CS 519 Cloud Computing Overview

**VL09: Optimizing with Trusted Advisor**

School of Technology and Computing

## **Instructions**

## For this activity you will be study this case:

## <https://aws.amazon.com/solutions/case-studies/hungama/>

Below you are given a table of service and corresponding limits. Based on the case study, identify which services were checked against with Trusted Advisor.

## Service limits

Checks for service usage that is more than 80% of the service limit. Values are based on a snapshot, so your current usage might differ. Limit and usage data can take up to 24 hours to reflect any changes.

The following table shows the limits that Trusted Advisor checks.  
Source: <https://aws.amazon.com/premiumsupport/technology/trusted-advisor/best-practice-checklist/>

|  |  |
| --- | --- |
| **Service** | **Limits** |
| Amazon DynamoDB (DynamoDB | Read capacity Write capacity |
| Amazon Elastic Block Store (Amazon EBS) | Active volumes Active snapshots General Purpose (SSD) volume storage (GiB) Provisioned IOPS Provisioned IOPS (SSD) volume storage (GiB) Magnetic volume storage (GiB) |
| Amazon Elastic Compute Cloud (Amazon EC2) | Elastic IP addresses (EIPs) Reserved Instances - purchase limit (monthly) On-Demand instances |
| Amazon Kinesis Streams | Shards |
| Amazon Relational Database Service (Amazon RDS) | Clusters Cluster parameter groups Cluster roles DB instances DB parameter groups DB security groups DB snapshots per user Event subscriptions Max auths per security group Option groups Read replicas per master Reserved Instances Storage quota (GiB) Subnet groups Subnets per subnet group |
| Amazon Route 53 (Route 53) | Hosted zones per account Max health checks per account Reusable delegation sets per account Traffic policies per account Traffic policy instances per account |
| Amazon Simple Email Service (Amazon SES) | Daily sending quota |
| Amazon Virtual Private Cloud (Amazon VPC) | Elastic IP addresses (EIPs) Internet gateways VPCs |
| Auto Scaling | Auto Scaling groups Launch configurations |
| AWS CloudFormation | Stacks |
| Elastic Load Balancing (ELB) | Application Load Balancer Network Load Balancer Classic Load Balancer |
| Identity and Access Management (IAM) | Groups Instance profiles Policies Roles Server certificates Users |

Cloud servers do save money over on-premises servers but it is still important to know about the cloud service we are using so we don’t pay more than we need to. For example, if we have long-term instances, it is better to use reserves instances. If we don’t have to be online at all times, if we can afford to run our code only when servers are available, we can use spot instances.

According to the case study, the company had underutilized ec2 instances because the team set the provisioning higher than they needed.

Also, during cloud computing, people are prone to forgetting to close down everything after they are done using them. This was another problem detected by the audit. Servers that were spun up for temporary projects weren't shut down. They also automated shutting down development servers during non business hours.

They also moved unused EBS volume snapshots to S3.

They make a good point at the end of the case study. Since we are not purchasing the entire servers and just paying for them as long as we use them, it makes it easy for the company to go into risky or temporary businesses that might end up shutting down which will allow them to reach markets first.