

General Description

Skill 53 – Cloud Computing

1 Introduction

This document describes the ICT Regional Championships 2023 in the category “Cloud Computing”, also known as skill 53. This competition is the successor of the previous skill 39 and is mainly focused on the usage of public cloud services.

The competition will be divided into several smaller tasks, for which you will have a total of **three hours** to complete as many tasks as possible. Whenever possible, the tasks are designed to be independent of each other, which will also allow you to solve them in a different order. Additionally, in case of multiple environments for solving a task, you will be able to switch between them at any time without any noticeable delay.

All these tasks are being performed on the AWS cloud platform and are dealing with their basic infrastructure service offerings. Specifically, you can expect challenges / tasks related to this list of services:

- Amazon Application Auto Scaling
- Amazon CloudFront
- Amazon Elastic Compute Cloud (EC2)
- Amazon Elastic Load Balancing (ELB)
- Amazon Relational Database Service (RDS)
- Amazon Simple Storage Service (S3)
- Amazon Virtual Private Cloud (VPC)
- AWS Identity and Access Management (IAM)

The individual tasks are not meant to check very specific knowledge regarding these services. Instead, they rather focus on basic usage of these AWS services and combine the new cloud computing era with usual on-premises skills related to the management of Linux systems and basic networking.

Each task will grant you the possibility to optionally request hints, which are getting more and more detailed. While this will come at a cost of a point deduction, based on how many you are going to use, this gives you a good chance at also solving issues you might not have dealt with before.

An important part of this competition is that all internet access is allowed, but you must NOT use any kind of outside help. You do not have to memorize domain-specific knowledge and can instead focus on the bigger picture.

2 Bring your own device

As a competitor, you must bring your own device to the competition, unless your regional school/location tells you otherwise. Due to the usage of public cloud services, specifically AWS, the requirements are very simple and easy to fulfill.

Basically, you only need to have a working email address, a web browser of your choice and optionally an SSH client like OpenSSH or PuTTY. No other software is required, and you also do not need to run any virtual machines on your system, as everything is hosted in the cloud.

On the competition day you will receive individual details for signing into a challenge platform where the competition is being held. You will find all the required information and credentials there along with the specific tasks and your current score. When logging in for the first time, you will be asked to fill in some details about yourself like your full name, school, and employer. Please make sure that the provided data is correct, as it will be used as part of the ranking.

Aside from that, there are no restrictions imposed regarding the kind of tools you may use. By default, you will be automatically logged into a temporary AWS account where you can solve the various tasks within your browser. Additionally, you will also have the possibility to get a temporary token for using the AWS CLI, although this is neither required nor recommended unless you already have some good knowledge.

3 Rules

Please be aware of the following competition rules to guarantee a fair experience for every participant:

- The competition has a fixed start and finish time. It is up to yourself to decide how to divide your time. Your score is being continuously graded and you do not have to submit any results at the end of the competition.
- Due to the competition allowing for BYOD (bring your own device), this exam is meant to be treated as open book, meaning that all resources including the internet are allowed.
- You are NOT allowed to communicate with other people, including fellow candidates. Any kind of outside help will result in your immediate disqualification from the competition.
- You may not disclose any competition material or information to any other person, neither before, during nor after the competition.

4 Training

In case you would like to work on your public cloud skills before joining the competition, we recommend you look at AWS Academy. This is an educational service provided by AWS, which allows taking various online courses and provides a free sandbox with up to 100\$ credits where you can experiment around and familiarize yourself with the AWS Management Console.

Your school might have already provided you with such an account, in which case you can use that account to train for the competition. In case your school is not part of the AWS Academy program, you may fill out the following form and we will provide you with an account as soon as possible:

AWS Academy Request: <https://forms.gle/Rbpsf5gA95DmUjWY9>

There are no specific training exercises available, however basic knowledge of the beforementioned services in section 1 along with some sysadmin knowhow will give you a decent chance to achieve a good score!