



Version 1.6 of the Data Processing Amendment will apply (in relation to G Suite Agreements) until 24 May 2018 inclusive and, as from 25 May 2018 (when the EU's General Data Protection Regulation comes into force), will be replaced by Version 2.0 of the Data Processing Amendment (below).

Current Version (1.6) of Data Processing Amendment

Version 2.0 of the Data Processing Amendment will take effect from 25 May 2018 (when the EU's General Data Protection Regulation comes into force) and replace Version 1.6 of the Data Processing Amendment (where applicable) on that date.

Data Processing Amendment to G Suite and/or Complementary Product Agreement

(Version 2.0)

The Customer agreeing to these terms (“**Customer**”) and Google LLC (formerly known as Google Inc.), Google Ireland Limited, Google Commerce Limited, Google Asia Pacific Pte. Ltd or Google Australia Pty Ltd (as applicable, “**Google**”) have entered into one or more G Suite Agreement(s) (as defined below) and/or Complementary Product Agreements(s) (as defined below) (each, as amended from time to time, an “**Agreement**”).

This Data Processing Amendment to G Suite and/or Complementary Product Agreement including its appendices (the “**Data Processing Amendment**”) will, as from the Amendment Effective Date (as defined below), be effective and replace any previously applicable data processing amendment or, in the case of a Complementary Product Agreement, any terms previously applicable to privacy, data processing and/or data security.

- **1. Introduction.**
 - This Data Processing Amendment reflects the parties' agreement with respect to the terms governing the processing and security of Customer Data under the applicable Agreement.
- **2. Definitions.**

- 2.1. Capitalized terms used but not defined in this Data Processing Amendment have the meanings given elsewhere in the applicable Agreement. In this Data Processing Amendment, unless stated otherwise:
 - “**Additional Products**” means products, services and applications that are not part of the Services but that may be accessible, via the Admin Console or otherwise, for use with the Services.
 - “**Additional Security Controls**” means security resources, features, functionality and/or controls that Customer may use at its option and/or as it determines. “Additional Security Controls” may include the Admin Console and other features and functionality of the Services such as two factor authentication, security key enforcement and monitoring capabilities.
 - “**Advertising**” means online advertisements displayed by Google to End Users, excluding any advertisements Customer expressly chooses to have Google or any of its Affiliates display in connection with the Services under a separate agreement (for example, Google AdSense advertisements implemented by Customer on a website created by Customer using any Google Sites functionality within the Services).
 - “**Affiliate**” means any entity controlling, controlled by, or under common control with a party, where “control” is defined as: (a) the ownership of at least fifty percent (50%) of the equity or beneficial interests of the entity; (b) the right to vote for or appoint a majority of the board of directors or other governing body of the entity; or (c) the power to exercise a controlling influence over the management or policies of the entity.
 - “**Agreed Liability Cap**” means the maximum monetary or payment-based amount at which a party’s liability is capped under the applicable Agreement, either per annual period or event giving rise to liability, as applicable.
 - “**Alternative Transfer Solution**” means a solution, other than the Model Contract Clauses, that enables the lawful transfer of personal data to a third country in accordance with Article 45 or 46 of the GDPR (for example, the EU-U.S. Privacy Shield).
 - “**Amendment Effective Date**” means, as applicable:
 - (a) 25 May 2018, if Customer clicked to accept or the parties otherwise agreed to this Data Processing Amendment in respect of the applicable Agreement prior to or on such date; or
 - (b) the date on which Customer clicked to accept or the parties otherwise agreed to this Data Processing Amendment in respect of the applicable Agreement, if such date is after 25 May 2018.
 - “**Audited Services**” means the Services (as defined below), unless the G Suite Services Summary or Complementary Product Services Summary indicates otherwise.
 - “**Complementary Product Agreement**” means: a Cloud Identity Agreement; Domain Administrator Agreement; any other agreement under which Google agrees to provide identity services as such to Customer; or any other agreement that incorporates this Data Processing Amendment by reference or states that it will apply if accepted by Customer.
 - “**Complementary Product Services Summary**” means the then-current description of the services provided under a Complementary Product Agreement, as set out in the applicable Agreement.
 - “**Core Services for G Suite**” means the Core Services for G Suite, as described in the G Suite Services Summary and irrespective of the G Suite

edition comprising such services. For clarity, the Core Services for G Suite exclude Google+ to the extent it is used to share content or interact with any persons outside an End User's G Suite Domain, and exclude any "other add-on services" described in the G Suite Services Summary.

- **"Customer Data"** means data submitted, stored, sent or received via the Services by Customer, its Affiliates or End Users.
- **"Customer Personal Data"** means personal data contained within the Customer Data.
- **"Data Incident"** means a breach of Google's security leading to the accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to, Customer Data on systems managed by or otherwise controlled by Google. "Data Incidents" will not include unsuccessful attempts or activities that do not compromise the security of Customer Data, including unsuccessful log-in attempts, pings, port scans, denial of service attacks, and other network attacks on firewalls or networked systems.
- **"Domain"** means the primary domain and any secondary domains managed together by Customer within a single instance of the Admin Console.
- **"EEA"** means the European Economic Area.
- **"European Data Protection Legislation"** means, as applicable: (a) the GDPR; and/or (b) the Federal Data Protection Act of 19 June 1992 (Switzerland).
- **"Full Activation Date"** means: (a) if this Data Processing Amendment is incorporated into the applicable Agreement by reference, the Amendment Effective Date; or (b) if the parties otherwise agreed to this Data Processing Amendment, the eighth day after the Amendment Effective Date.
- **"GDPR"** means Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC.
- **"Google's Third Party Auditor"** means a Google-appointed, qualified and independent third party auditor, whose then-current identity Google will disclose to Customer.
- **"G Suite Agreement"** means: one or more Order Form(s) specifying that Google will provide the Core Services for G Suite under a Master Agreement, combined with a set of General Terms and a G Suite Services Schedule; a G Suite Agreement; a G Suite for Education Agreement; a Google Apps for Work Agreement; a Google Apps Enterprise Agreement; a Google Apps for Business Agreement; a Google Apps for Education Agreement; a Via Reseller version of any of the foregoing agreements; or any other agreement under which Google agrees to provide the Core Services for G Suite to Customer.
- **"G Suite Services Summary"** means the then-current description of the Core Services for G Suite and related editions, as set out at https://gsuite.google.com/terms/user_features.html (as may be updated by Google from time to time in accordance with the G Suite Agreement).
- **"ISO 27001 Certification"** means ISO/IEC 27001:2013 certification or a comparable certification, as related to the Audited Services.
- **"ISO 27017 Certification"** means ISO/IEC 27017:2015 certification or a comparable certification, as related to the Audited Services.
- **"ISO 27018 Certification"** means ISO/IEC 27018:2014 certification or a comparable certification, as related to the Audited Services.

- **“Model Contract Clauses”** or **“MCCs”** means the standard data protection clauses for the transfer of personal data to processors established in third countries which do not ensure an adequate level of data protection, as described in Article 46 of the GDPR.
 - **“Non-European Data Protection Legislation”** means data protection or privacy legislation other than the European Data Protection Legislation.
 - **“Notification Email Address”** means the email address(es) designated by Customer in the Admin Console or the Order Form to receive certain notifications from Google.
 - **“Security Documentation”** means all documents and information made available by Google under Section 7.5.1 (Reviews of Security Documentation).
 - **“Security Measures”** has the meaning given in Section 7.1.1 (Google’s Security Measures).
 - **“Services”** means the following services, as applicable: (a) the Core Services for G Suite; or (b) the services described in the Complementary Product Services Summary.
 - **“SOC 2 Report”** means a confidential Service Organization Control (SOC) 2 Report (or a comparable report) on Google’s systems examining logical security controls, physical security controls, and system availability, as produced by Google’s Third Party Auditor in relation to the Audited Services.
 - **“SOC 3 Report”** means a Service Organization Control (SOC) 3 Report (or a comparable report), as produced by Google’s Third Party Auditor in relation to the Audited Services.
 - **“Subprocessors”** means third parties authorized under this Data Processing Amendment to have logical access to and process Customer Data in order to provide parts of the Services and related technical support.
 - **“Term”** means the period from the Amendment Effective Date until the end of Google’s provision of the Services under the applicable Agreement, including, if applicable, any period during which provision of the Services may be suspended and any post-termination period during which Google may continue providing the Services for transitional purposes.
- 2.2. The terms “personal data”, “data subject”, “processing”, “controller”, “processor” and “supervisory authority” as used in this Data Processing Amendment have the meanings given in the GDPR, and the terms “data importer” and “data exporter” have the meanings given in the Model Contract Clauses, in each case irrespective of whether the European Data Protection Legislation or Non-European Data Protection Legislation applies.
- **3. Duration of Data Processing Amendment.** This Data Processing Amendment will take effect on the Amendment Effective Date and, notwithstanding expiry of the Term, remain in effect until, and automatically expire upon, deletion of all Customer Data by Google as described in this Data Processing Amendment.
- **4. Scope of Data Protection Legislation.**
 - 4.1 Application of European Legislation. The parties acknowledge and agree that the European Data Protection Legislation will apply to the processing of Customer Personal Data if, for example:
 - (a) the processing is carried out in the context of the activities of an establishment of Customer in the territory of the EEA; and/or

or EU Member State law to which Google is subject requires other processing of Customer Personal Data by Google, in which case Google will inform Customer (unless that law prohibits Google from doing so on important grounds of public interest) via the Notification Email Address. For clarity, Google will not process Customer Personal Data for Advertising purposes or serve Advertising in the Services.

- 5.3. **Additional Products.** If Google at its option makes any Additional Products available to Customer in accordance with the Additional Product Terms (if applicable), and if Customer opts to install or use those Additional Products, the Services may allow those Additional Products to access Customer Personal Data as required for the interoperation of the Additional Products with the Services. For clarity, this Data Processing Amendment does not apply to the processing of personal data in connection with the provision of any Additional Products installed or used by Customer, including personal data transmitted to or from such Additional Products. Customer may use the functionality of the Services to enable or disable Additional Products, and is not required to use Additional Products in order to use the Services.
- **6. Data Deletion.**
 - 6.1. **Deletion During Term.** Google will enable Customer and/or End Users to delete Customer Data during the applicable Term in a manner consistent with the functionality of the Services. If Customer or an End User uses the Services to delete any Customer Data during the applicable Term and the Customer Data cannot be recovered by Customer or an End User (such as from the “trash”), this use will constitute an instruction to Google to delete the relevant Customer Data from Google’s systems in accordance with applicable law. Google will comply with this instruction as soon as reasonably practicable and within a maximum period of 180 days, unless EU or EU Member State law requires storage.
 - 6.2. **Deletion on Term Expiry.** Subject to Section 6.3 (Deferred Deletion Instruction), on expiry of the applicable Term Customer instructs Google to delete all Customer Data (including existing copies) from Google’s systems in accordance with applicable law. Google will comply with this instruction as soon as reasonably practicable and within a maximum period of 180 days, unless EU or EU Member State law requires storage. Without prejudice to Section 9.1 (Access; Rectification; Restricted Processing; Portability), Customer acknowledges and agrees that Customer will be responsible for exporting, before the applicable Term expires, any Customer Data it wishes to retain afterwards.
 - 6.3. **Deferred Deletion Instruction.** To the extent any Customer Data covered by the deletion instruction described in Section 6.2 (Deletion on Term Expiry) is also processed, when the applicable Term under Section 6.2 expires, in relation to an Agreement with a continuing Term, such deletion instruction will only take effect with respect to such Customer Data when the continuing Term expires. For clarity, this Data Processing Amendment will continue to apply to such Customer Data until its deletion by Google.
- **7. Data Security.**
 - 7.1. **Google’s Security Measures, Controls and Assistance.**
 - 7.1.1. **Google’s Security Measures.** Google will implement and maintain technical and organizational measures to protect Customer Data against accidental or unlawful destruction, loss, alteration, unauthorized disclosure or access as described in Appendix 2 (the “Security Measures”). As described in Appendix 2, the Security Measures include measures to encrypt personal data; to help ensure ongoing confidentiality, integrity, availability and

resilience of Google's systems and services; to help restore timely access to personal data following an incident; and for regular testing of effectiveness. Google may update or modify the Security Measures from time to time provided that such updates and modifications do not result in the degradation of the overall security of the Services.

- 7.1.2. Security Compliance by Google Staff. Google will take appropriate steps to ensure compliance with the Security Measures by its employees, contractors and Subprocessors to the extent applicable to their scope of performance, including ensuring that all persons authorized to process Customer Personal Data have committed themselves to confidentiality or are under an appropriate statutory obligation of confidentiality.
- 7.1.3. Additional Security Controls. In addition to the Security Measures, Google will make the Additional Security Controls available to: (a) allow Customer to take steps to secure Customer Data; and (b) provide Customer with information about securing, accessing and using Customer Data.
- 7.1.4. Google's Security Assistance. Customer agrees that Google will (taking into account the nature of the processing of Customer Personal Data and the information available to Google) assist Customer in ensuring compliance with any of Customer's obligations in respect of security of personal data and personal data breaches, including if applicable Customer's obligations pursuant to Articles 32 to 34 (inclusive) of the GDPR, by:
 - (a) implementing and maintaining the Security Measures in accordance with Section 7.1.1 (Google's Security Measures);
 - (b) making the Additional Security Controls available to Customer in accordance with Section 7.1.3 (Additional Security Controls);
 - (c) complying with the terms of Section 7.2 (Data Incidents); and
 - (d) providing Customer with the Security Documentation in accordance with Section 7.5.1 (Reviews of Security Documentation) and the information contained in the applicable Agreement including this Data Processing Amendment.
- **7.2. Data Incidents.**
 - 7.2.1. Incident Notification. If Google becomes aware of a Data Incident, Google will: (a) notify Customer of the Data Incident promptly and without undue delay; and (b) promptly take reasonable steps to minimize harm and secure Customer Data.
 - 7.2.2. Details of Data Incident. Notifications made pursuant to this section will describe, to the extent possible, details of the Data Incident, including steps taken to mitigate the potential risks and steps Google recommends Customer take to address the Data Incident.
 - 7.2.3. Delivery of Notification. Notification(s) of any Data Incident(s) will be delivered to the Notification Email Address or, at Google's discretion, by direct communication (for example, by phone call or an in-person meeting). Customer is solely responsible for ensuring that the Notification Email Address is current and valid.
 - 7.2.4. No Assessment of Customer Data by Google. Google will not assess the contents of Customer Data in order to identify information subject to any specific legal requirements. Customer is solely responsible for complying with incident notification laws applicable to Customer and fulfilling any third party notification obligations related to any Data Incident(s).
 - 7.2.5. No Acknowledgment of Fault by Google. Google's notification of or response to a Data Incident under this Section 7.2 (Data Incidents) will not be

construed as an acknowledgement by Google of any fault or liability with respect to the Data Incident.

- **7.3. Customer's Security Responsibilities and Assessment.**
 - **7.3.1. Customer's Security Responsibilities.** Customer agrees that, without prejudice to Google's obligations under Section 7.1 (Google's Security Measures, Controls and Assistance) and Section 7.2 (Data Incidents):
 - (a) Customer is solely responsible for its use of the Services, including:
 - (i) making appropriate use of the Services and the Additional Security Controls to ensure a level of security appropriate to the risk in respect of the Customer Data;
 - (ii) securing the account authentication credentials, systems and devices Customer uses to access the Services; and
 - (iii) backing up its Customer Data; and
 - (b) Google has no obligation to protect Customer Data that Customer elects to store or transfer outside of Google's and its Subprocessors' systems (for example, offline or on-premise storage), or to protect Customer Data by implementing or maintaining Additional Security Controls except to the extent Customer has opted to use them.
 - **7.3.2. Customer's Security Assessment.**
 - (a) Customer is solely responsible for reviewing the Security Documentation and evaluating for itself whether the Services, the Security Measures, the Additional Security Controls and Google's commitments under this Section 7 (Data Security) will meet Customer's needs, including with respect to any security obligations of Customer under the European Data Protection Legislation and/or Non-European Data Protection Legislation, as applicable.
 - (b) Customer acknowledges and agrees that (taking into account the state of the art, the costs of implementation and the nature, scope, context and purposes of the processing of Customer Personal Data as well as the risks to individuals) the Security Measures implemented and maintained by Google as set out in Section 7.1.1 (Google's Security Measures) provide a level of security appropriate to the risk in respect of the Customer Data.
- **7.4. Security Certifications and Reports.** Google will do the following to evaluate and help ensure the continued effectiveness of the Security Measures:
 - (a) maintain the ISO 27001 Certification, the ISO 27017 Certification and the ISO 27018 Certification; and
 - (b) update the SOC 2 Report and SOC 3 Report at least once every 18 months.
- **7.5. Reviews and Audits of Compliance.**
 - **7.5.1. Reviews of Security Documentation.** In addition to the information contained in the applicable Agreement including this Data Processing Amendment, Google will make available for review by Customer the following documents and information to demonstrate compliance by Google with its obligations under this Data Processing Amendment:
 - (a) the certificates issued in relation to the ISO 27001 Certification, the ISO 27017 Certification and the ISO 27018 Certification;
 - (b) the then-current SOC 3 Report; and
 - (c) the then-current SOC 2 Report, following a request by Customer in accordance with Section 7.5.3(a).

- **8. Impact Assessments and Consultations.** Customer agrees that Google will (taking into account the nature of the processing and the information available to Google) assist Customer in ensuring compliance with any obligations of Customer in respect of data protection impact assessments and prior consultation, including if applicable Customer's obligations pursuant to Articles 35 and 36 of the GDPR, by:
 - (a) providing the Additional Security Controls in accordance with Section 7.1.3 (Additional Security Controls) and the Security Documentation in accordance with Section 7.5.1 (Reviews of Security Documentation); and
 - (b) providing the information contained in the applicable Agreement including this Data Processing Amendment.
- **9. Data Subject Rights; Data Export.**
 - **9.1. Access; Rectification; Restricted Processing; Portability.** During the applicable Term, Google will, in a manner consistent with the functionality of the Services, enable Customer to access, rectify and restrict processing of Customer Data, including via the deletion functionality provided by Google as described in Section 6.1 (Deletion During Term), and to export Customer Data.
 - **9.2. Data Subject Requests.**
 - **9.2.1. Customer's Responsibility for Requests.** During the applicable Term, if Google receives any request from a data subject in relation to Customer Personal Data, Google will advise the data subject to submit his/her request to Customer, and Customer will be responsible for responding to any such request including, where necessary, by using the functionality of the Services.
 - **9.2.2. Google's Data Subject Request Assistance.** Customer agrees that (taking into account the nature of the processing of Customer Personal Data) Google will assist Customer in fulfilling any obligation to respond to requests by data subjects, including if applicable Customer's obligation to respond to requests for exercising the data subject's rights laid down in Chapter III of the GDPR, by:
 - (a) providing the Additional Security Controls in accordance with Section 7.1.3 (Additional Security Controls); and
 - (b) complying with the commitments set out in Section 9.1 (Access; Rectification; Restricted Processing; Portability) and Section 9.2.1 (Customer's Responsibility for Requests).
- **10. Data Transfers.**
 - **10.1. Data Storage and Processing Facilities.** Customer agrees that Google may, subject to Section 10.2 (Transfers of Data Out of the EEA), store and process Customer Data in the United States and any other country in which Google or any of its Subprocessors maintains facilities.
 - **10.2. Transfers of Data Out of the EEA.**
 - **10.2.1. Google's Transfer Obligations.** If the storage and/or processing of Customer Personal Data (as set out in Section 10.1 (Data Storage and Processing Facilities)) involves transfers of Customer Personal Data out of the EEA and the European Data Protection Legislation applies to the transfers of such data ("Transferred Personal Data"), Google will:
 - (a) if requested to do so by Customer, ensure that Google LLC as the data importer of the Transferred Personal Data enters into Model Contract Clauses with Customer as the data exporter of such data, and that the transfers are made in accordance with such Model Contract Clauses; and/or

- (b) remain fully liable for all obligations subcontracted to, and all acts and omissions of, the Subprocessor.
 - 11.4. **Opportunity to Object to Subprocessor Changes.**
 - (a) When any new Third Party Subprocessor is engaged during the applicable Term, Google will, at least 30 days before the new Third Party Subprocessor processes any Customer Data, inform Customer of the engagement (including the name and location of the relevant subprocessor and the activities it will perform) either by sending an email to the Notification Email Address or via the Admin Console.
 - (b) Customer may object to any new Third Party Subprocessor by terminating the applicable Agreement immediately upon written notice to Google, on condition that Customer provides such notice within 90 days of being informed of the engagement of the subprocessor as described in Section 11.4(a). This termination right is Customer's sole and exclusive remedy if Customer objects to any new Third Party Subprocessor.
- 12. **Cloud Data Protection Team; Processing Records.**
 - 12.1. **Google's Cloud Data Protection Team.** Google's Cloud Data Protection Team can be contacted by Customer's Administrators at https://support.google.com/a/contact/googlecloud_dpr (while Administrators are signed in to their Admin Account) and/or by Customer by providing a notice to Google as described in the applicable Agreement.
 - 12.2. **Google's Processing Records.** Customer acknowledges that Google is required under the GDPR to: (a) collect and maintain records of certain information, including the name and contact details of each processor and/or controller on behalf of which Google is acting and, where applicable, of such processor's or controller's local representative and data protection officer; and (b) make such information available to the supervisory authorities. Accordingly, if the GDPR applies to the processing of Customer Personal Data, Customer will, where requested, provide such information to Google via the Admin Console or other means provided by Google, and will use the Admin Console or such other means to ensure that all information provided is kept accurate and up-to-date.
- 13. **Liability.**
 - 13.1. **Liability Cap.** If Model Contract Clauses have been entered into as described in Section 10.2 (Transfers of Data Out of the EEA), the total combined liability of either party and its Affiliates towards the other party and its Affiliates under or in connection with the applicable Agreement and such Model Contract Clauses combined will be limited to the Agreed Liability Cap for the relevant party, subject to Section 13.2 (Liability Cap Exclusions).
 - 13.2. **Liability Cap Exclusions.** Nothing in Section 13.1 (Liability Cap) will affect the remaining terms of the applicable Agreement relating to liability (including any specific exclusions from any limitation of liability).
- 14. **Third Party Beneficiary.** Notwithstanding anything to the contrary in the applicable Agreement, where Google LLC is not a party to such Agreement, Google LLC will be a third party beneficiary of Section 7.5 (Reviews and Audits of Compliance), Section 11.1 (Consent to Subprocessor Engagement) and Section 13 (Liability) of this Data Processing Amendment.
- 15. **Effect of Amendment.** To the extent of any conflict or inconsistency between the terms of this Data Processing Amendment and the remainder of the applicable Agreement, the terms of this Data Processing Amendment will govern. Subject to the amendments in this Data Processing Amendment, such Agreement remains in full force and effect. For clarity, if

Customer has entered more than one Agreement, this Data Processing Amendment will amend each of the Agreements separately.

Appendix 1: Subject Matter and Details of the Data Processing

Subject Matter

Google's provision of the Services and related technical support to Customer.

Duration of the Processing

The applicable Term plus the period from expiry of such Term until deletion of all Customer Data by Google in accordance with the Data Processing Amendment.

Nature and Purpose of the Processing

Google will process Customer Personal Data submitted, stored, sent or received by Customer, its Affiliates or End Users via the Services for the purposes of providing the Services and related technical support to Customer in accordance with the Data Processing Amendment.

Categories of Data

Personal data submitted, stored, sent or received by Customer, its Affiliates or End Users via the Services may include the following categories of data: user IDs, email, documents, presentations, images, calendar entries, tasks and other data.

Data Subjects

Personal data submitted, stored, sent or received via the Services may concern the following categories of data subjects: End Users including Customer's employees and contractors; the personnel of Customer's customers, suppliers and subcontractors; and any other person who transmits data via the Services, including individuals collaborating and communicating with End Users.

Appendix 2: Security Measures

As from the Amendment Effective Date, Google will implement and maintain the Security Measures set out in this Appendix 2 to the Data Processing Amendment. Google may update or modify such Security Measures from time to time provided that such updates and modifications do not result in the degradation of the overall security of the Services.

- **1. Data Center & Network Security.**
 - **(a) Data Centers.**

Infrastructure. Google maintains geographically distributed data centers. Google stores all production data in physically secure data centers.

Redundancy. Infrastructure systems have been designed to eliminate single points of failure and minimize the impact of anticipated environmental risks. Dual circuits, switches, networks or other necessary devices help provide this redundancy. The Services are designed to allow Google to perform certain types of preventative and corrective maintenance without interruption. All environmental equipment and facilities have documented preventative maintenance procedures that detail the process for and frequency of performance in accordance with the manufacturer's or internal specifications. Preventative and corrective maintenance of the data center equipment is scheduled through a standard change process according to documented procedures.

Power. The data center electrical power systems are designed to be redundant and maintainable without impact to continuous operations, 24 hours a day, and 7 days a week. In most cases, a primary as well as an alternate power source, each with equal capacity, is provided for critical infrastructure components in the data center. Backup power is provided by various mechanisms such as uninterruptible power supplies (UPS) batteries, which supply consistently reliable power protection during utility brownouts, blackouts, over voltage, under voltage, and out-of-tolerance frequency conditions. If utility power is interrupted, backup power is designed to provide transitory power to the data center, at full capacity, for up to 10 minutes until the diesel generator systems take over. The diesel generators are capable of automatically starting up within seconds to provide enough emergency electrical power to run the data center at full capacity typically for a period of days.

Server Operating Systems. Google servers use a Linux based implementation customized for the application environment. Data is stored using proprietary algorithms to augment data security and redundancy. Google employs a code review process to increase the security of the code used to provide the Services and enhance the security products in production environments.

Businesses Continuity. Google replicates data over multiple systems to help to protect against accidental destruction or loss. Google has designed and regularly plans and tests its business continuity planning/disaster recovery programs.

- **(b) Networks & Transmission.**

- **Data Transmission.** Data centers are typically connected via high-speed private links to provide secure and fast data transfer between data centers. This is designed to prevent data from being read, copied, altered or removed without authorization during electronic transfer or transport or while being recorded onto data storage media. Google transfers data via Internet standard protocols.
- **External Attack Surface.** Google employs multiple layers of network devices and intrusion detection to protect its external attack surface. Google

considers potential attack vectors and incorporates appropriate purpose built technologies into external facing systems.

- **Intrusion Detection.** Intrusion detection is intended to provide insight into ongoing attack activities and provide adequate information to respond to incidents. Google's intrusion detection involves:
 - 1. Tightly controlling the size and make-up of Google's attack surface through preventative measures;
 - 2. Employing intelligent detection controls at data entry points; and
 - 3. Employing technologies that automatically remedy certain dangerous situations.

Incident Response. Google monitors a variety of communication channels for security incidents, and Google's security personnel will react promptly to known incidents.

Encryption Technologies. Google makes HTTPS encryption (also referred to as SSL or TLS connection) available. Google servers support ephemeral elliptic curve Diffie-Hellman cryptographic key exchange signed with RSA and ECDSA. These perfect forward secrecy (PFS) methods help protect traffic and minimize the impact of a compromised key, or a cryptographic breakthrough.

- **2. Access and Site Controls.**
 - **(a) Site Controls.**

On-site Data Center Security Operation. Google's data centers maintain an on-site security operation responsible for all physical data center security functions 24 hours a day, 7 days a week. The on-site security operation personnel monitor Closed Circuit TV (CCTV) cameras and all alarm systems. On-site Security operation personnel perform internal and external patrols of the data center regularly.

Data Center Access Procedures. Google maintains formal access procedures for allowing physical access to the data centers. The data centers are housed in facilities that require electronic card key access, with alarms that are linked to the on-site security operation. All entrants to the data center are required to identify themselves as well as show proof of identity to on-site security operations. Only authorized employees, contractors and visitors are allowed entry to the data centers. Only authorized employees and contractors are permitted to request electronic card key access to these facilities. Data center electronic card key access requests must be made through e-mail, and require the approval of the requestor's manager and the data center director. All other entrants requiring temporary data center access must: (i) obtain approval in advance from the data center managers for the specific data center and internal areas they wish to visit; (ii) sign in at on-site security operations; and (iii) reference an approved data center access record identifying the individual as approved.

On-site Data Center Security Devices. Google's data centers employ an electronic card key and biometric access control system that is linked to a system alarm. The access control system monitors and records each

individual's electronic card key and when they access perimeter doors, shipping and receiving, and other critical areas. Unauthorized activity and failed access attempts are logged by the access control system and investigated, as appropriate. Authorized access throughout the business operations and data centers is restricted based on zones and the individual's job responsibilities. The fire doors at the data centers are alarmed. CCTV cameras are in operation both inside and outside the data centers. The positioning of the cameras has been designed to cover strategic areas including, among others, the perimeter, doors to the data center building, and shipping/receiving. On-site security operations personnel manage the CCTV monitoring, recording and control equipment. Secure cables throughout the data centers connect the CCTV equipment. Cameras record on site via digital video recorders 24 hours a day, 7 days a week. The surveillance records are retained for up to 30 days based on activity.

o **(b) Access Control.**

Infrastructure Security Personnel. Google has, and maintains, a security policy for its personnel, and requires security training as part of the training package for its personnel. Google's infrastructure security personnel are responsible for the ongoing monitoring of Google's security infrastructure, the review of the Services, and responding to security incidents.

Access Control and Privilege Management. Customer's Administrators and End Users must authenticate themselves via a central authentication system or via a single sign on system in order to use the Services. Each application checks credentials in order to allow the display of data to an authorized End User or authorized Administrator.

Internal Data Access Processes and Policies – Access Policy. Google's internal data access processes and policies are designed to prevent unauthorized persons and/or systems from gaining access to systems used to process personal data. Google aims to design its systems to: (i) only allow authorized persons to access data they are authorized to access; and (ii) ensure that personal data cannot be read, copied, altered or removed without authorization during processing, use and after recording. The systems are designed to detect any inappropriate access. Google employs a centralized access management system to control personnel access to production servers, and only provides access to a limited number of authorized personnel. LDAP, Kerberos and a proprietary system utilizing SSH certificates are designed to provide Google with secure and flexible access mechanisms. These mechanisms are designed to grant only approved access rights to site hosts, logs, data and configuration information. Google requires the use of unique user IDs, strong passwords, two factor authentication and carefully monitored access lists to minimize the potential for unauthorized account use. The granting or modification of access rights is based on: the authorized personnel's job responsibilities; job duty requirements necessary to perform authorized tasks; and a need to know basis. The granting or modification of access rights must also be in accordance with Google's internal data access policies and training. Approvals are managed by workflow tools that maintain audit records of all changes. Access to systems is logged to create

an audit trail for accountability. Where passwords are employed for authentication (e.g., login to workstations), password policies that follow at least industry standard practices are implemented. These standards include password expiry, restrictions on password reuse and sufficient password strength. For access to extremely sensitive information (e.g., credit card data), Google uses hardware tokens.

- **3. Data.**

- **(a) Data Storage, Isolation & Authentication.**

Google stores data in a multi-tenant environment on Google-owned servers. Data, the Services database and file system architecture are replicated between multiple geographically dispersed data centers. Google logically isolates data on a per End User basis at the application layer. Google logically isolates each Customer's data, and logically separates each End User's data from the data of other End Users, and data for an authenticated End User will not be displayed to another End User (unless the former End User or an Administrator allows the data to be shared). A central authentication system is used across all Services to increase uniform security of data.

Customer will be given control over specific data sharing policies. Those policies, in accordance with the functionality of the Services, will enable Customer to determine the product sharing settings applicable to End Users for specific purposes. Customer may choose to make use of certain logging capability that Google may make available via the Services, products and APIs. Customer agrees that its use of the APIs is subject to the API Terms of Use. Google agrees that changes to the APIs will not result in the degradation of the overall security of the Services.

- **(b) Decommissioned Disks and Disk Erase Policy.**

Certain disks containing data may experience performance issues, errors or hardware failure that lead them to be decommissioned ("Decommissioned Disk"). Every Decommissioned Disk is subject to a series of data destruction processes (the "Disk Erase Policy") before leaving Google's premises either for reuse or destruction. Decommissioned Disks are erased in a multi-step process and verified complete by at least two independent validators. The erase results are logged by the Decommissioned Disk's serial number for tracking. Finally, the erased Decommissioned Disk is released to inventory for reuse and redeployment. If, due to hardware failure, the Decommissioned Disk cannot be erased, it is securely stored until it can be destroyed. Each facility is audited regularly to monitor compliance with the Disk Erase Policy.

- **4. Personnel Security.**

Google personnel are required to conduct themselves in a manner consistent with the company's guidelines regarding confidentiality, business ethics, appropriate usage, and professional standards. Google conducts reasonably appropriate backgrounds checks to the extent legally permissible and in accordance with applicable local labor law and statutory regulations.

Personnel are required to execute a confidentiality agreement and must acknowledge receipt of, and compliance with, Google's confidentiality and privacy policies. Personnel are provided with security training. Personnel handling Customer Data are required to complete additional requirements appropriate to their role (eg., certifications). Google's personnel will not process Customer Data without authorization.

- **5. Subprocessor Security.**

Before onboarding Subprocessors, Google conducts an audit of the security and privacy practices of Subprocessors to ensure Subprocessors provide a level of security and privacy appropriate to their access to data and the scope of the services they are engaged to provide. Once Google has assessed the risks presented by the Subprocessor, then subject always to the requirements set out in Section 11.3 (Requirements for Subprocessor Engagement) of this Data Processing Amendment, the Subprocessor is required to enter into appropriate security, confidentiality and privacy contract terms.