

# Job Description

Skill 53 – Cloud Computing

## 1 Introduction

This document describes the ICT Regional Championships 2024 in the category “Cloud Computing”, also known as skill 53. Unlike the previously released General Description, this document provides some additional information regarding the specific tasks that you are going to face. Please note that one additional service has been added, which has been highlighted further down below in yellow.

We are looking forward towards an interesting and fair competition and wish you already today good luck with showing off your skills!

## 2 Competition Details

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. Unlike last year, where as part of a transition phase we also included some Linux tasks, from this point on all challenges will only focus on AWS Basics.

While a couple tasks might require signing into an EC2 Linux system and doing some very trivial tasks, most can be completely solved within the AWS Management Console. All tasks are performed on the official AWS cloud platform and are related to their basic infrastructure service offerings. Specifically, you can expect challenges / tasks related to this list of services:

- Amazon CloudFront
- Amazon EC2 Auto Scaling
- Amazon Elastic Compute Cloud (EC2)
- Amazon Elastic Load Balancing (ELB)
- Amazon ElastiCache
- Amazon Relational Database Services (RDS)
- Amazon Route 53
- Amazon Simple Storage Service (S3)
- Amazon Virtual Private Cloud (VPC)
- AWS Certificate Manager (ACM)
- AWS Identity and Access Management (IAM)
- AWS Lambda – nur Eigenschaften und Ausführung, kein Coding
- AWS Systems Manager (SSM) – nur Session Manager mit EC2 Linux

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 how basic cloud computing infrastructure can be deployed and managed.

Each task will grant you the possibility to optionally request hints when you are stuck solving a challenge. While these hints will result in a deduction of points depending on how detailed they are, they give you a good chance to solve tasks in areas you have not faced previously. The competition platform will let you know in advance how many points each hint is going to cost, so it is up to you if and how many of them you use.

Please note that unlike last year, the point deduction only affects the specific challenge task, and not your overall score. This way you can more easily attempt tasks that are completely new to you, and still score a couple points, instead of risking that your overall score dips lower.

As an example, a task might give you 10 points, but you have the chance to unlock a hint for 3 points – if you do not complete the task, you did not lose any points, but if you do, you only get 7 instead of 10 points.

An important part of this competition is that internet access for research is allowed, but you must NOT use any kind of outside help. This means that while you must develop a solution by yourself, you do not have to memorize domain-specific knowledge and can instead focus on the bigger picture.

### 3 Bring Your Own Device (BYOD)

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 an URL together with an invite code where you can register an account on our competition platform. 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 for 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 session for using the AWS CLI, although this is neither required nor recommended by us.

## 4 Rules

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

- The competition takes a total of 180 minutes, and the time will automatically start once you signed up on the platform and started the challenge. 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. At any time, you will be able to view your current score and gather insights about which parts of your infrastructure are already working and which ones still need more work.
- 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 for obtaining knowledge, 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.
- The usage of any form of generative AI during the competition is strictly forbidden. All the work you submit must be developed by yourself.

## 5 Training

Please visit our official website via <https://skills53.ch/competitions/rc2024/> to get more information on how you can prepare for the upcoming competition. Good luck and looking forward to seeing you compete in March!

## 6 Remarks

See the official [General Informations](#) document from ICT Berufsbildung Schweiz for basic competition information like rules about fairness and further details about BYOD.