## Cloud service provider disclosure

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The form is to be completed for each cloud service provided. For questions not applicable or not disclosed, indicate accordingly in the remarks.

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Cloud Service Provider Background

## Overview of service offering:

Azure is Microsoft's cloud platform: a growing collection of integrated services—compute, storage, data, networking, and app - that help you move faster, do more, and save money.

The Microsoft Azure technology platform is an open and flexible cloud platform that companies can use to quickly build, deploy and manage applications across a global network of Microsoft-managed data centers. Organizations can build applications using any language, tool or framework. And they can also integrate public cloud applications with an existing IT environment.

Azure services in scope are:

API Management, App Service (Web Apps, Mobile Apps, API Apps, Logic Apps), Application Gateway, Application Insights, Automation, Azure Active Directory B2C, Azure Active Directory Free and Basic, Azure Container Service, Azure DevTest Labs, Azure DNS, Azure Information Protection (including Rights Management), Azure Resource Manager, Backup, Batch, Biztalk Services, Cloud Services, Data Catalog, Data Factory, Data Lake Analytics, Data Lake Store, Azure Cosmos DB, Event

Hubs, Express Route, Functions, HDInsight, Import/Export, IoT Hub, Key Vault, Load Balancer, Log Analytics (formerly Operational Insights), Machine Learning, Microsoft Azure Portal (including Azure IaaS Experience), Microsoft Cloud App Security, Microsoft Flow, Microsoft Genomics, Microsoft Graph, Microsoft Intune, Microsoft Power BI, Microsoft PowerApps, Multi-Factor Authentication, Notification Hubs, Redis Cache, Scheduler, Security Center (Rome), Service Bus, Service Fabric, Site Recovery, SQL Databases, SQL Server Stretch Database, SQL Warehouse, Storage (blobs, queues, files, disks, tables, cool and premium), StorSimple, Stream Analytics, Traffic Manager, Virtual Machines, Virtual Machine Scale Sets, Virtual Network, VPN Gateway, Azure Core Services (RDFE, Fabric and SMAPI), Media Services.

Servic	e model:				
	⊠ Virtual mad	hine instances owned by the user			
	Network fa	cilities			
	Compliance with applicable standards				
Deplo	yment model:				
	Private clou	ud			
	Community	<i>r</i> cloud			
	Hybrid clou	d			
	Public cloud	d			
Tier:					
	Level 1				
	Level 2				
	⊠ Level 3				
No.	Criteria	Description	Remarks		
Legal	and Compliance				
1.	Right to audit	The user has the right to audit:			
		☑ Virtual machine instances owned by the user	By providing customers with compliant,		
		☐ Network facilities	independently verified cloud services,  Microsoft makes it easier for customers to		
		Compliance with applicable standards	achieve compliance for the infrastructure and applications they run in Azure.		
		Technical controls	Microsoft provides Azure customers with		
		Policies and governance	detailed information about our security and compliance programs, including audit		
		Data centre facilities	reports and compliance packages, to help customers assess our services against their		
		Others	own legal and regulatory requirements.		
		None	In addition, Microsoft has developed an extensible compliance framework that		

enables it to design and build services using Regulators recognised by Singapore law have the a single set of controls to speed up and right to audit: simplify compliance across a diverse set of regulations and rapidly adapt to changes in ☐ Virtual machine instances owned by the user the regulatory landscape. Network facilities We provide financial sector customers with a Regulator Right to Examine, which Compliance with applicable standards includes access to a number of auditrelated materials and an opportunity to Technical controls discuss with our auditor. Report and certification requests can be made through Policies and governance a Microsoft account representative. Data centre facilities Microsoft has also established a policy for customers to carry out authorized Others penetration testing on their applications hosted in Azure. None be Because such testing can Audit / assessment reports that can be made indistinguishable from a real attack, it is available on request: critical that customers conduct penetration testing only after obtaining approval in Penetration test (Please see side remarks) advance from Azure Customer Support. Penetration testing must be conducted in Threat and vulnerability risk assessment accordance with our terms and conditions. (Please see side remarks) Requests for penetration testing should be submitted with a minimum of 7 days ☑ Vulnerability scan (Please see side remarks) advanced notice. Audit reports (e.g. Statement on Standards for To learn more or to initiate penetration Attestation Engagements (SSAE) No. 16, Reporting testing, please download the Penetration on Controls at a Service Organisation) Testing Approval Form and then contact Azure Customer Support. Customers may also be interested in reading the document entitled "Microsoft Enterprise Cloud Red Teaming". See Azure Trust Center for details: http://azure.microsoft.c om/enus/support/trustcenter/compliance/ Penetration Test, TVRA and Vulnerability scanning reports are provided to auditors request as part of audit requirements. The following guidelines / standards / regulations By providing customers with compliant, 2. Compliance are adhered to: independently verified cloud services, Microsoft makes it easier for customers to Singapore Personal Data Protection Act achieve compliance for the infrastructure and applications they run in Azure. SO / IEC 27001 Microsoft provides Azure customers with

			detailed information about our security and
		☐ ISO 9000	compliance programs, including audit
		□ ISO / ISO 20000	reports and compliance packages, to help
		☐ ISO / IEC 20000	customers assess our services against their
		□ CSA Open Certification Framework	own legal and regulatory requirements.
		⊠ PCI-DSS	Microsoft Azure is compliant to the
		Others: SOC 1 and SOC 2 SSAE 16/ISAE 3402; CSA Cloud Controls Matrix; FedRAMP (U.S. only); HIPAA BAA and other listed in the Remarks.	following certifications:  • •ISO/IEC 27001:2013 and 27018:2014 • ISO/IEC 22301 • ISO/IEC 27017 • ISO/IEC 9001 • SOC 1 and SOC 2 SSAE 16/ISAE 3402 Type 1 and Type 2 • CDSA CPS • CJIS • CSA Cloud Controls Matrix 1.2 (Azure) • FedRAMP/FISMA • PCI DSS Level 1 (Azure) • Australia I-RAP • UK G-Cloud • UK Cyber Essentials Plus • HIPAA / HITECH • FDA 21 CFR Part 11 • FERPA • FIPS 140-2 • Data Processing Agreements (DPAs) • European Union (EU) Model Clauses • US-EU Safe Harbor framework • New Zealand GCIO • Japan FISC • PIPEDA • GLBA  List of Certifications for Microsoft Azure: https://www.microsoft.com/en-us/trustcenter/compliance/complianceoffe rings  Microsoft's privacy representative for Singapore can be reached at the following address:  Microsoft Operations Pte Ltd Frederic Blanchi, Privacy Officer 1 Marina Boulevard, #22-01
			Marina Boulevard Singapore 018989
Data	Control		
3.	Data ownership	All data on the cloud service is owned by the cloud user except for: content the customer did not upload into or create within the service.	The following lists helpful information with regards to data ownership:
			https://www.microsoft.com/en-

		The cloud User retains the ownership on the derived data or attributes of cloud usage except for the following:  Advertising or marketing  Statistics analysis on usage	us/trustcenter/privacy
4.	Data retention	Data deleted by the user is retained as follows:	Customers may extract and/or delete Customer Data at any time. When a
		Minimum data retention period is: 90 days	Subscription expires, or terminates, we will retain any Customer Data you have not
		Maximum data retention period is:	deleted for at least 90 days so that you may extract it, except for free trials, where we
		☑ Deleted immediately	may delete Customer Data immediately without any retention period.
		Log data is retained for a period of:	Customers remain responsible for all
		Minimum data retention period as follows:	storage and other applicable charges during this retention period. After the 90-
		Maximum data retention period is: 90 days	day retention period ends, Microsoft will disable Customer's account. No more than
		☐ Not retained	180 days after expiration or termination of
	:	User data is retained for a period of:	the customer's use of the service, Microsoft will disable the account and delete the data from the account.
		Minimum data retention period is:	
		Maximum data retention period is: Default is 90 days after closure of storage account.	More information can be found in the Online Services Terms: http://www.microsoftvolumelicensing.com
		☐ Not retained	/DocumentSearch.aspx?Mode=3&Docume ntTypeId=46
		The following types of data are available for download by the cloud user:	Log data retention, this varies by type of
			log. Logs controlled by the user are retained for whatever period the user sets.
		Log data	Most, but not all, platform logs are retained
		Other: Log Data from VMs as well as diagnostic data from Azure Diagnostic API	90 days.
		-	Users can download logs maintained within their own virtual machines.
5.	Data	The primary data locations are:	Customers can choose their data locations
	sovereignty	Singapore	and their data will stay within that location they specify.
		Asia Pacific	Please find the details of Azure data center locations here:
		☐ Europe	
		United States	For Azure services, all customer and app data remains in Singapore and the responsibility lies with the customer to
		Other	configure this requirement.

		The backup data locations are:	Please find the details of Azure data center
		Singapore	locations here:
		Asia Pacific (Hong Kong)	https://azure.microsoft.com/en- us/regions/
		Europe	
	Į.	United States	
		Other	https://azure.microsoft.com/en-
		No. of countries in which data centers are operated: 16	us/regions/services/
		The user's data stored in the cloud environment will never leave the locations specified in item 5:	Consent is obtained via service agreement and in privacy statement.
		Yes	https://privacy.microsoft.com/en- us/privacystatement
		Xes, except as required by law	
		Yes, except as noted: See link in remarks section for non- regional services.	
		□No	
		User's consent is required prior to transferring data to a location not specified in item 5 or a third party:	
		Yes	
		Yes, except as required by law	
		Yes, except as noted:	
		□No	
		Note: Cloud users are responsible for determining the impact of data protection and data sovereignty laws on the locations where data is stored. In addition, users should understand the risks associated with relevant laws that may allow for law enforcement or other government access to data in-transit or storage with Cloud Service Providers.	
6.	Non-disclosure	Non-disclosure agreement template can be provided by Cloud Service Provider	Non-disclosure is addressed in the service agreement, which includes the following
		Cloud Service Provider may use customer's NDA (pending legal review)	commitment:  Microsoft will not disclose Customer Data
			to a third party (including law enforcement,
			other government entity, or civil litigant; excluding our subcontractors) except as

			Customer directs or unless required by law.
			Should a third party contact Microsoft with
			a demand for Customer Data, Microsoft
			will attempt to redirect the third party to
			request that data directly from Customer.
			As part of that, Microsoft may provide
			Customer's basic contact information to
			the third party. If compelled to disclose
			Customer Data to a third party, Microsoft
			will promptly notify Customer and provide
			a copy of the demand, unless legally
			prohibited from doing so.
Provid	ler Performance		
7.	Availability	The committed network uptime is:	Minimum SLA for all Azure services in scope
			is 99.9%. There are some services provide
		99.9 to 99.95%	higher SLA in specific context:
		∇aries according to price plan	• 99.95%: Cloud Services, Virtual Machines
		The committed system uptime is:	and Websites
		⊠ 99.9 to 99.95%	Please find the details and conditions of SLAs for different Azure services:
		☑ Varies according to price plan	https://azure.microsoft.com/en- us/support/legal/sla/
		The cloud environment has the following single points of failure:	
		none	
8.	BCP / DR	☐ Disaster recovery protection	Microsoft does provide escrow
		□ Backup and restore service	arrangements, but will provide process for SLA service credit claims.
		☐ User selectable backup plans	
		Escrow arrangements	
		☐ No BCP / DR is available	
		RPO - Managed by cloud user	
		RTO - Managed by cloud user	
		Others, please specify:	
9.	Liability	The following terms are available for the users on failure of the provider to meet the service commitment:	Liability for outages is addressed in the Service Level Agreements, available here: https://azure.microsoft.com/en-
		⊠ Network failure	us/support/legal/sla/

		Liability:  ☑ Infrastructure failure  Liability: Same as network failure  ☑ Virtual machine instance failure  Liability: Same as network failure  ☑ Migrations  Liability:  ☑ Unscheduled downtime  Liability: Same as network failure  ☑ Database failure	Liability not addressed in the SLAs is addressed in the subscription agreement. Microsoft Azure's subscription agreement for Singapore is here:  https://azure.microsoft.com/en-us/support/legal/subscription-agreement/?country=sg&language=en
		Liability: Same as network failure  Monitoring failure	
	_	Liability: Same as network failure	
Servio	e Support		
10.	Change management	The Cloud Service Provider has established the following for changes, migrations, downtime, and other potential interruptions to cloud services:	Assistance in migration to new services when legacy solutions are provided via guidance documentations.
		Communication plan and procedures for proactive notification	laaS: No need for assistance from Microsoft, expected to be transparent to
		Assistance in migration to new services when legacy solutions are discontinued	the customer.
		Ability to remain on old versions for a defined time period	PaaS: Will provide guidance for limited migration scenarios.
		Ability to choose timing of impact	
11.	Self-service provisioning and	Provide self-service provisioning and management portal for users to manage cloud services:	
	management	⊠ Yes	
	portal	□No	
		If yes, describe the functions of the self-service provisioning and management portal provided:	
		☑ Allow role-based access control (RBAC)	
		Manage resource pools (e.g. VMs, storage, and	

		network) and service templates	
		☐ Track and manage the lifecycle of each service	
		☐ Track consumption of services	
		Others:	
12.	Incident and	Delivery mode of support:	Support plans as follows:
	problem management	Access via email	https://azure.microsoft.com/en-
		Access via portal	us/support/plans/
		Access via phone support	< 15 minutes (with Azure Rapid Response) or <1 hour (without Azure Rapid Response)
		☑ Direct access to support engineers	Customers have continuous access to their
		Availability of support:	own virtual machines and other services.
		⊠ 24 x 7	On Azure Virtual Machines (IaaS), Microsoft does not audit customer instances.
		During office hours support, please specify the hours of operations:	Auditing of workloads, vulnerability assessment and penetration testing within the Virtual Machines or for their own virtual machines is the customer's
		After office hours support, please specify the hours of operations: 24x7 support in English.	responsibility.
		Service response time:	
		The following are available to users upon request:	
		Permanent access to audit records of customer instances	
		Incident response time: Dependent on severity of incident and type of support plan; between 15 minutes – 8 hours	
		Mean time to repair on detection of faults:	
13.	Billing	The following billing modes are available (please elaborate granularity of charges and measurement):	Other pricing model: Azure has a monthly committed spend model which offers discount to Pay-per-usage.
		Pay per usage per hour (up to per min/hour/day/month for compute/storage for laaS/PaaS.	history since the subscription starts.
		Fixed pricing (up to	Microsoft offers an Enterprise Agreement for Azure on a pre-paid commitment basis.

		yearly/monthly/daily)	
		Other pricing model Enterprise Agreement for Azure	
		☐ Not disclosed	
		Available billing history:Months	
14.	Data portability	Importable VM formats: VHD - Virtual Hard Disk	VHD formats: VHD - Virtual Hard Disk
	portability	Downloadable formats: VHD - Virtual Hard Disk	Downloadable formats: same as above
		Supported operating systems: See side remarks	Supported OS:
		Language versions of supported operating systems:	•Windows - https://support.microsoft.com/en- us/help/2721672/microsoft-server-
		Supported database formats: See side remarks	software-support-for-microsoft-azure- virtual-machines
		API:	•Linux - https://docs.microsoft.com/en-
		Common: See side remarks	us/azure/virtual-machines/linux/tutorial- backup-vms
		☐ Customized: See side remarks	
		Upon service termination, data is available through:	Language versions of supported operating systems: See above URL
		Physical media	Supported database formats: SQL, NoSQL
		Standard methods as described above	API: Open Data standards, REST Management API, Web Services, etc.
		Other methods: Physical-disk shipping subject to geographical availability	Microsoft Azure has a service available for sending in your own hard drives for upload https://docs.microsoft.com/en-
			us/azure/storage/storage-import-export- service
15.	Access	Type of access to the service is through:    Public access	These services are constantly updated. Please contact Microsoft for the latest updates and roadmap, which is available
		Private access (e.g. VPN, dedicated link)	under the terms of Microsoft's nondisclosure agreement.
		☑ IPv6 access is supported	For more info on regions supported by IPV6
		Other access methods	go to:  https://azure.microsoft.com/en-
		Public access speed (shared bandwidth) in Mbps:	us/updates/ipv6-for-azure-vms/

16.	User management		ARBAC for management portal functions is on near term roadmap. RBAC for user management could be done through an Identity Management system of choice, such as Forefront Identity Manager, and DirSync to Microsoft Azure AD Services OR the provisioning of an organization-owned AD through IaaS.  Customer can implement RBAC through the utilization of Active Directory (AD). AD is a Commercial Off The Shelf (COTS) directory service implemented by Microsoft for Windows domain networks. O365 MT uses Azure AD to implement Role Based Access Control (RBAC) via the use of AD groups. For the purposes of this control, the term "security group" references an Azure AD
			group which is used to enforce RBAC permissions.
17.	Lifecycle	The cloud user may select the following for service upgrades and changes:	
		Automatic provisioning	
		□ User customisable provisioning	
Secur	ity Configurations		
18.	Security configuration enforcement	Security configuration enforcement checks are performed:	For more information, please see the following link:
	checks	☐ Manually  ☐ Using automated tools	https://www.microsoft.com/en- us/trustcenter/compliance/complianceoffe
		How often are enforcement checks being performed to ensure all security configurations are applied?	rings
		External audits are done semi-annually. Selfassessment is performed regularly.	
19.	Multi-tenancy	Distinct physical hosts	Fundamental to any cloud architecture is
		Distinct physical network infrastructure	the isolation provided to customers. The distributed virtual firewall in Azure helps
		☑ Virtual instance grouping	customer's private network traffic remain separated from other customers' data.
		☐ User definable security domains	,
		☐ User customisable firewall	In addition, a customer subscription can contain multiple logically isolated private networks:
		Suser definable access policies	

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			<ul> <li>Deployment network: Each deployment can be isolated from others at the network level. Multiple VMs within a deployment can communicate with each other through private IP addresses.</li> <li>Virtual network: Each virtual network is isolated from other virtual networks. Multiple deployments (inside the same subscription) can be placed on the same virtual network, and then allowed to communicate with each other through private IP addresses.</li> </ul>
Servic	e Elasticity		
20.	Capacity elasticity	The following capacity elasticity options are available:	Programmatic interface to scale up or down - yes
		Programmatic interface to scale up or down	Mean time to start and end new virtual instances - Can be automated through
		Mean time to start and end new virtual instances	Powershell / SMA integration.
:		Alerts to be sent for unusual high usage	Alerts to be sent for unusual high usage – Yes, performance counters can be sent via
		Minimum performance during peak	Powershell cmdlets
		periods  Minimum duration to scale up computing resources	Minimum performance during peak periods – No.
		Minimum additional capacity guaranteed per account (number of cores and GB memory)	
21.	Network resiliency and elasticity	The following network resiliency and elasticity options are available:	Defence-in-depth mechanisms: <a href="https://azure.microsoft.com/en-us/services/security-">https://azure.microsoft.com/en-us/services/security-</a>
		Redundant Internet connectivity links  Redundant Internal connectivity	center/?&WT.srch=1&WT.mc_id=AID_SEM b7bGQl8h&
		Selectable bandwidth up toMbps	Microsoft Azure Cloud security whitepaper: <a href="https://servicetrust.officeppe.com/Documents">https://servicetrust.officeppe.com/Documents</a> <a href="https://servicetrust.officeppe.com/Documents">nts/TrustDocuments</a>
		Maximum usable IPs: Customers can use any IP address range defined in RFC1918. That means the entire 10.0.0.0/8 (16,777,216 addresses)	
		☑ Load balancing ports	
		☑ Load balancing protocols	
		Anti-DDOS protection systems or services	

		☑ Defence-in-depth mechanisms, please specify: See side remarks	
		Network traffic isolation, please specify: See side remarks	
		Shared or dedicated bandwidth, please specify: Shared/Dedicated based on geographical availability. See side remarks.	
		QoS traffic control services	
		Alerts to be sent for unusual high usage	
		Minimum performance during peak periods	
		Minimum period to scale up network throughput	
22.	Storage redundancy	The following storage redundancy and elasticity options are available:	Microsoft Azure includes a "service" called Geo-Replication. It provides durability by
	and elasticity	Redundant storage connectivity links within each data centre	constantly maintaining multiple health replicas of data both within and betwee data centers. With geo-replication, Azur
		Redundant storage connectivity links between data centres belonging to the same cloud	Storage keeps data durable in two locations. It replicates customer data hundreds of miles between two locations
		Storage traffic isolation, please specify:	(i.e., between North and South US, between North and West Europe, and
		Shared or dedicated storage network bandwidth, please specify:	between East and Southeast Asia) to provide disaster recovery in case of regional disasters.
		Quality of service storage traffic control services	Also the geo-replication information from one data center to another as following:
an internal control of the control o		☐ Maximum storage capacity for entire cloud, please specify:	https://docs.microsoft.com/en- us/azure/sql-database/sql-database-geo- replication-portal
	:	Maximum storage capacity for single user, please specify:	Billing alert enables customer to get proactive email notifications when the bill goes above a certain monetary threshold
		A storage account can contain any number of containers, and a container can contain any number of blobs, up to the 500 TB capacity limit of the storage account.	that customer configures.

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	Maximum expandable storage, please specify:     Refer to above for maximum storage account	
	☑ Alerts to be sent for unusual high usage	
	Minimum storage I / O performance during peak periods	
	Minimum period to scale up storage I / O throughput	