considerations are not new and are not cloud-specific. They are relevant to internally hosted and operated systems as well as traditional third party hosted services. Each may involve storage of content on third-party equipment or on third-party premises, with that content managed, accessed or used by third-party personnel. When using AWS services, each AWS customer maintains ownership and control of their content, including control over:

- What content they choose to store or process using AWS services
- Which AWS services they use with their content
- The Region(s) where their content is stored
- The format, structure and security of their content, including whether it is masked, anonymised or encrypted
- Who has access to their AWS accounts and content, and how those access rights are granted, managed and revoked

Because AWS customers retain ownership and control over their content within the AWS environment, they also retain responsibilities relating to the security of that content as part of the AWS "shared responsibility" model. This shared responsibility model is fundamental to understanding the respective roles of the customer and AWS in the context of privacy requirements that may apply to content that customers choose to store or process using AWS services.

AWS shared responsibility approach to managing cloud security

Will customer content be secure?

Moving IT infrastructure to AWS creates a shared responsibility model between the customer and AWS, as both the customer and AWS have important roles in the operation and management of security. AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the AWS services operate. The



customer is responsible for management of the guest operating system (including updates and security patches to the guest operating system) and associated application software, as well as the configuration of the AWS provided security group firewall and other security-related features. The customer will generally connect to the AWS environment through services the customer acquires from third parties (for example, internet service providers). AWS does not provide these connections, and they are therefore part of the customer's area of responsibility. Customers should consider the security of these connections and the security responsibilities of such third parties in relation to their systems. The respective roles of the customer and AWS in the shared responsibility model are shown in Figure 1:

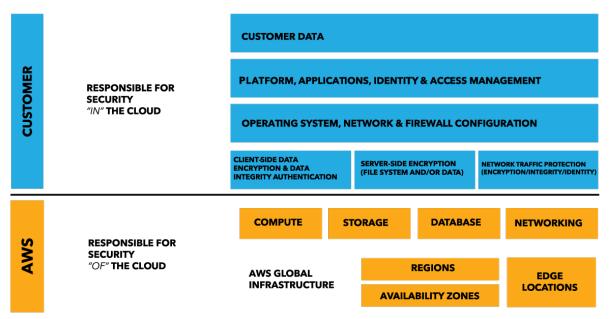


Figure 1 - Shared Responsibility Model

What does the shared responsibility model mean for the security of customer content?

When evaluating the security of a cloud solution, it is important for customers to understand and distinguish between:

- Security measures that the cloud service provider (AWS) implements and operates "security *of* the cloud"
- Security measures that the customer implements and operates, related to the security of customer content and applications that make use of AWS services – "security in the cloud"



While AWS manages security **of** the cloud, security **in** the cloud is the responsibility of the customer, as customers retain control of what security they choose to implement to protect their own content, platform, applications, systems and networks — no differently than they would for applications in an on-site data centre.

Understanding security *OF* **the cloud**

AWS is responsible for managing the security of the underlying cloud environment. The AWS cloud infrastructure has been architected to be one of the most flexible and secure cloud computing environments available, designed to provide optimum availability while providing complete customer segregation. It provides an extremely scalable, highly reliable platform that enables customers to deploy applications and content quickly and securely at massive global scale if necessary.

AWS services are content agnostic, in that they offer the same high level of security to all customers, regardless of the type of content being stored, or the geographical region in which they store their content. AWS's world-class, highly secure data centers utilize state-of-the art electronic surveillance and multi-factor access control systems. Data centers are staffed 24x7 by trained security guards, and access is authorized strictly on a least privileged basis. For a complete list of all the security measures built into the core AWS cloud infrastructure, platforms, and services, please read our Overview of Security Processes¹ whitepaper.

We are vigilant about our customers' security and have implemented sophisticated technical and physical measures against unauthorized access. Customers can validate the security controls in place within the AWS environment through AWS certifications and reports, including the AWS Service Organization Control (SOC) 1, 2^2 and 2^3 reports, ISO 27001^4 , 27017^5 and 27018^6 certifications and PCI-DSS7 compliance reports. These reports and certifications are produced by independent third-party auditors and attest to the design and operating effectiveness of AWS security controls. Our 27018 certification demonstrates that AWS has a system of controls in place that specifically address the privacy protection of customer content. AWS compliance certifications and reports can be requested at https://aws.amazon.com/compliance/contact. More information on AWS compliance certifications, reports, and alignment with best practices and standards can be found at AWS' compliance site.



¹ https://d0.awsstatic.com/whitepapers/Security/AWS%20Security%20Whitepaper.pdf

² http://aws.amazon.com/compliance/soc-fags/

http://d0.awsstatic.com/whitepapers/compliance/soc3 amazon web services.pdf

⁴ http://aws.amazon.com/compliance/iso-27001-faqs/

⁵ http://aws.amazon.com/compliance/iso-27017-fags/

⁶ http://aws.amazon.com/compliance/iso-27018-faqs/

⁷ https://aws.amazon.com/compliance/pci-dss-level-1-fags/

Understanding security IN the cloud

Customers retain ownership and control of their content when using AWS services. Customers, rather than AWS, determine what content they store or process using AWS services. Because it is the customer who decides what content to place in the AWS cloud, only the customer can determine what level of security is appropriate for the content they store and process using AWS. Customers also have complete control over which services they use and whom they empower to access their content and services, including what credentials will be required.

Customers control how they configure their environments and secure their content, including whether they encrypt their content (at rest and in transit), and what other security features and tools they use and how they use them. AWS does not change customer configuration settings, as these settings are determined and controlled by the customer. AWS customers have the complete freedom to design their security architecture to meet their compliance needs. This is a key difference from traditional hosting solutions where the provider decides on the architecture. AWS enables and empowers the customer to decide when and how security measures will be implemented in the cloud, in accordance with each customer's business needs. For example, if a higher availability architecture is required to protect customer content, the customer may add redundant systems, backups, locations, network uplinks, etc. to create a more resilient, high availability architecture. If restricted access to customer content is required, AWS tools enable the customer to implement access rights management controls both on a systems level and through encryption on a data level.

To assist customers in designing, implementing and operating their own secure AWS environment, AWS provides a wide selection of security tools and features customers can use. Customers can also use their own security tools and controls, including a wide variety of third party security solutions. Customers can configure their AWS services to leverage a range of such security features, tools and controls to protect their content, including sophisticated identity and access management tools, security capabilities, encryption and network security. Examples of steps customers can take to help secure their content include implementing:

- Strong password policies, assigning appropriate permissions to users and taking robust steps to protect their access keys
- Appropriate firewalls and network segmentation, encrypting content, and properly architecting systems to decrease the risk of data loss and unauthorized access

Because customers, rather than AWS control these important factors, customers retain responsibility for their choices, and for security of the content they put on AWS, or that they connect to their AWS infrastructure, such as the guest operating system, applications on their compute instances, and content stored and processed in AWS storage, platforms, databases or other services.



AWS provides an advanced set of access, encryption, and logging features to help customers manage their content effectively, including AWS Key Management Service and AWS CloudTrail. To assist customers in integrating AWS security controls into their existing control frameworks and help customers design and execute security assessments of their organisation's use of AWS services, AWS publishes a number of whitepapers relating to security, governance, risk and compliance; and a number of checklists and best practices. Customers are also free to design and execute security assessments according to their own preferences, and can request permission to conduct scans of their cloud infrastructure as long as those scans are limited to the customer's compute instances and do not violate the <u>AWS Acceptable Use Policy</u>.

AWS Regions: Where will content be stored?

AWS data centres are built in clusters in various global regions. We refer to each of our data centre clusters in a given country as a "Region". Customers have access to sixteen AWS Regions around the globe⁸, including an Asia Pacific (Sydney) Region. Customers can choose to use one Region, all Regions or any combination of Regions. Figure 2 shows AWS Region locations:





Figure 2 – AWS Global Regions

⁸AWS GovCloud (US) is an isolated AWS Region designed to allow US government agencies and customers to move sensitive workloads into the cloud by addressing their specific regulatory and compliance requirements. AWS China (Beijing) is also an isolated AWS Region. Customers who wish to use the AWS China (Beijing) Region are required to sign up for a separate set of account credentials unique to the China (Beijing) Region.



AWS customers choose the AWS Region or Regions in which their content and servers will be located. This allows customers with geographic specific requirements to establish environments in a location or locations of their choice. For example, while AWS does not currently have a Region in New Zealand, AWS customers in New Zealand can choose to deploy their AWS services exclusively in the Asia Pacific (Sydney) Region and store their content offshore in Australia. If the customer makes this choice, their content will be located in Australia unless the customer chooses to move that content.

Customers always retain control of which Region(s) are used to store and process their content. AWS only stores and processes each customers' content in the Region(s), and using the services, chosen by the customer, and otherwise will not move customer content except as legally required.

How can customers select their Region(s)?

When using the AWS management console, or in placing a request through an AWS Application Programming Interface (API), the customer identifies the particular Region or Regions where it wishes to use AWS services. Figure 3: Selecting AWS Global Regions provides an example of when uploading content to an AWS storage service or provisioning compute resources using the AWS management console.

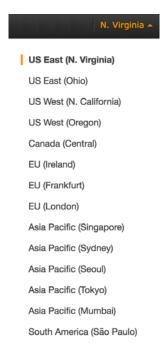


Figure 3 – Selecting AWS Global Regions in the AWS Management Console

Customers can also prescribe the AWS Region to be used for their compute resources by taking advantage of the Amazon Virtual Private Cloud (VPC) capability. Amazon VPC lets the customer provision a private, isolated section of the AWS Cloud where the customer can launch AWS resources in a virtual network that the customer defines. With Amazon VPC, customers can define a virtual network topology that closely resembles a traditional network that might operate in their own data centre.



Any compute and other resources launched into the VPC will only reside in the Region in which that VPC was created. For example, by creating a VPC in the Asia Pacific (Sydney) Region and providing a link (either a VPN⁹ or Direct Connect¹⁰) back to the customer's data centre, all compute resources launched into that VPC would only reside in the Asia Pacific (Sydney) Region.

Transfers of personal information cross border

When using AWS services, customers may choose to transfer content containing personal information cross border, and they will need to consider the legal requirements that apply to such transfers. AWS can provide a Data Processing Addendum that includes the Standard Contractual Clauses 2010/87/EU (often referred to as "Model Clauses") to AWS customers transferring content containing personal data (as defined under the EU Directive) from the EU to a country outside of the European Economic Area, such as Australia. AWS has obtained approval from EU data protection authorities, known as the Article 29 Working Party, of the AWS Data Processing Addendum and Model Clauses. With our EU-approved Data Processing Addendum and Model Clauses, AWS customers—whether established in Europe or a global company with operations in the European Economic Area—can continue to run their operations using AWS in full compliance with the EU Directive. For additional information, please visit the AWS EU Data Processing Addendum, please visit here (sign-in required).

Who can access customer content?

Customer control over content

Customers using AWS maintain and do not release effective control over their content within the AWS environment. They can:

- Determine where their content will be located, for example the type of storage they use on AWS and the geographic location (by Region) of that storage
- Control the format, structure and security of their content, including whether it is masked, anonymised or encrypted. AWS offers customers options to implement strong encryption for their customer content in transit or at rest, and also provides customers with the option to manage their own encryption keys or use third party encryption mechanisms of their choice
- Manage other access controls, such as identity, access management, permissions and security credentials



http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_VPN.html

¹⁰ http://aws.amazon.com/directconnect/

This allows AWS customers to control the entire life cycle of their content on AWS, and manage their content in accordance with their own specific needs, including content classification, access control, retention and disposal.

AWS access to customer content

AWS makes available to each customer the compute, storage, database, networking or other services as described on our website. Customers have a number of options to encrypt their content when using the services, including using AWS encryption features, managing their own encryption keys, or using a third-party encryption mechanism of their own choice. AWS does not access or use customer content for any purpose other than as legally required and to provide the AWS services selected by each customer, to that customer and its end users. AWS never uses customer content or derives information from it for other purposes such as marketing or advertising.

Government rights of access

Queries are often raised about the rights of domestic and foreign government agencies to access content held in cloud services. Customers are often confused about issues of data sovereignty, including whether and in what circumstances governments may have access to their content. The local laws that apply in the jurisdiction where the content is located are an important consideration for some customers. However, customers also need to consider whether laws in other jurisdictions may apply to them. Customers should seek advice to understand the application of relevant laws to their business and operations.

When concerns or questions are raised about the rights of domestic or foreign governments to seek access to content stored in the cloud, it is important to understand that relevant government bodies may have rights to issue requests for such content under laws that already apply to the customer. For example, a company doing business in Country X could be subject to a legal request for information even if the content is stored in Country Y. Typically, a government agency seeking access to the data of an entity will address any request for information directly to that entity rather than to the cloud provider.

New Zealand, like most countries, has legislation that enables New Zealand law enforcement and government security bodies to seek access to information; for example, the New Zealand Security Intelligence Service Act 1969 and the Government Communications Security Bureau. However, it is important to remember that these laws all contain criteria that must be satisfied before authorising access by the relevant government body. For example, the government agency seeking access will need to show it has a valid reason for requiring a party to provide access to content. Most importantly, access powers largely relate to law enforcement and counter-terrorism.

Many countries have data access laws which purport to apply extraterritorially. An example of a US law with extra-territorial reach that is often mentioned in the



context of cloud services is the U.S. Patriot Act. The Patriot Act is similar to laws in other developed nations that enable governments to obtain information with respect to investigations relating to international terrorism and other foreign intelligence issues. Any request for documents under the Patriot Act requires a court order demonstrating that the request complies with the law, including, for example, that the request is related to legitimate investigations. The Patriot Act generally applies to all companies with an operation in the U.S., irrespective of where they are incorporated and/or operating globally and irrespective of whether the information is stored in the cloud, in an on-site data centre or in physical records. This means that New Zealand companies doing business in the United States may find they are subject to the Patriot Act by reason of their own business operations.

AWS policy on granting government access

AWS is vigilant about customers' security and does not disclose or move data in response to a request from the New Zealand, U.S. or other government unless *legally required to do so*, in order to comply with a legally valid and binding order, such as a subpoena or a court order, or as is otherwise required by applicable law. Non-U.S. governmental or regulatory bodies typically must use recognized international processes, such as Mutual Legal Assistance Treaties with the U.S. government, to obtain valid and binding orders. Additionally, our practice is to notify customers where practicable before disclosing their content so they can seek protection from disclosure, unless we are legally prohibited from doing so or there is clear indication of illegal conduct in connection with the use of AWS services.



Privacy and Data Protection in New Zealand

The Privacy Act

The main requirements for handling personal information are set out in the Information Privacy Principles ("IPPs") which are part of the Privacy Act¹¹. The IPPs impose requirements for collecting, managing, using, disclosing and otherwise handling personal information collected from individuals in New Zealand.

The Privacy Act recognises a distinction between principals and agents. Where an entity (the agent) holds personal information for the sole purpose of storing or processing personal information on behalf of another entity (the principal) and does not use or disclose the personal information for its own purposes, the information is deemed to be held by the principal. In those circumstances, primary responsibility for compliance with the IPPs will rest with the principal.

AWS appreciates that its services are used in many different contexts for different business purposes, and that there may be multiple parties involved in the data lifecycle of personal information included in customer content stored or processed using AWS services. For simplicity, the guidance included in the table below assumes that, in the context of the customer content stored or processed using the AWS services, the customer:

- Collects personal information from its end users, and determines the purpose for which the customer requires and will use the information
- Has the capacity to control who can access, update and use the personal information
- Manages the relationship with the individual about whom the personal information relates, including by communicating with the individual as required to comply with any relevant disclosure and consent requirements
- Transfers the content into the AWS Region it selects; AWS does not receive customer content in New Zealand

Customers may in fact work with or rely on third parties to discharge these responsibilities, but the customer, rather than AWS, would manage its relationships with those third parties.

We summarise in the following table the IPP requirements that are particularly important for customers to consider if using AWS to store personal information collected from individuals in New Zealand. We also discuss aspects of the AWS services relevant to these IPPs.



¹¹The IPPs can be found at: http://www.privacy.org.nz/the-privacy-act-and-codes/privacy-principles/

Information Privacy Principle	Summary of IPP	Considerations
IPP 1 – Purpose of collection of personal information	Personal information may only be collected for lawful and necessary purposes	Customer: The customer determines and controls when, how and why it collects personal information from individuals, and decides whether it will include that personal information in customer content it stores on AWS. The customer, rather than AWS, will know the scope of any notifications given to, or consents obtained by the customer from the individuals. Only the customer is able to communicate directly with individuals whose personal information the customer stores on AWS about collection and treatment of their personal information.
IPP 2 – Source of personal information	Personal information may only be collected directly from the individual, unless an exception applies	
IPP 3 – Collection of Information	Reasonable steps must be taken to ensure that when an individual's personal information is collected they are aware of the purposes for which it is collected and certain other matters	AWS: AWS does not know when a customer chooses to upload to AWS content that contains personal information and AWS does not collect personal information from the individuals whose personal information is included in content the customer stores or processes using AWS. AWS has no contact with such individuals, and is therefore not required and is unable in these circumstances to seek or obtain consents from the relevant individuals or provide
IPP 4 – Manner of collection of personal information	Personal information may only be collected in a lawful and non- intrusive manner	any notifications to the relevant individuals. AWS only uses customer content to provide the AWS services selected by each customer to that customer and does not use customer content for other purposes.



Information Privacy Principle	Summary of IPP	Considerations
IPP 5 – Storage and security of personal information	Reasonable steps must be taken to protect the security of personal information	Customer: Customers are responsible for security <i>in</i> the cloud, including security of their content (and personal information included in their content). AWS: AWS is responsible for managing the security <i>of</i> the underlying cloud environment. For a complete list of all the security measures built into the core AWS cloud infrastructure, platforms, and services, please read our whitepaper.
IPP 6 – Access to personal information	Individuals are entitled to access personal information that is readily retrievable, unless an exception applies.	Customer: The customer retains control of content stored on AWS, and therefore controls how individuals may access and correct personal information included in that content. AWS: The customer rather than AWS collects personal information from the individuals whose personal information is included in content the customer stores or processes using AWS services, and the customer manages and controls who has access to customer content. AWS has no contact with such individuals and is therefore not required and is unable in the circumstances to provide relevant individuals with access to, or the ability to correct, customer content containing their personal information.
IPP 7 – Correction of personal information	Individuals may request correction of personal information.	



Information Privacy Principle	Summary of IPP	Considerations
IPP 8 - Accuracy to be checked before use	Reasonable steps must be taken to check accuracy of personal information before it is used.	Customer: When a customer chooses to store or process content containing personal information using AWS, the customer retains control over the quality of that content and any personal information included in it, and retains access to and can correct any personal information. Only the customer knows how it will use the personal information, so the customer will need to determine what reasonable steps should be taken to check its accuracy. AWS: AWS's SOC 1 Type 2 report includes controls that provide reasonable assurance that data integrity is maintained through all phases including transmission, storage and processing.
IPP 9 - Personal information must not be kept longer than necessary	Personal information should not be kept for longer than is required for the purposes for which the information may be lawfully used.	Customer: Only the customer knows why personal information included in customer content stored or processed using AWS was collected, and only the customer knows when it is no longer necessary to retain that personal information for legitimate purposes. The customer must delete or anonymise the personal information when no longer needed.
		AWS: The AWS services provide the customer with controls to enable the customer to delete content, as described in the documentation available at http://aws.amazon.com/documentation .



Information Privacy Principle	Summary of IPP	Considerations
IPP 10 - Limits on use of personal information	Personal information may only be used or disclosed for the purpose for which it was collected, directly related purposes, in a way in which the individual is not identified, or if another exception applies	Customer : The customer determines why it collects personal information, and controls how it uses and discloses customer content that contains personal information. The customer must ensure it does so for permitted purposes. The customer also controls the format and structure of its
IPP 11 - Limits on disclosure of personal information		content and how it is protected from disclosure including whether it is anonymised or encrypted. AWS: AWS only uses customer content to provide the AWS services selected by each customer to that customer and does not use customer content for other purposes.
		General: The AWS service is structured so that a customer maintains effective control of customer content regardless of which AWS Region they use for their content.

Privacy Breaches

Given that customers maintain management and control of their data when using AWS, customers retain the responsibility to monitor their own environment for privacy breaches and to notify affected individuals as required under applicable law.

A customer's AWS access keys can be used as an example to help explain why the customer rather than AWS is best placed to manage this responsibility. Customers control access keys, and determine who is authorized to access their AWS account. AWS does not have visibility of access keys, or who is and who is not authorized to log into an account. Therefore, the customer is responsible for monitoring use, misuse, distribution or loss of access keys.

At the date of this paper, it is not a mandatory requirement of the Privacy Act to notify individuals of unauthorized access to or disclosure of their personal information. Notification may be appropriate having regard to the Office of the



New Zealand Privacy Commissioner's guidance on privacy breaches¹². It is for the customer to determine when it is appropriate for them to notify individuals and the notification process they will follow.

Other considerations

This whitepaper does not discuss other New Zealand laws, aside from the Privacy Act, that may also be relevant to customers, including industry specific requirements or codes of practice¹³. The relevant privacy and data protection laws and regulations applicable to individual customers will depend on several factors including where a customer conducts business, the industry in which they operate, the type of content they wish to store, where or from whom the content originates, and where the content will be stored.

Customers concerned about their privacy regulatory obligations should first ensure they identify and understand the requirements applying to them, and seek appropriate advice.

Closing Remarks

For AWS, security is always our top priority. We deliver services to more than one million active customers, including enterprises, educational institutions, and government agencies in over 190 countries. Our customers include financial services providers and healthcare providers; we are trusted with some of their most sensitive information.

AWS services are designed to give customers flexibility over how they configure and deploy their solutions as well as control over their content, including where it is stored, how it is stored and who has access to it. AWS customers can build their own secure applications and store content securely on AWS.

Additional Resources

Customers may wish to consider privacy resources published by the Office of the New Zealand Privacy Commissioner, which can be found at: http://www.privacy.org.nz/.

To help customers further understand how they can address their privacy and data protection requirements, customers are encouraged to read the risk, compliance and security whitepapers, best practices, checklists and guidance published on the AWS website. This material can be found at



¹² For example, see the Data Safety Toolkit (http://www.privacy.org.nz/news-and-publications/guidance-notes/guidance-notes/privacy-breach-guidelines-2/)

¹³ For example, see http://www.privacy.org.nz/the-privacy-act-and-codes/codes-of-practice/ for codes of practice made under the Privacy Act.

http://aws.amazon.com/compliance and http://aws.amazon.com/security. As of the date of this document, specific white papers about privacy and data protection are available for the following countries or regions:

Australia¹⁴ European Union¹⁵ Malaysia¹⁶ New Zealand¹⁷ Singapore¹⁸

AWS also offers training to help customers learn how to design, develop, and operate available, efficient, and secure applications on the AWS cloud and gain proficiency with AWS services and solutions. We offer <u>free instructional videos</u>, <u>self-paced labs</u>, and <u>instructor-led classes</u>. Further information on AWS training is available at http://aws.amazon.com/training/.

AWS certifications certify the technical skills and knowledge associated with best practices for building secure and reliable cloud-based applications using AWS technology. Further information on AWS certifications is available at http://aws.amazon.com/certification/.

If you require further information, please contact AWS at: https://aws.amazon.com/contact-us/ or contact your local AWS account representative.

¹⁸http://d0.awsstatic.com/whitepapers/compliance/Using AWS in the context of Singapore Privacy Considerations.pdf



¹⁴http://d0.awsstatic.com/whitepapers/compliance/Using AWS in the context of Australian Privacy C onsiderations.pdf

http://d0.awsstatic.com/whitepapers/compliance/Using AWS in the context of Malaysian Privalents.

¹⁶http://d0.awsstatic.com/whitepapers/compliance/Using AWS in the context of Malaysian Privacy C onsiderations.pdf

¹⁷http://d0.awsstatic.com/whitepapers/compliance/Using AWS in the context of New Zealand Privac y Considerations.pdf