

## ABSTRAK

Cloud Computing merupakan perkembangan dari jaringan komputer atau internet, di mana gambaran cloud sendiri diambil dari jaringan komputer yang dapat diabstraksi dari infrastruktur kompleks yang disembunyikan. Studi komparasi EC2 AWS dan Virtual Machine Azure dilakukan untuk memahami perbedaan antara kedua platform ini.

Melihat dari banyaknya pengguna *cloud* sekarang di Indonesia maka penulis ingin melakukan studi komparasi antara *EC2 AWS* dan *Virtual Machine Azure*. Penelitian ini akan mempertimbangkan *Thread (users)*, *Ramp-Up (Second)*, *Loop Count* dan menghasilkan parameter *Throughput*, *Latency*, *Simple Time/Response Time* dan melihat *Resource Utilization*, *CPU Utilization*, *Memory Utilization*, *Disk Utilization*.

Berdasarkan hasil pengujian antara *AWS EC2* dan *Azure Virtual Machine* menghasilkan beberapa kesimpulan yaitu, hasil rata-rata parameter *Througput* pada Azure mendapatkan nilai 32.83/*mbps* dan AWS 32.38/*mbps*. Hasil Parameter *Sample Response Time* pada Azure mendapatkan nilai 4741.86/*ms* dan AWS 5258.4/*ms*. Hasil Parameter *Latency* pada Azure mendapatkan nilai 2731.41/*ms* dan AWS 2891/*ms*. Sementara hasil *utilization* mendapatkan nilai rata-rata *Resource 1min 35sec*, *CPU 47.39%*, *Memory 30.76%* dan *Disk 7.13%* sedangkan untuk *Utilization AWS EC2 Instance* mendapatkan nilai rata-rata *Resource 1min 42sec*, *CPU 25.22%*, *Memory 58.66%* dan *Disk 4.42%*.

**Kata Kunci** : *Cloud Computing*, *Amazon Web Services*, *Azure*, *Virtual Machine*, *EC2 Instance*.

## ABSTRACT

Cloud Computing is a development of computer networks or the internet, where the cloud image itself is taken from computer networks that can be abstracted from hidden complex infrastructure. A comparative study of AWS EC2 and Azure Virtual Machine was conducted to understand the differences between these two platforms.

Seeing the many cloud users now in Indonesia, the author wants to do a comparative study between AWS EC2 and Azure Virtual Machine. This research will consider Thread (users), Ramp-Up (Second), Loop Count and produce parameters Throughput, Latency, Simple Time/Response Time and look at Resource Utilization, CPU Utilization, Memory Utilization, Disk Utilization.

Based on the test results between AWS EC2 and Azure Virtual Machine, several conclusions were drawn, namely, the average Throughput parameter on Azure was 32.83/mbps and AWS 32.38/mbps. The results of the Sample Response Time parameter on Azure get a value of 4741.86/ms and AWS 5258.4/ms. The results of the Latency parameter on Azure get a value of 2731.41/ms and AWS 2891/ms. While the utilization results get an average value of Resource 1min 35sec, CPU 47.39%, Memory 30.76% and Disk 7.13% while for AWS EC2 Instance Utilization get an average value of Resource 1min 42sec, CPU 25.22%, Memory 58.66% and Disk 4.42%.

**Keywords:** *Amazon Web Services, Azure , Cloud Computing, , Virtual Machine, EC2 Instance.*