Chapter 2

Using Cloud Computing for E-Government: A New Dawn

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ABSTRACT

For the last two decades, e-government has attracted government around the world to itself. Today almost every country in the world has developed and implemented e-government system in some form or another in order to reduce costs, improve services, save time and increase effectiveness and efficiency in a public sector. With increasing generalization of technology access by citizen and organizations, e-governments across the world face a major challenge in keeping a pace with ever changing technologies and offer an efficient, effective and transparent way of offering its services. Cloud computing is becoming an adoptable technology for many countries. The concept of cloud computing becomes important for each e-government, facilitating its way of work, increasing its productivity and all that leading to cost savings. It will likely have a significant impact on the e-governments in the future. In this paper, we analyzed cloud computing and its applications in the context of e-government.

1. INTRODUCTION

It is beyond doubt that the use of Information and Communication Technology (ICT) has good impact on performance of businesses (Khazaei and Misi, 2010). Keeping a successful implementation of e-business into account, governments decided to employ ICT in public affairs to improve the effectiveness and efficiency of public sector organizations in the form of providing best possible information and services to citizens, businesses and other governments under what is called e-governments (Alford, 2009).

E-government can be viewed as the use of emerging information and communication technology services like World Wide Web (WWW), internet and mobile phones to deliver information and services
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to citizens and businesses (Jeanna et al., 2009). E-government helps simplify the working procedure of
government mechanism by providing better services, more transparency and accountability, and instant
response to end users. It also helps in better information dissemination by providing accessibility of
different web services of e-government regardless of geographical and language barriers. The ultimate
goal of the e-government is to increased public services in an efficient and cost effective manner (Hashem
et al., 2013).

Every day the expansion and complexity of the e-governments is being observed, so that the size
of their computational data is increasing daily. Increasing demands for information and service by the
citizens and continuous advances in technology which puts governments under pressure to be innovative.
One of the new inventions is cloud computing where information and computing services are provided
as utilities (Lee, 2010).

Cloud computing is a result of continuous research in virtualization, distributed computing, utility
computing, networking, and software services. It provides a new service consumption and delivery model
inspired by Consumer Internet Services. Cloud computing has many advantages such as cost savings,
scalability, integration, reusability of services, or high availability, which make cloud computing inter-
esting for many areas (Ismail, 2011).

The importance of cloud computing and its benefits for the public sector has a already been noticed
by different sectors in many countries. For instance, European Commission explicitly refers to cloud
computing in their digital agenda for 2020. It aims to strengthen the European internal market by taking
the advantage of cloud computing benefits (Kuldeep, 2012).

This study is based on cloud computing and e-government. The use of cloud computing in the con-
text of e-government has been described in detail in this study. The rest of paper is organized as follow.
In Section 2, e-government and its benefits have been discussed. Section 3 provides an overview cloud
computing. The benefits of using cloud computing analyzed in Section 4, while Section 5 discusses
the applicability of the cloud computing in the context of e-government. Followed by the conclusion
in Section 6.

2. E-GOVERNMENT

E-government is the application of information and communication technology in public administration
to improve public services and democratic processes and to facilitate citizens and businesses. Through
e-government, the internet is used for delivering information and services between government and
customer (G2C), between government and business (G2B), between government agencies and business
(G2B), and between government and government (G2G) (Safari et al., 2002).

Today, e-government is one of the most important areas of modern information technology. It helps
simplify government processes and makes the access to government information more accessible for
public sector agencies and citizens. In addition to its simplicity, e-democracy services can reduce the
operations cost and time, and improving the efficiency of services and business productivity (Layne
and Lee, 2001). E-government also allows for government transparency because it allows the public
to be informed about what the government is working on as well as the policies they are trying to
implement (Khan et al., 2011).