



## MANAGING CLOUD COMPUTING IN THE UNITED NATIONS SYSTEM

*Inspectors Jorge T. Flores Callejas and  
Petru Dumitriu*



### Background

The General Assembly refers to cloud computing for the first time in its resolution 68/198 of 20 December 2013, recognizing that all stakeholders should adapt to cloud computing, among other innovations which contribute to a dynamic landscape in the field of information and communications technologies.

The use of cloud computing systems has grown considerably in the past decade and all the United Nations organizations are already using a variety of cloud computing services.

The primary driving forces and considerations for using cloud services are often like those of enterprises worldwide. Specific conditions related to the nature of United Nations organizations and its values rarely have an impact on cloud related decision-making.

The United Nations system presently exhibits a full range of cloud adoption models, and, consequently, different degrees of maturity to meet the desired security, uptime, agility, and flexibility. In this regard, they need to retain certain management skills in order to make the right decisions to deal with the different risks in terms of policies and practices of using cloud services.



### Objectives

The main objectives of this review are:

- To **analyze the different cloud computing frameworks, strategies, policies and practices** in selected United Nations organizations, with a view to identifying valuable information regarding best practices, innovative approaches and lessons learned, and thereby promoting effective cloud computing governance. The key aspects to consider are the current ICT and cloud computing governance structures in place, and the strategic alignment of cloud computing with the existing ICT strategies and with the organizations' business objectives and mandates.
- To **examine and identify specific security and data privacy issues** arising from the use of cloud computing, as well as current risk management mechanisms, including business continuity and disaster recovery plans.
- To **examine cloud computing governance** at the United Nations system-wide level, notably inter-agency coordination and cooperation, such as through the Digital and Technology Network and other relevant mechanisms.
- To **disseminate best practices, including ideas and recommendations** to inform the development of safeguards in using cloud computing services.



# What JIU concluded

## 1. Need for contextual risk analysis.

The United Nations organizations are aware of the risks associated with cloud computing, as confirmed by answers provided to the JIU corporate questionnaire and the interviews held by the Inspectors.

## 2. Cloud computing as a tool to achieve higher integration and compatibility among United Nations organizations.

As cloud deployment increases and matures in the United Nations system, the importance of compatibility among the different cloud services deployed, including their interoperability and portability, is likely to grow.

## 3. A new financing model for computing services.

By leveraging shared infrastructure and economies of scale, cloud computing offers a compelling business model.

## 4. Data privacy challenges and the need to protect the privileges and immunities of the United Nations organizations.

Digitalized data are part of the assets owned by United Nations entities. Regardless of their location, they should be subject to the immunities provided by the Convention on the Privileges and Immunities of the United Nations and the one of the Specialized Agencies.

## 5. Enhancing accountability through service level agreements.

The challenges ingrained in cloud services of confiding the organizations digital data to third-party actors requires the establishment of appropriate due diligence processes and the preparation of comprehensive contracts, or service-level agreements (SLAs).



# What JIU Recommends

The JIU makes 5 formal recommendations to the General Assembly and governing bodies of United Nations organizations, as well as to the executive heads of organizations.

### The General Assembly is called on to:

1 Review and update the mandate of the UN International Computing Centre (UNICC), and consider, inter alia, diversifying the membership of the UNICC Management Committee and delegating appropriate levels of authority with respect to decision.

### The governing bodies of the United Nations organizations are called on to:

2 Request the heads of their respective organizations to include provisions in their financial strategies that facilitate the adaptation, responsiveness and efficient use of operational expenditures and capital investments related to new technologies.

### The Executive heads of United Nations organizations are called on to:

3 Ensure that business continuity planning includes strategies and measures to mitigate the risk of failure by cloud service providers to deliver the contracted services;

4 Put in place periodic procedures to ensure that their corporate ICT strategies, including those for cloud computing services, are aligned with the organizations' business needs and priorities, and yield value for the investment;

5 Ensure that a comprehensive risk analysis exercise is undertaken before contracting ICT services, including cloud-based services. The risk analysis exercise should consider both technical and financial risks and benefits, and relevant safeguards should be included in the service-level agreement.



## Methodology

In accordance with the JIU internal standards and working procedures, the review was conducted using a blend of qualitative and quantitative data collection methods from different sources for consistency, validity, and reliability.



Desk review



46 interviews



Two questionnaires to participating organizations and the UNICC



Analysis and use of state-of-the-art concepts and definitions



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The Joint Inspection Unit is the only independent external oversight body of the United Nations system mandated to conduct evaluations, inspections and investigations system-wide. Visit the JIU website for more information at [www.unjiu.org](http://www.unjiu.org)



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