



SCIENCE & INFORMATION TECHNOLOGY
DEPARTMENT
(General Section)

Dated Quetta the 12th August, 2024.

NOTIFICATION.

No. SO (General:) 1-19/2020-21/S&IT/645-772 The Government of Balochistan Cloud First Policy containing Nineteen (19) pages as approved by the Provincial Cabinet vide S&GAD letter No. S(CAB) 1-642/2023/S&GAD/6628-31 dated 9th October 2023 is hereby notified for information of all concerned. The policy has been uploaded on the official website of the Government of Balochistan.


SECRETARY
S&IT Department

The Chief Controller,
Printing & Stationery Department,
Balochistan, Quetta for the Gazette Notification.

No. Even. Date. Even.

A Copy is forwarded to:

1. The Principal Secretary to Chief Minister Balochistan.
2. The Principal Secretary to Governor Balochistan.
3. The Additional Chief Secretary (Dev:) P&D Department Government of Balochistan.
4. The Additional Chief Secretary (Home:) Home Department Government of Balochistan, Quetta.
5. Senior Member Board of Revenue Balochistan, Quetta.
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7. All the Commissioners in Balochistan _____
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10. All the Deputy Commissioners in Balochistan _____
11. All the Divisional Information Technology Officers _____
12. All the District Information Technology Officers _____
13. The P.S to Secretary Science & Information Technology Department Balochistan.
14. Master File


(Ghulam Rasool) 12/8/24
Under Secretary General)



Government of Balochistan

Cloud First Policy

Science & Information Technology Department



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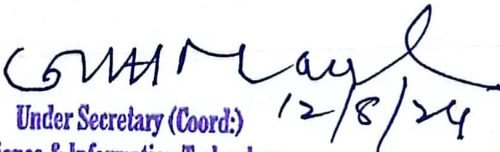
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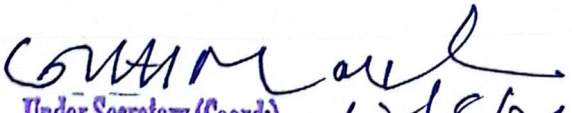


Background

Information Technology is an effective tool for every government department to provide service more efficiently to the general public across the province. By implementing well established IT based system will enable the government departments and general public to interact more easily, quickly at lower cost.

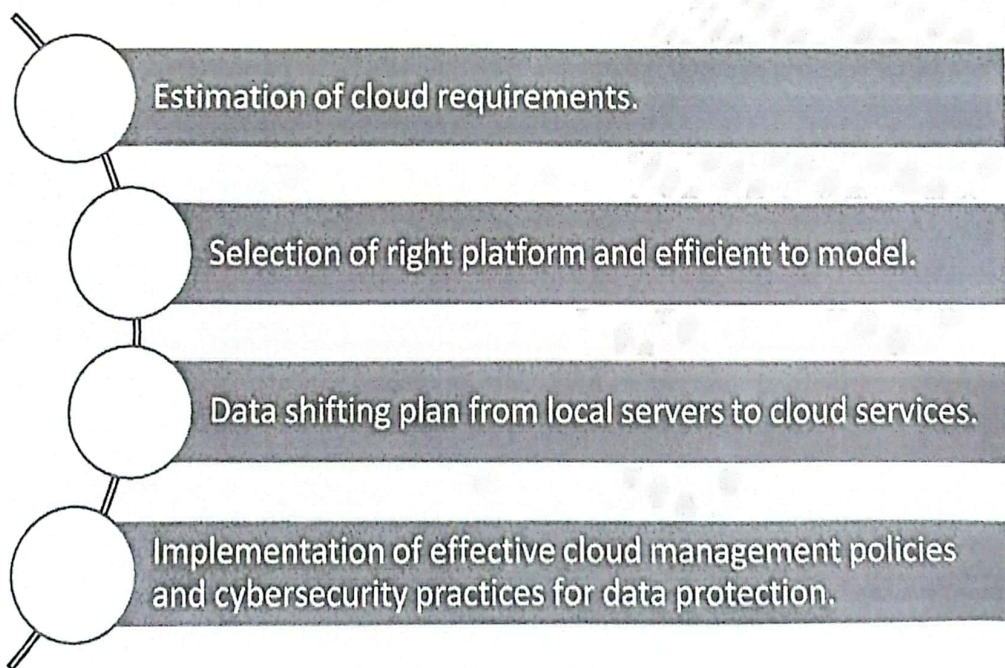
The Science and Information Technology Department Balochistan is also on the road map towards e-governance by providing technical support to all government Departments for transformation of manual systems into digital platforms.

Different IT/ICT (online / offline) projects have been initiated in the province for the facilitation of general public and/or automation/digitization of government Departments, in order to prevent long delays in the process of the government services. The automation or public service IT/ICT project initiated online results in providing access to information for the general public or to get the services anywhere, anytime and on any device. Reason being, every Department/


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Organization is procuring IT equipment's and deploying standalone IT based infrastructures/solutions in silos to fulfill their requirement, which is not only increasing duplication in development of systems/customized applications software, but also the recurring cost to maintain these systems. These systems developed in silos are also prone to data security because of unavailability of proper cloud policy in the province and poor understanding of Cloud Procurement framework. Most of the Departments/ Organizations are facing following challenges during the procurement stage of cloud services:




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Objectives of Cloud First Policy

In continuation to the approved Pakistan Cloud First Policy (PCFP) in February 2022, followed by Sind Province in July 2022, and consideration of the plentiful advantages of cloud first strategy in public sector, the Government of Balochistan is also stepping for its Cloud First policy. The main objectives of which, are:

- i. To attract investments, both foreign and domestic in digital services.
- ii. To support the IT Investments and Streamline the IT Procurement in the province.
- iii. Restrict IT intervention, which involves or having fragmented datacenter for resource optimization.
- iv. Introduction of smooth procurement framework, which could allow departments to adopt cloud model.
- v. To establish trained cloud, enable workforce in the province with regular training and upscaling.
- vi. Manage carbon footprint by reducing scattered traditional on premises data centers and promoting carbon neutral facilities.


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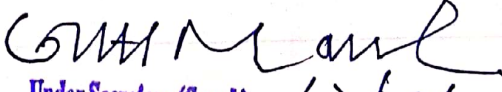


Scope of Cloud First Policy

All public sector organizations of the Government of Balochistan would come under the ambit of the Cloud First Policy which are planning to undertake digital transformation. In addition to the government, this policy will also serve as a useful guideline for the selection of cloud-based platforms for all the administrative and attached departments, semi-government organizations, private sector organizations, NGOs, etc.

Cloud First Policy Adoption

With the promulgation of the Pakistan Cloud First Policy (PCFP) in February 2022, a comprehensive approach is required by the Government of Balochistan to adopt the Cloud First Policy (CFP) at the province level to harmonize the need and usage of cloud services with the federation. The CFP would bring value for money and significantly lower the Total Cost of Ownership as compared to non-cloud deployment/initiatives.


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Adoption of cloud policy will provide more flexibility to government agencies than traditional IT/ICT infrastructures, buying and housing server-based hardware, and networking equipment, requires more cost in terms of its connectivity, security, and power consumption in keeping the system(s) functional round the clock. Adaptability of cloud policy province-wide, in lines of the Federal and Provincial Governments, will standardize the cloud service procurement mechanisms. This will also help out the Departments/Organizations in the adoption of the latest tools for the IT/ICT-based initiatives in the province.

1. Cloud Benefits:

Cloud services enable transformational opportunities across government operations, enabling the delivery of citizen-focused services anywhere, anytime with the following benefits:

1.1. Whole-of-Government Efficiencies:

Reducing the cost of developing and maintaining technology and reducing the duplication of capabilities across government.


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1.2. On-Demand Self-Service:

The consumer can provision multiple computing capabilities as needed. The provisioning can be entirely online.

1.3. Broad Network Access:

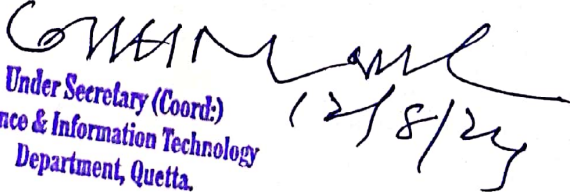
The services are available over the network and access is supported through multiple platforms (e.g., mobile phones, tablets, laptops, and workstations).

1.4. Resource Pooling:

The cloud service provider computing resources are pooled to serve multiple consumers at the same time, the consumers can be from anywhere in the world. Examples of resources include storage, processing, memory, and network bandwidth.

1.5. Scalability:

Cloud resources can be easily provisioned and released. To the consumer, the resources available for provisioning may appear to be unlimited and can be appropriated in any quantity at any time.


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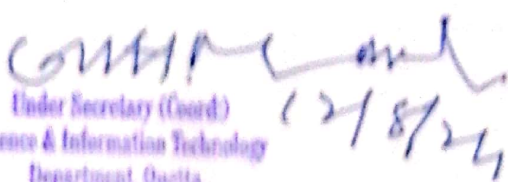
1.6. Measured Service:

Cloud systems automatically control and optimize resource utilization. Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer.

2. Deployment Models for Cloud Infrastructure:

Cloud infrastructure can be dedicated to individual users with isolated access or shared among multiple users or a combination of both. The basic infrastructure resources are the same regardless of the deployment model but differentiate in their allocation between users.

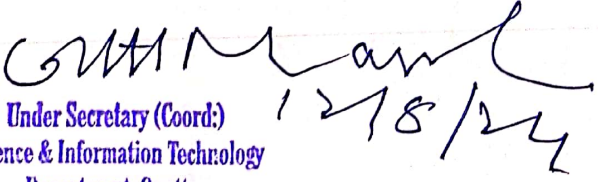
The models of cloud infrastructure will be recommended by the Cloud Acquisition Office (CAO) based on sensitivity, technology and economic impact. To ensure secure adoption and usage of cloud services, all cloud-oriented service needs/must be approved prior to acquisition and deployment. The CAO would require to take in consideration the following steps:

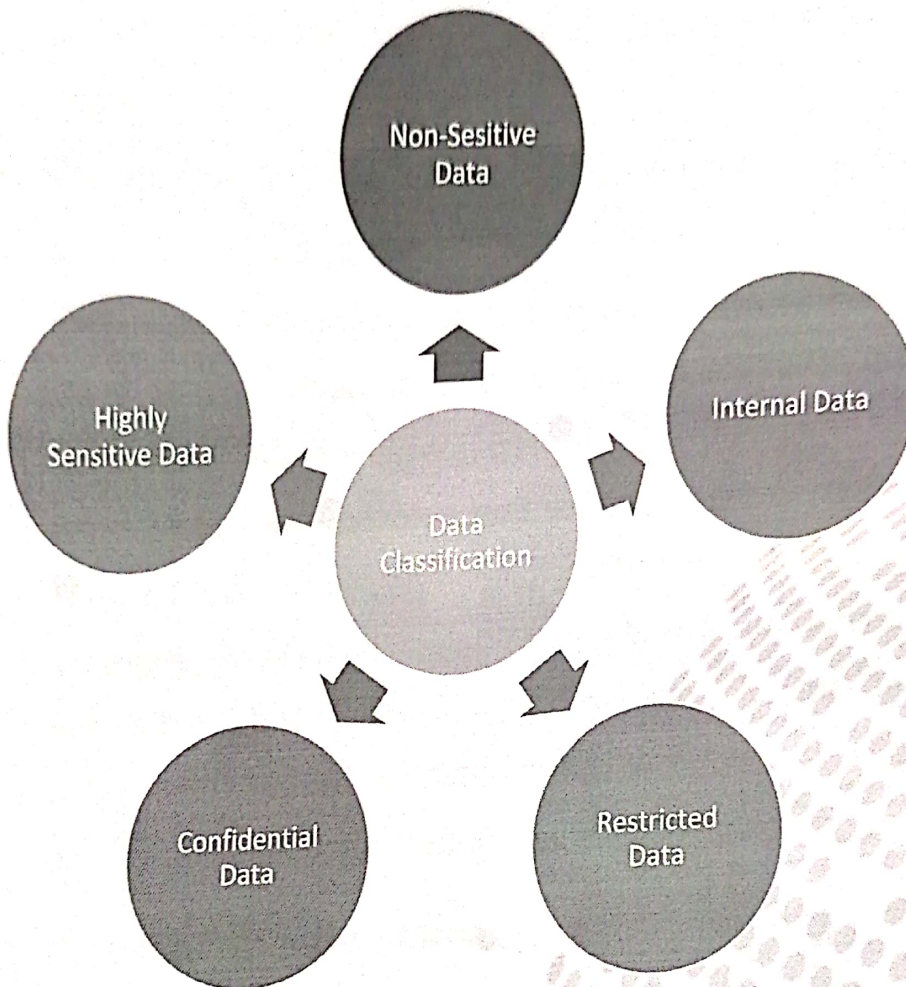

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- i. Outline the departmental/organizational needs and priorities.
- ii. Detail of service users (both internal and external).
- iii. Description of type of cloud service to be adopted (including physical and operational characteristics for the solutions like SaaS, PaaS and IaaS).
- iv. Details of the data types to be stored.
- v. Encompass/inclusion of the security solutions and configurations required for encryption, monitoring, backups, etc.
- vi. Assessment of/enlist past security incidents involving this cloud service provider.
- vii. Confirmation / assurance of security certifications availability.
- viii. Obtain copies of agreements from provider, including SLAs.

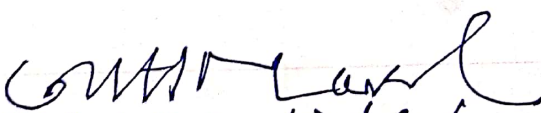
The Department's/Organizations data will be classified according to a risk profile for sensitivity and efficiency for safeguarding sensitive or critical data with appropriate levels of protection such as:


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The three most common cloud deployment models are categorized as:

- * **Public Cloud:** A pool of virtualized resources shared among multiple users outside of the vendor's firewall. The service is distributed on an as-needed consumption basis, charged with a pay-as-you-go model. The vendor


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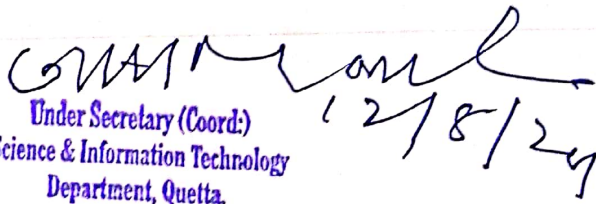


is responsible for managing and operating the public cloud.

- * **Private Cloud:** These are cloud environments dedicated to individual users accessible via their own firewall. Private cloud environments are typically deployed as on-premises but virtualized data centers. An added layer of automation allows users to leverage the virtualized infrastructure as a private cloud service.
- * **Hybrid Cloud:** The integration of public and private cloud creates a hybrid cloud model. The workloads are portable across the hybrid cloud, allowing organizations to use the public cloud set up for cost-sensitive workloads and the private cloud set up for security sensitive workloads.

3. Cloud Acquisition Office Establishment:

In line with the policy, Science and Information Technology Department Government of Balochistan will establish Cloud Acquisition Office (CAO) in the province for provisioning of support to the government entities in the procurement of cloud services solutions (e.g. SaaS, PaaS, IaaS) for any project/initiative, which involves data center equipment's such as infrastructure, hardware, software, licenses etc.,


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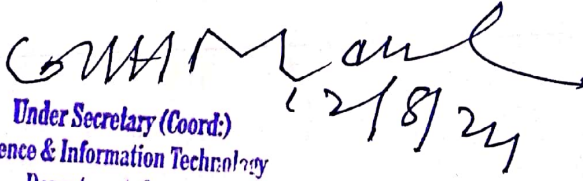


where cloud based solution is better or equivalent. The cloud services office will recommend the solution based on the need assessments of department storage requirements, software to use and data security. Furthermore any entity which intends to establish its own private data center or cloud platform in the province must have approval from provincial Cloud Acquisition Office (CAO) in line with PCF Policy.

Upon the approval of this policy, all government entities will be bound to procure the services from those service providers which are accredited from national or provincial cloud office in Pakistan to ensure data security and data protection.

The cloud Acquisition office may engage team of cloud experts to assist in alleviating government agencies demand for cloud solution and coordinating with cloud service providers, during the planning, procurements and contracting stages on behalf of government agencies

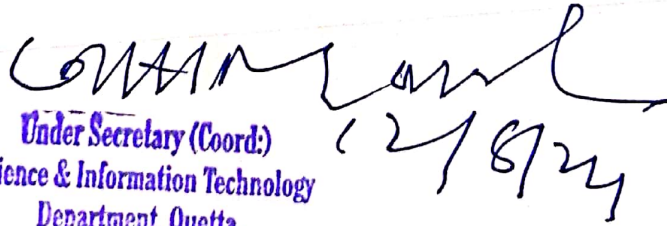
The Cloud Acquisition Office will be responsible for the successful adoption of cloud computing, supported by key working groups for the different elements.


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The Science & IT Department will govern the cloud Acquisition office, setting the overall direction, including the determination and ratification of the business objectives, future vision, business case, and the sequencing strategy for delivering the Cloud solution, including the Government applications and Data Centre Consolidation. The initial delivery focus will be on the government departments but will then extend to other local authorities and wider public services.

After the approval of this policy, the Science & IT Department will take-up the case with Balochistan Public Procurement Regularity Authority (BPPRA) to devise the procurement mechanism of cloud. Furthermore cloud procurement guideline followed by data security guideline will also be developed for smooth adaptation of cloud platforms to provide efficiency and also value for money with significant reduction in Total Cost of Ownership (TCO) for the government.


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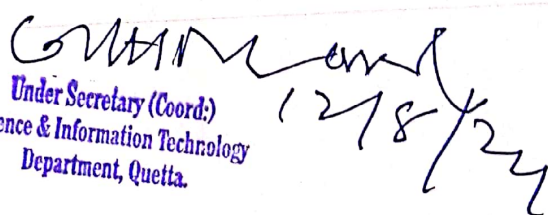


4. Cloud Accreditation Guidelines:

Cloud Acquisition office will follow the guidelines prepared by National Cloud Accreditation Office and will follow the process for the assessment of requirements of government departments to adopt cloud platform. The provincial Cloud Acquisition Office will update these guidelines according to local requirement with mutual understanding.

5. Restriction on Fragmented ICT Infrastructure:

After approval of the Balochistan Cloud First Policy (BCFP), all the public sector entities within the Government of Balochistan will require to review their project proposals by including Cloud services instead of estimation for procurement of server system, and/or ICT Infrastructure development/deployment. Such proposal that includes fragmented ICT infrastructure procurement would not be approved until & unless recommended by the Cloud Acquisition Office. These provisions will also apply to projects to be implemented in public sector through a third-party or a donor agency.


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6. Cloud Acquisition Office Responsibilities:

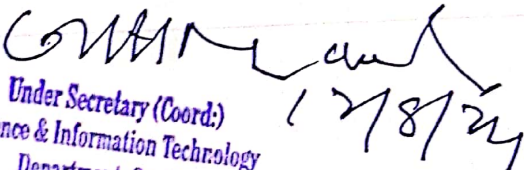
- i. Estimation of cloud requirements.
- ii. Selection of right platform and efficient cloud model.
- iii. Data shifting plan from local servers to cloud services.
- iv. Implementation of effective cloud management policies and cyber security practices for data protection.

7. Engagement Models for Procurement of Cloud Services:

- i. Direct Procurement of Cloud Services from CSP
- ii. Indirect Procurement of Cloud Services from MSP
- iii. End to End Procurement of Cloud Services from a System Integrator

8. Applicability & Validity of BCFP:

The Government of Balochistan Cloud First Policy is an effort to streamline and for effective utilization of Cloud Services, and is subject to holistic reviews when required. The policy becomes effective from the date of approval by the Competent Authority.


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Balochistan Cloud First Policy Maturity Model

BCFP Approval

Nomination for CAO

Establishment of CAO

Framework for Procurement

Coordination for Accredited CSP

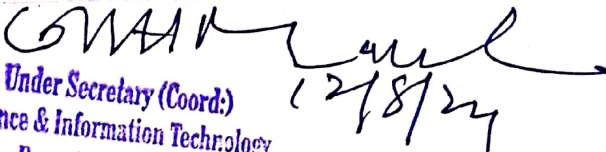
Provisioning of CS to Stakeholders

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Glossary

BPPRA	Balochistan Public Procurement Regulatory Authority
BCFP	Balochistan Cloud First Policy
CAO	Cloud Acquisition Office
CSP	Cloud Services Provider
ICT	Information & Communication Technology
IaaS	Infrastructure as a Service
MSP	Managed Services Provider
PaaS	Platform as a Service
PCFP	Pakistan Cloud First Policy
SaaS	Software as a Service
TCO	Total Cost of Ownership


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Government of Balochistan

Cloud First Policy



**Directorate General IT
Balochistan**