



Sudan University of Science & Technology

جامعة السودان للعلوم والتكنولوجيا

كلية الدراسات العليا

## Guidelines for Regulating Cloud Computing in Sudan

# موجهات لتنظيم الحوسبة السحابية في السودان

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{ أَقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ } 1 { خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ } 2 { أَقْرَأْ وَرَبُّكَ الْأَكْبَرُ } 3 { الَّذِي عَلَّمَ بِالْقَلَمِ } 4 { عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ } 5

صدق الله العظيم

سورة العلق الآية ( 1-5 )

وقال تعالى :

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{ وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنْبِئُونِي بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ } 31 { قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ } 32

صدق الله العظيم

سورة البقرة ( 31-32 )

## المستخلص

الحوسبة السحابية هي مصطلح عام لإيصال خدمات مستضافة عبر الإنترنت لتخزين ومعالجة وتبادل البيانات الرقمية عن بعد. الحوسبة السحابية هي مجال بحثي جديد، ولا تزال هنالك فجوة بشأن الإبلاغ عن القضايا التنظيمية.

تنظيم السحابة ليس مجرد خلق مجموعة من القواعد ووضعها لكل من يستخدم السحابة، والانتقال الى القضية المقبلة، ولكن يمكن تنظيم الحوسبة السحابية، أو بشكل صحيح، تنظيم الكينونات التي تستخدم السحابة و بناء ثقة لدى المستهلك، بالثقة في السحابة .

هذه الأطروحة البحثية تقترح لوائح للحوسبة السحابية على وجه التحديد في السودان . اللائحة المقترحة تأخذ في الإعتبار أفضل الممارسات في العديد من البلدان وآراء الخبراء السودانيين.

تهدف هذه اللوائح في الحفاظ على الخصوصية، والمساعدة على سلامة وأمن الخدمة من ثغرات السحابة، والفقدان أو السرقة، وتقود موفري الخدمات إلى تقليل المخاطر المرتبطة بمتطلبات مدة التشغيل، والتعافي من الكوارث وحماية البيانات الحساسة.

التنظيم يسهل إعتداد الحوسبة السحابية من خلال إنشاء بيئة تُمكن كل من مقدمي الخدمات ومُستخدميها بأن يكون لديهم اليقين والثقة.

في هذا البحث تم الوصول لموجهات عامة بعد الاستفادة من آراء خبراء سودانيين والاطلاع على كم مقدم عما نشر في المجال.

## **Abstract**

Cloud computing is a general term for delivering hosted services over the internet to remotely store, process and share digital data.

Cloud computing is a new area, and there is still a gap only on reporting regulatory issues.

Regulating the cloud is not simply a matter of creating a set of rules, handing them down to everyone who uses the cloud, but it should lead to regulating entities using the cloud and, building consumer trust and confidence in the cloud.

This dissertation proposes suggested regulations to the cloud computing in Sudan. The suggested regulations take into account the best practice in many countries and the views of the Sudanese experts.

These regulations aim to maintain privacy, and to help the safety and security of the cloud computing service from cloud vulnerabilities, loss or theft, and to lead service providers to minimize risks associated with uptime requirements, disaster recovery and protection of sensitive data.

Regulation can facilitate the adoption of cloud computing by establishing an environment in which both providers and users have certainty and trust.

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