

Google Cloud Mapping

This document is designed to help firms within the scope of the European Securities and Markets Authority's mandate ("regulated entity") to consider the Guidelines on outsourcing to cloud service providers ("framework") in the context of Google Cloud Platform ("GCP") and the Google Cloud Financial Services Contract.

We focus on the following requirements of the framework: Guideline 3 - Key contractual elements, Guideline 4 - Information security, Guideline 5 - Exit strategies, Guideline 6 - Access and audit rights and Guideline 7 - Sub-outsourcing. For each paragraph, we provide commentary to help you understand how you can address the requirements using the Google Cloud services and the Google Cloud Financial Services Contract.

#	Framework refer	ence	Google Cloud commentary	Google Cloud Financial Services Contract reference
Guide	eline 3. Key contr	actual elements		
1.	26. The respective written agree		The rights and obligations of the parties are set out in the Google Cloud Financial Services Contract.	N/A
2.	27. The written a where neces		You can elect to terminate our contract for convenience with advance notice, including if necessary to comply with law or if directed by a supervisory authority.	Termination for Convenience
3.	28. In case of o include at lea	utsourcing of critical or important functions, the written agreement should ast:		
4.	a)	a clear description of the outsourced function;	The GCP services are described on our <u>services summary</u> page.	Definitions
5.	b)	the start date and end date, where applicable, of the agreement and the notice periods for the CSP and for the firm;	Refer to your Google Cloud Financial Services Contract.	Term and Termination
6.	c)	the governing law of the agreement and, if any, the choice of jurisdiction;	Refer to your Google Cloud Financial Services Contract.	Governing Law
7.	d)	the firm's and the CSP's financial obligations;	Refer to your Google Cloud Financial Services Contract.	Payment Terms
8.	e)	whether sub-outsourcing is permitted, and, if so, under which conditions, having regard to Guideline 7;	For more information on sub-outsourcing refer to Rows 58 to 65.	N/A
9.	f)	the location(s) (namely regions or countries) where the outsourced function will be provided and where data will be processed and stored, and the conditions to be met, including a requirement to notify the firm if the CSP proposes to change the location(s);	<u>Locations</u>	Data Transfers (Cloud Data Processing Addendum) Data Security; Subprocessors (Cloud Data Processing Addendum)



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			Google provides the same contractual commitments and technical and organizational measures for your data regardless of the country / region where it is located. In particular:	
			 The same robust security measures apply to all Google facilities, regardless of country / region. Google makes the same commitments about all its subprocessors, regardless of country / region. 	
			Conditions Google provides you with choices about where to store your data - including a choice to store your data in Europe. Once you choose where to store your data, Google will not store it outside your chosen region(s).	
			You can also choose to use tools provided by Google to enforce data location requirements. For more information, see our <u>Data residency</u> , operational transparency, and privacy for European customers on Google Cloud Whitepaper.	Data Transfers (Cloud Data Processing Addendum)
			In addition, Google provides commitments to enable the lawful transfer of personal data to a third country in accordance with European data protection law.	
10.	g)	provisions regarding information security and protection of personal data, having regard to Guideline 4;	For more information on information security and protection of personal data, refer to Rows 19 to 28.	N/A
11.	h)	the right for the firm to monitor the CSP's performance under the cloud outsourcing arrangement on a regular basis, having regard to Guideline 6;	You can monitor Google's performance of the Services (including the SLAs) on an ongoing basis using the functionality of the Services. For example:	Ongoing Performance Monitoring
			The <u>Status Dashboard</u> provides status information on the Services.	
			 Google Cloud Operations is an integrated monitoring, logging, and diagnostics hosted solution that helps you gain insight into your applications that run on GCP. 	
			Access Transparency is a feature that enables you to review logs of actions taken by Google personnel regarding your data. Log entries include: the affected resource, the time of action, the reason for the action (e.g. the case).	



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			number associated with the support request); and data about who is acting on data (e.g. the Google personnel's location).	
12.	i)	the agreed service levels, which should include, quantitative and qualitative performance targets in order to allow for timely monitoring so that appropriate corrective actions can be taken without undue delay if agreed service levels are not met;		Services
13.	j)	the reporting obligations of the CSP to the firm and, as appropriate, the obligations to submit reports relevant for the firm's security function and key functions, such as reports prepared by the internal audit function of the CSP;		Significant Developments
14.	k)	provisions regarding the management of incidents by the CSP, including the obligation for the CSP to report to the firm without undue delay incidents that have affected the operation of the firm's contracted service;	Google will notify you of data incidents promptly and without undue delay. More information on Google's data incident response process is available in our <u>Data incident response whitepaper</u> .	Data Incidents (<u>Cloud Data Processing</u> <u>Addendum</u>)
15.	1)	whether the CSP should take mandatory insurance against certain risks and, if applicable, the level of insurance cover requested;	Google will maintain insurance cover against a number of identified risks.	Insurance
16.	m)	the requirements for the CSP to implement and test business continuity and disaster recovery plans;	Google will implement a business continuity plan for the Services, review and test it at least annually and ensure it remains current with industry standards. In addition, information about how customers can use our Services in their own business contingency planning is available in our <u>Disaster Recovery Planning Guide</u> .	Business Continuity and Disaster Recovery
17.	n)	and any other person appointed by the firm or the competent authorities	Google grants audit, access and information rights to regulated entities and supervisory authorities, and both their appointees. This includes access to Google's premises used to provide the Services to conduct an on-site audit.	Regulator Information, Audit and Access Customer Information, Audit and Access



#	Framework reference	Google Cloud commentary	Google Cloud Financial Services Contract reference
18.	o) provisions to ensure that the data that the CSP processes or behalf of the firm can be accessed, recovered and returned to needed, having regard to Guideline 5.	r stores on Regulated entities may access their data on the services at any time. the firm as For more information on data export , refer to Row 32.	N/A
Guide	eline 4. Information security		
19.	29. A firm should set information security requirements in its internal por procedures and within the cloud outsourcing written agreement and monitor of with these requirements on an ongoing basis, including to protect confidential or otherwise sensitive data. These requirements should be proportionate to scale and complexity of the function that the firm outsources to the CSP and inherent to this function.	ompliance I, personal (1) Security of Google's infrastructure	ty nat



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		Although we want to offer you as much choice as possible when it comes to your data, the security of your data is of paramount importance to Google and we take the following proactive steps to assist you: • Encryption at rest. Google encrypts customer data stored at rest by default, with no additional action required from you. More information is available at: https://cloud.google.com/security/encryption-at-rest/default-encryption. • Encryption in transit. Google encrypts and authenticates all data in transit at one or more network layers when data moves outside physical boundaries not controlled by Google or on behalf of Google. More information is available at https://cloud.google.com/security/encryption-in-transit. (b) Security products In addition to the other tools and practices available to you outside Google, you can choose to use tools provided by Google to enhance and monitor the security of your data. Information on Google's security products is available on our Cloud Security Products page. (c) Security resources Google also publishes guidance on: • Security best practices • Security use cases	
20.	30. For that purpose, in case of outsourcing of critical or important functions, and without prejudice to the applicable requirements under GDPR, a firm, applying a risk-based approach, should at least:		
21.	p) information security organisation: ensure that there is a clear allocation of information security roles and responsibilities between the firm and the CSP, including in relation to threat detection, incident management and patch management, and ensure that the CSP is effectively able to fulfil its roles and responsibilities		N/A
22.	 q) identity and access management: ensure that strong authentication mechanisms (for example multi-factor authentication) and access 		N/A



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	controls are in place with a view to prevent unauthorised access to the firm's data and back-end cloud resources;	Cloud Identity and Access Management helps to prevent against unauthorized access by controlling access rights and roles for Google Cloud Platform resources. Cloud Audit Logs help your security teams maintain audit trails in GCP and view detailed information about Admin activity, data access, and system events. Multi-Factor Authentication provides a wide variety of verification methods to help protect your user accounts and data. The "Managing Google's Access to your Data" section of our Trusting your data with GCP whitepaper explains Google's data access processes and policies. In addition, you can also monitor and control the limited actions performed by Google personnel on your data using these tools: Access Transparency is a feature that enables you to review logs of actions taken by Google personnel regarding your data. Log entries include: the affected resource, the time of action, the reason for the action (e.g. the case number associated with the support request); and data about who is acting on data (e.g. the Google personnel's location). Access Approval is a feature that enables you to require your explicit approval before Google support and engineering teams are permitted access to your customer content. Access Approval provides an additional layer of control on top of the transparency provided by Access Transparency.		
23.	r) encryption and key management: ensure that relevant encryption technologies are used, where necessary, for data in transit, data in memory, data at rest and data back-ups, in combination with appropriate key management solutions to limit the risk of non-authorised access to the encryption keys; in particular, the firm should conside state-of-the-art technology and processes when selecting its key management solution;	In addition, you can choose to use these encryption and key management tools provided by Google:	N/A	



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24.	s) operations and network security: cons availability, network segregation(for shared environment of the cloud, ope	sider appropriate levels of network example tenant isolation in the rational separation as regards the system, network, Data Base storage layers) and processing Acceptance Testing, development,	 service. You can generate, use, rotate, and destroy various symmetric and asymmetric keys. Customer-managed encryption keys for Cloud SQL and GKE persistent disks. Cloud External Key Manager (beta) lets you protect data at rest in BigQuery and Compute Engine using encryption keys that are stored and managed in a third-party key management system that's deployed outside Google's infrastructure. Key Access Justification (alpha) works with External Key Manager. It provides a detailed justification each time one of your keys is requested to decrypt data, along with a mechanism for you to explicitly approve or deny providing the key using an automated policy that you set. 	reference	ncial Services	Contract
			<u>Dedicated Interconnect</u> is a high-performance option providing direct physical connections between your on-premises network and Google's network.			
		E	Resource isolation			
			To keep data private and secure, Google logically isolates each customer's data from that of other customers. Refer to Row 19 for more information on Google's security.	Security Measures; D Logging (<u>Cloud Data I</u>		
25.	t) application programming interfaces (A integration of the cloud services with security of APIs (for example establishment)	the systems of the firm to ensure	There are a number of ways to integrate our services with your systems and to perform effective access management.	N/A		



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	security policies and procedures for APIs across multiple system interfaces, jurisdictions, and business functions to prevent unauthorised disclosure, modification or destruction of data);		
26.	continuity and disaster recovery controls are in place (for example by setting minimum capacity requirements, selecting hosting options that are geographically spread, with the capability to switch from one to the other, or requesting and reviewing documentation showing the transport route of the firm's data among the CSP's systems, as well as considering	least annually and ensure it remains current with industry standards. In addition, information about how customers can use our Services in their own	Business Continuity and Disaster Recovery



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27.	v)	data location: adopt a risk-based approach to data storage and data processing location(s) (namely regions or countries);	This is a customer consideration. For more information on data location and the choices regulated entities have refer to Row 9.	N/A
28.	w)	internationally recognised information security standards and has	Google recognizes that you expect independent verification of our security, privacy and compliance controls. Google undergoes several independent third-party audits on a regular basis to provide this assurance. Google commits to comply with the following key international standards during the term of our contract with you: ISO/IEC 27001:2013 (Information Security Management Systems) ISO/IEC 27017:2015 (Cloud Security) ISO/IEC 27018:2014 (Cloud Privacy) PCI DSS SOC 1 SOC 2 SOC 3	·
			You can review Google's current <u>certifications and audit reports</u> at any time.	
Guide	line 5. Exit strateg	ies		
29.	able to exit the activities and	ne cloud outsourcing arrangement without undue disruption to its business services to its clients, and without any detriment to its compliance with its	Regulated entities can elect to terminate our contract for convenience, including if necessary to comply with law, or where directed by the supervisory authority.	Termination for Convenience
		nder the applicable legislation, as well as the confidentiality, integrity and its data. For that purpose, a firm should:	Google recognizes that regulated entities need to be able to exit our Services without undue disruption to their business, without limiting their compliance with regulatory requirements and without any detriment to the continuity and quality of their service to their own clients. To help regulated entities achieve this, upon request, Google will continue to provide the Services for 12 months beyond the expiry or termination of the contract.	Transition Term
30.	x)	develop exit plans that are comprehensive, documented and sufficiently tested. These plans should be updated as needed, including in case of changes in the outsourced function;		N/A
31.	y)	identify alternative solutions and develop transition plans to remove the outsourced function and data from the CSP and, where applicable, any sub-outsourcer, and transfer them to the alternative CSP indicated by the firm or directly back to the firm. These solutions should be defined with regard to the challenges that may arise from the location of the		N/A



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	data, taking the necessary measures to ensure business continuity during the transition phase;		
32.	firm in case the firm activates the exit strategy. The obligation to support the orderly transfer of the outsourced function, and the related treatment of data, should include where relevant the secure deletion of the data from the systems of the CSP and any sub-outsourcer.	Google will enable you to access and export your data throughout the duration of our contract and during the additional 12 month transition period. You can export your data from the Services in a number of industry standard formats. For example: • Google Kubernetes Engine is a managed, production-ready environment that allows portability across different clouds as well as on premises environments. • Migrate for Anthos allows you to move and convert workloads directly into containers in Google Kubernetes Engine. • You can export/import an entire VM image in the form of a .tar archive. Find more information on images and storage options on our Compute Engine Documentation page. Our Services enable you to transfer your data independently. You do not need Google's permission to do this. However, if a regulated entity would like support, upon request, Google will provide advisory and implementation services to assist in migrating workloads or otherwise transitioning use of the Services. Deletion	Data Export (Cloud Data Processing Addendum) Transition Assistance Deletion on Termination (Cloud Data Processing Addendum)
33.	32. When developing the exit plans and solutions referred to in points (a) and (b) above ('exit strategy'), the firm should consider the following:		
34.	aa) define the objectives of the exit strategy;	This is a customer consideration.	N/A



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35.	bb)	define the trigger events that could activate the exit strategy. These should include at least the termination of the cloud outsourcing arrangement at the initiative of the firm or the CSP and the failure or other serious discontinuation of the business activity of the CSP;		N/A
36.	cc)	perform a business impact analysis that is commensurate to the function outsourced to identify what human and other resources would be required to implement the exit strategy;		N/A
37.	dd)	assign roles and responsibilities to manage the exit strategy;	This is a customer consideration.	N/A
38.	ee)	test the appropriateness of the exit strategy, using a risk-based approach, (for example, by carrying out an analysis of the potential costs, impact, resources and timing implications of transferring an outsourced service to an alternative provider);		N/A
39.	ff)	define success criteria of the transition.	This is a customer consideration.	N/A
40.	monitoring a	d include indicators of the trigger events of the exit strategy in its ongoing and oversight of the services provided by the CSP under the cloud arrangement.		N/A
Guide	line 6. Access and	d Audit Rights		
41.	firm's and co	d ensure that the cloud outsourcing written agreement does not limit the ompetent authority's effective exercise of the access and audit rights and tions on the CSP.	Nothing in our contract is intended to limit or impede a regulated entity's or the supervisory authority's ability to audit our services effectively. In particular, although we will make a lot of information and tools available to help regulated entities review our Services, our contract does not contain pre-defined steps before regulated entities or supervisory authorities can approach Google to exercise their audit, access and information rights. In other words, there is no hierarchy amongst the options for assessing our Services.	Enabling Customer Compliance
42.	audit freque	d ensure that the exercise of the access and audit rights (for example, the ncy and the areas and services to be audited) takes into consideration outsourcing is related to a critical or important function, as well as the	The regulated entity is best placed to decide what audit frequency and scope is right for their organization. Our contract does not limit regulated entities to a fixed number of audits or a pre-defined scope.	Customer Information, Audit and Access



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	nature and extent of the risks and impact arising from the cloud outsourcing arrangement on the firm.	3	
43.	36. In case the exercise of the access or audit rights, or the use of certain audit techniques create a risk for the environment of the CSP and/or another CSP's client (for example by impacting service levels, confidentiality, integrity and availability of data), the CSF should provide a clear rationale to the firm as to why this would create a risk and the CSP should agree with the firm on alternative ways to achieve a similar result (for example, the inclusion of specific controls to be tested in a specific report/certification produced by the CSP).	any other customers at risk. This applies when you perform an audit. It also applies when any other customer performs an audit.	Arrangements
44.	37. Without prejudice to their final responsibility regarding cloud outsourcing arrangements in order to use audit resources more efficiently and decrease the organisational burder on the CSP and its clients, firms may use:		
45.	gg) third-party certifications and external or internal audit reports made available by the CSP;	Google recognizes that you expect independent verification of our security, privacy and compliance controls. Google undergoes several independent third-party audits on a regular basis to provide this assurance. Google commits to comply with the following key international standards during the term of our contract with you: ISO/IEC 27001:2013 (Information Security Management Systems)	Certifications and Audit Reports
46.	hh) pooled audits performed jointly with other clients of the same CSP o pooled audits performed by a third-party auditor appointed by multiple clients of the same CSP.	Google recognizes the benefits of pooled audits. We would be happy to discuss this with regulated entities.	N/A



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47.	38. In case of outsourcing of critical or important functions, a firm should assess whethe the third-party certifications and external or internal audit reports referred to in paragraph 37(a) are adequate and sufficient to comply with its obligations under the applicable legislation and should aim at not solely relying on these certifications and reports over time.			N/A
48.	39. In case of outsourcing of critical or importan third-party certifications and external or inter 37(a) only if it:			
49.	the CSP's key systems	the certifications or the audit reports covers (for example processes, applications, the key controls identified by the firm and ant applicable legislation;	Refer to Row 45. Google's audit scope covers in scope Services, infrastructure systems, policies and procedures, common processes and personnel. Google is audited on our security and privacy controls covering the relevant certifications and audit reports for the audit scope.	Certifications and Audit Reports
50.		ent of the certifications or audit reports on a e certifications or reports are not obsolete;	Refer to Row 45. You can review Google's current <u>certifications and audit reports</u> at any time.	Certifications and Audit Reports
51.	kk) ensures that the CSP's key s versions of the certifications or	systems and controls are covered in future r audit reports;	Refer to Row 45. As part of Google's routine planning, scoping, and readiness activities, recurring key systems and controls, as well as new systems and controls, are reviewed prior to the audit work commencing.	Certifications and Audit Reports
52.	to its qualifications, exper	or auditing party (for example with regard rtise, re-performance/verification of the dit file as well as rotation of the certifying or		Certifications and Audit Reports
53.		tions are issued and that the audits are opriate standards and include a test of the ols in place;		Certifications and Audit Reports



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54.	nn)		not covered by Google's certifications or audit reports for that service, regulated entities	Certifications and Audit Reports
55.	00)	retains the contractual right to perform individual on-site audits at its discretion with regard to the outsourced function.	Regulated entities always retain the right to conduct an audit. The contract does not contain pre-defined steps before regulated entities can approach Google to exercise their audit, access and information rights. In other words, there is no hierarchy amongst the options for assessing our Services.	Customer Information, Audit and Access
56.	the firm (for provided to emergency of longer be effective.)	ensure that, before an on-site visit, including by a third party appointed by example an auditor), prior notice within a reasonable time period is the CSP, unless an early prior notification is not possible due to an or crisis situation or would lead to a situation where the audit would no ective. Such notice should include the location, purpose of the visit and the will participate to the visit.	ensure the relevant Google experts are available and prepared to make the most of your time. Notice also enables Google to plan the audit so that it does not create undue risk	Arrangements
57.	41. Considering that cloud services present a high level of technical complexity and raise specific jurisdictional challenges, the staff performing the audit —being the internal auditors of the firm or auditors acting on its behalf —should have the right skills and knowledge to properly assess the relevant cloud services and perform effective and relevant audit. This should also apply to the firms' staff reviewing the certifications or audit reports provided by the CSP.			N/A
Guide	eline 7. Sub-outsou	rcing		
58.		urcing of critical or important functions (or material parts thereof) is e cloud outsourcing written agreement between the firm and the CSP		
59.	pp)	specify any part or aspect of the outsourced function that are excluded from potential sub-outsourcing;	Google recognizes that regulated entities need to consider the risks associated with sub-outsourcing. We also want to provide you and all our customers with the most reliable, robust and resilient service that we can. In some cases there may be clear benefits to working with other trusted organizations e.g. to provide 24/7 support. Although Google will provide you with information about the organizations that we work with, we cannot agree that we will never sub-outsource. Given the one-to-many nature	Subcontracting



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			of our service, if we agreed with one customer that we would not sub-outsource, we would potentially be denying all our customers the benefit motivating the sub-outsourcing.	
			To ensure regulated entities retain oversight of any sub-outsourcing, Google will comply with clear conditions designed to provide transparency and choice. Refer to Row 60.	
60.	qq)	indicate the conditions to be complied with in case of sub-outsourcing;	To enable regulated entities to retain oversight of any sub-outsourcing and provide choices about the services regulated entities use, Google will:	Google Subcontractors
			 provide information about our subcontractors; provide advance notice of changes to our subcontractors; and give regulated entities the ability to terminate if they have concerns about a new subcontractor. 	
			Google will oversee the performance of all subcontracted obligations and ensure our subcontractors comply with our contract with you (including the audit and access rights, and security requirements).	
61.	rr)	specify that the CSP remains accountable and is obliged to oversee those services that it has sub-outsourced to ensure that all contractual obligations between the CSP and the firm are continuously met;		Google Subcontractors
62.	ss)	include an obligation for the CSP to notify the firm of any intended sub-outsourcing, or material changes thereof, in particular where that might affect the ability of the CSP to meet its obligations under the cloud outsourcing arrangement with the firm. The notification period set in the written agreement should allow the firm sufficient time at least to carry out a risk assessment of the proposed sub-outsourcing or material changes thereof and to object to or explicitly approve them, as indicated in point (e) below;	the time you need, Google provides advance notice before we engage a new subcontractor or change the function of an existing subcontractor.	Google Subcontractors
63.	tt)	ensure that the firm has the right to object to the intended sub-outsourcing, or material changes thereof, or that explicit approval is required before the proposed sub-outsourcing or material changes come into effect;	Regulated entities have the choice to terminate our contract if they think that a subcontractor change materially increases their risk. Refer to Row 64.	Google Subcontractors



#	Framework reference	Google Cloud commentary	Google Cloud Financial Services Contract reference
64.	outsourcing arrangement with the CSP in case it objects to the proposed	them. To ensure this, regulated entities have the choice to terminate our contract if they think that a subcontractor change materially increases their risk or if they do not receive the agreed notice.	Google Subcontractors
65.	43. The firm should ensure that the CSP appropriately oversees the sub-outsourcer.	Refer to Row 60.	N/A