



# Cloud First Policy

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## Glossary of Terms

<b>Ministry:</b>	Ministry of Transport, Communications and Information Technology
<b>Centre:</b>	Cyber Defense Centre
<b>Government Administrative Units</b>	Government units as defined by the Royal Decree 75/2020
<b>Service Providers:</b>	All Cloud Computing services providers
<b>Sensitive Data:</b>	All Government data that are classified under the following classifications (Confidential, Restricted, Secret, Top Secret)
<b>PCI DSS:</b>	The Payment Card Industry Data Security Standard
<b>ROI:</b>	Return on Investment (ROI) is a financial ratio used to calculate the benefit an investor will receive in relation to their investment cost.
<b>TCO:</b>	Total Cost of Ownership (TCO) is a financial estimate intended to help buyers and owners determine the direct and indirect costs of a product or service

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## 1. Introduction

Oman vision 2040 emphasizes the role of the ICT sector in enhancing the performance and efficiency of the national economy. For this, MTCIT has identified various areas through which the economy can be enhanced and stimulated. One of these areas with that potential to stimulate the economy is the cloud computing service provision. Accordingly, MTCIT has issued the National Cloud\_1<sup>st</sup> Policy to govern the cloud service provision from both- supply and demands sides and to manage the migration from on premise data centers to cloud.

Cloud Computing Services assist governments to direct and focuses on observing and maximizing the benefits of its digital resources efficiently, in addition, to develop the competencies and provide suitable environment for innovations and enhance the local market. The Sultanate aims to benefit from the Cloud Computing services to achieve various objectives including:

- Rationalizing government investment in providing technologies or solutions required for the transition to the digital economy.
- Efficiency on using the technical resources in Government units
- Develop central technical infrastructure able to fulfill the upcoming future technology requirements.
- Drive economic growth by expanding local market opportunities for investment, competition in providing service and creating job opportunities.
- Enhance integration environment in Government sector, eliminate investment duplication and improve the effectiveness of IT solutions.

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## 2. Purpose

This Policy intend to achieve the following objectives:

- Efficient governance of the government IT resources
- Make Cloud Computing services as first option when making decision related to IT services
- Stimulate and direct the transformation process from the IT traditional solutions to Cloud computing solutions
- Define Cloud Computing Polices and approaches and enhance the services provider's capabilities
- Improve the use of Cloud Computing services in Government sector and cope with the latest developments to enable the implementation of digital transformation plans.
- Protect the beneficiaries by outlining the agreements between the Government units and Services Providers standards to sustain the parties' rights and the quality of the services
- Prompt and stimulate the private sector to provide cloud services and achieve the fair competition between the services providers.
- Contribute on the growth of the local market in providing Cloud computing services and enhancing its participation in the regional and global market

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### 3. Policy Scope

This Policy apply to all administrative Government Units from the issuance date, and exception is made to the security and military units in the Sultanate

### 4. Cloud computing services overview

Cloud computing is a model of accessing services (business/applications) over the Internet which will be hosted either at a third party location (provider) or at the agencies data center (consolidated). These services (servers, applications, storage, etc.) can be broadly accessed over various channels (workstations, laptops, mobile phones, tablets) from anywhere, made available on-demand.

Cloud Services Providers: CSP provide their services based on different types, including Infrastructure as a service (IaaS), Platform as a Service (PaaS), and (SaaS), detailed definition of these services is explained on Cloud Governance Framework

### 5. Advantages of Cloud Computing services

There are many advantages for adopting Cloud Computing, some of these are:

**Costs Saving:** In essence, cloud computing revolves around pooling and sharing resources between entities, which reduces the overhead costs associated with servers and devices, as well as maintenance costs in the future.

**Efficiency:** Cloud server usage is much higher than traditional infrastructure (on premise), as it requires fewer servers and less power to run. Cloud service providers' hardware is more efficient, and they have specific climate control mechanisms in place to maintain servers'

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temperature and humidity. In short, the cloud uses significantly less energy, making it an affordable and environmentally friendly option.

**Scalability:** Cloud computing solutions provide users with the flexibility to expand or contract according to the rate of demand unlike traditional information technology that usually depends on fixed capacity against expected demand, which improves the overall user experience with the minimum additional investment required and reduces service disruptions to a minimum.

## 6. Policy Statements

All government administrative units are required to consider Cloud Computing Services as first option when making any IT investment decision, and apply the following requirements:

### 6.2) Data Classification

Government administrative units required to:

1. Define and build internal and external datasets.
2. Develop internal policy for Data Classification based on Royal Decree number 118/2011 for issuance records classification law and the Royal Decree number 26/2019 for issuance the amendments. Approve the Policy by the head of the unit
3. Add a fifth classification category for public/open data in the internal policy
4. Analysis the risk related to the Data and define the security protection requirements
5. Comply with the laws and polices related to Data security and privacy in the Sultanate
6. Comply with the Polices, Standards and Guidelines issued by the Cyber Defense Centre

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## 6.2) Security requirements

1. Conduct risk evaluation before hosting and periodically as per defined schedule set by the unit. Units can refer to Cloud Governance Framework published on 2018 through Circular number 7/2018
2. Comply with all regulations related to data including privacy, record management and any other requirements like publication rights, ownership, and data residency.
3. Comply with the Sultanate laws, polices, and standards published by MTCIT and Cyber Defense Centre.
4. Ensure Encryption of any hosted or processed government data in cloud
5. Government data may not be hosted or processed in cloud unless security and privacy measures are implemented and monitored to protect the data; as defined and supported by the results of risk assessment, data classification and contractual obligations.

## 6.3) Administrative requirements:

1. Acquire cloud services from the accredited Cloud Service Providers only
2. Conduct visibility study including TCO and ROI for all cloud based projects
3. Transfer the expenses from the capital to the current budget for cloud based projects
4. Government data that been hosted, or processed on the cloud infrastructure are considered strategic government assets, and require contractual agreements with service providers.
5. Data must not be stored on external servers that has no contractual agreements with service providers, for example Dropbox, OneDrive or Google Drive.

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6. All government units that use banking transactions through internet has to make sure that service provider comply with the requirements of PCI DSS standards
7. Government units shall take the following contractual measures with CSP:
  - A. Government Data Protection, CSP and any subcontractors are not allowed to commit any acts or practices that violate the privacy and security of data, regardless of whether the service provider (and any subcontractor) is based in Oman or abroad (if exceptions are granted).
  - B. Easy and smooth termination of the contract or transfer of services in the event that the project moved to a new CSP.
  - C. Retrieval of all data, in the event of contract termination, in the formats approved by the Government unit.
8. All units shall ensure their ability to implement the terms of the agreement
9. All units shall prepare a checklist to help highlight the potential impacts of Cloud Computing, e.g. issues related to CSPs, Data, Payments, Support, and Exit Strategy
10. All units shall document all relevant contractual issues in the SLA including key business requirements such as availability, reliability, scalability and business continuity, which must be reviewed and approved by legal advisor.
11. All units shall ensure that appropriate training is provided to IT personnel to ensure handling and management of cloud-based services and applications.

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#### 6.4) Hosting Data outside Sultanate boundaries

The demand for hosting and processing data and applications outside the Sultanate is very limited in size and scope; it is restricted to SaaS Service, and all Government units shall follow appropriate assessment and specific procedures to grant permission to host their Data outside the Sultanate boundaries. In the event that there are no available alternatives, the Government unit shall register to request an exception, providing the appropriate justification and taking into account the relevant regulations.

The exception request shall meet the following requirements:

1. Obtaining the approval of the Cyber Defense Center before Storing or processing any sensitive data outside the Sultanate.
2. The request shall be limited to the scope of the Software as a Service (SaaS) only.
3. Conducting an internal risk assessment for all Data and systems in order to determine the level of risks associated with them.
4. Comply with the Sultanate laws and the Policies, Standards and Frameworks issued by the Ministry of Transport, Communications and Information Technology and the Cyber Defense Center.
5. The obligation to document all relevant contractual matters in the Service Level Agreement (SLA), which must be reviewed and approved by the legal advisor.
6. Private sector companies that deal with Government Data shall seek approval from regulatory authorities such as the Central Bank and the Telecommunications Regulatory Authority.

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## 7. Policy Authority and review:

This Policy is owned by the Ministry of Transport, Communications and Information Technology and will be subject to revision as necessary.

## 8. Policy Compliance:

1. This policy shall go into force as of the date of its approval and circulation by the Ministry of Transport, Communications and Information Technology, and the Ministry is responsible for following up, reviewing, amending and updating the implementation of the policy requirements to keep pace with local and regional developments and international best practices.
2. All Government Administrative Units are responsible for implementing and complying with the terms of this policy.

## 9. Related publications

1. Royal Decree number 118/2011 – Promulgating Records Classification and Authorization of Protected Places Law, 2011
2. Royal Decree 26/2019 – Promulgating amendments on some of the provisions of Records Classification and Authorization of Protected Places Law, 2019
3. Royal Decree number 64/2020 – Promulgating establishing of Cyber Defense Centre and its structure, 2020
4. Open Data Policy, 2010
5. Cloud Governance Framework, 2018
6. Information Sharing Policy, 2014
7. Data and Information Security Systems Classification Guidelines, 2018

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