

Enabling Process Preservation via Cloud Computing Methodology

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Extended abstract

1 Introduction

Cloud computing is more than a short-term trend. There are legitimate benefits to companies adopting cloud services into their business such as operational efficiency, efficient scaling and most importantly reduced expenses in a challenging business environment. The main enabling technology for cloud computing is virtualization. Technical characteristics of cloud and virtualization environments needs to be monitored, because software and hardware market are growing very fast, even daily changes could be very important and could have effect on preserved processes and business continuity.

In this paper we are presenting the questions which impose themselves and emphasizing shortcomings and problems which are becoming actual nowadays and are related to the future of our data in the cloud environment. By following and answering these questions we are proposing an approach which includes creation of Archival Information Package (AIP) [1] for "virtualized" environment to meet Digital Preservation (DP) aspects in first step and then verification and validation of redeployed processes in cloud environment. Means for verification will be important for companies which are willing to move their businesses into cloud. To ensure business continuity DP methodology for verification of redeployed processes will be unavoidable. Finally, being able to monitor cloud environment settings and its consistency, will help in convincing business users in cloud stability.

2 Problem Description

In Figure 1 the main problem is depicted. Main advantage and attractiveness of the cloud environment and its' accessibility over the Internet is presented. If the original process which is running on the original legacy system is preserved and redeployed in the cloud (e.g. by hiring virtual appliance), we need to be sure whether this redeployed process gives the same result like the original one.

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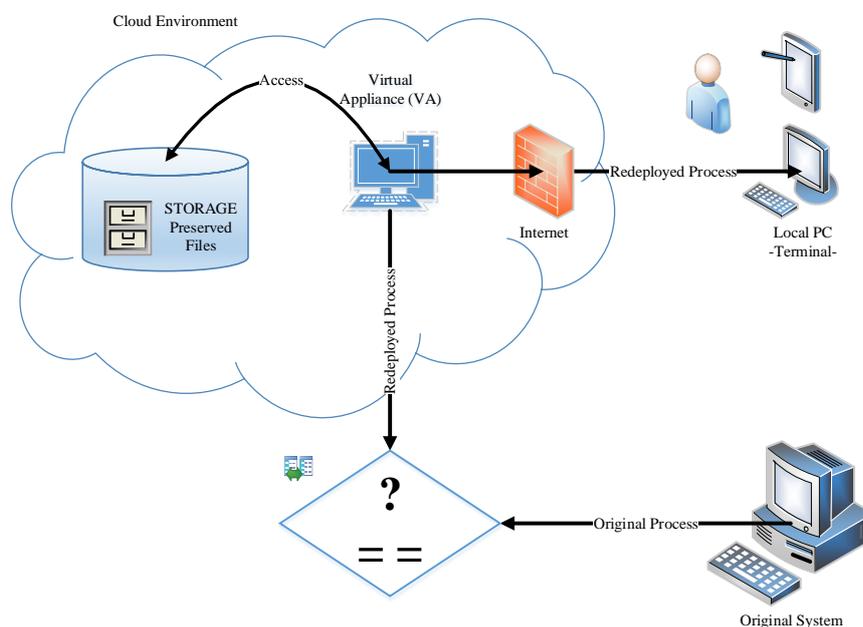


Fig. 1. Problem description

The following points list the precise research question starting with the technical differences, advantages and disadvantages of using such technologies in context of DP, considering benefits, complexities and means for verification and validation.

1. How to package necessary settings for preservation into AIP, so we can shift it into the cloud environment and deploy it there?
2. How to verify and validate the execution of redeployed processes in cloud environment?
3. How to ensure consistency of cloud environment for preserved content?

Presented research should contribute to the research area by presenting virtualization as important concept in DP field. It will become even more important since nowadays tendencies for cloud computing and centralized environment will enhance usage of virtualization as a technology, as well as problems that follows within.

References

1. The Consultative Committee for Space Data Systems (CCSDS). Reference Model for an Open Archival Information System (OAIS). Draft Recommended Standard, CCSDS 650.0-P-1.1 (Pink Book) Issue 1.1. Technical report, August 2009.