

Trade 53 – Cloud Computing

Competitor Information for SwissSkills 2022

1 Overview

This document is supposed to inform every current and upcoming candidate about the national competitions in Cloud Computing, also known as trade 53. After reading this document, you should have understood what the competition is about, how the competition is being carried out, which training possibilities are available and the scope of the specific tasks.

While this trade has some similarities to its predecessor IT Network Systems Administration (trade 39), there are also several important distinctions which will be highlighted as part of this document.

2 Rules

As with every competition, there are certain rules in place to guarantee a fair and interesting experience for all participants:

- The competition has a fixed start and finish time with a total runtime of roughly 7 ½ hours. It is up to you how you best divide the available time.
- As the competition relies on BYOD (bring your own device) and involves the AWS cloud, it is to be treated as open book. This means that all resources including the internet can be used for research, however you are **NOT** allowed to use any kind of communication with other people, including fellow competitors.
- You may not disclose any competition material or information to any other person, neither before, during nor after the competition.

Please be aware that there are also general competition rules in place, which can be found on the website of ICT Berufsbildung Schweiz:

[https://www.ict-berufsbildung.ch/resources/General-Information Meisterschaften Championnats Campionati ICT-BBCH.pdf](https://www.ict-berufsbildung.ch/resources/General-Information%20Meisterschaften%20Championnats%20Campionati%20ICT-BBCH.pdf)

3 Competition

3.1 Concept and Structure

The national championships will be hosted using AWS GameDay, which is a special edition of AWS primarily targeted for usage as part of competitions. A key feature of the platform is the usage of live grading, which will give you a rough clue where you are currently standing and how your competitors are holding up.

This means that not only the final solution is being graded, but also how you achieved it and what costs you might have caused while doing so. As an example, you could receive a scenario where you must work on existing infrastructure which is being permanently tested and graded. While you can receive a lot of points by improving the existing service, you would also lose points when the service is unavailable.

In other words, the scenario is realistic and close to working on actual production infrastructure, where you also can not simply tear down the whole stack for a long time and have to keep everything running as much as possible.

3.2 Grading and Scoring

In addition to the point and ranking system mentioned above, there might also be a chance for you to get some extra points by achieving certain goals. These will be graded by a jury **after** the competition and counted towards your automatically assessed score to determine your final ranking.

You will be informed about any additional judgment criteria as part of the welcome briefing on the competition site, which will be held 30 minutes in advance of the competition start time.

3.3 Technologies and Scope

As some of you might be familiar, most cloud providers including AWS offer a wide variety of services, ranging from basic infrastructure offerings to highly specialized services optimized for a certain use case. As testing the whole palette of services would be very unrealistic and impossible in some cases, this competition restricts itself to a certain subset of services:

- Amazon Application Auto Scaling
- Amazon CloudFormation
- Amazon CloudFront
- Amazon CloudWatch
- Amazon DynamoDB
- Amazon EC2 Auto Scaling
- Amazon EC2 Image Builder
- Amazon Elastic Block Store (EBS)
- Amazon Elastic Compute Cloud (EC2)
- Amazon Elastic Container Registry (ECR)
- Amazon Elastic Container Service (ECS)
- Amazon Elastic File System (EFS)
- Amazon Elastic Load Balancing (ELB)
- Amazon ElastiCache

- Amazon Lightsail
- Amazon Relational Database Service (RDS)
- Amazon Simple Notification Service (SNS)
- Amazon Simple Queue Service (SQS)
- Amazon Simple Storage Service (S3)
- Amazon Simple Storage Service Glacier (S3 Glacier)
- Amazon Virtual Private Cloud (Amazon VPC)
- AWS Cloud9
- AWS CloudShell
- AWS CloudTrail
- AWS Identity and Access Management (IAM)

Please note that you do not have to worry about the number of listed services, as you are not required to know them in detail. This list should be mostly final as of 2022-07-13, however small changes might be made, in which case you would be informed about them at least a month prior to the competition. Should you not receive any update about this list, you can be assured that the tasks of the competition focus on the technologies listed above.

4 Training

This certain trade poses some additional challenges regarding training, as the used infrastructure is provided by AWS and cannot be deployed by yourself on virtual machines or similar environments. Additionally, there is also the challenge that some of the candidates might have never worked with AWS before and are only experienced with classic infrastructure as in trade 39.

Usually this would imply that you must sign up for the regular AWS offerings, which however requires adding a credit card and could easily result in hefty fees if not being careful about the provisioned resources.

As this is not feasible for you as a candidate, we have prepared two options for training so that you can deliver your best performance at the upcoming national championships. While these training materials are optional, we highly advise you to check them out, especially if you have not worked with AWS before, as it might pose difficult to figure out a completely foreign environment during the competition itself.

4.1 Usage of AWS Academy

Each candidate is being provided with an account on AWS Academy, which is another edition of AWS focused on being used for educational purposes. You should have received these credentials by mail and should otherwise contact us (see last page of this document) in case something is not working.

The big advantage of AWS Academy is that it does not require any sort of credit card or other payment method, so you can learn about AWS without having to worry about any costs. Additionally, the actual AWS console itself will look the same during the competition, so you will not face any surprises.

You can access AWS Academy at <https://awsacademy.instructure.com/> and were enrolled in two separate courses with different use cases:

- **AWS Academy Cloud Architecting [22686]**
This course is guiding you through various topics/areas of AWS, many of them also being included in the list of possible technologies for the competition itself. You can complete them in any order of your liking, learn by reading text and video materials and directly use the newly gained knowledge in various lab environments.

Please note that these lab environments are **not** the same as the second course mentioned further below. Unlike the Learners Lab, where your environment is persistent and you get a certain credit, these course labs do not use any credit themselves, but are restricted to certain services and will be teared down automatically after a given time frame.

- **AWS Academy Learner Lab [22563]**
This course provides you with a sandbox environment where you can spawn your own infrastructure in any way you like, giving you the possibility to experiment around to your liking. You have been assigned a total credit of 100 USD, which can be used however you like.

The portal itself should be fairly self-explanatory and guide you through the individual modules using both text and videos. You are not obliged to complete them in any specific order, so feel free to pick out certain topics that you feel are most beneficial to you.

Feel free to reach out to us should you face any difficulties or if anything is unclear. You may also just experiment around yourself, as you can not really break anything on the platform itself.

4.2 On-premise / hybrid AWS training over 3 days

In addition to AWS Academy, the team of AWS Switzerland is offering a free training at the AWS offices in Zurich. The course itself takes three days, spread over three weeks in total. This course will give you additional experience with the AWS platform and provides you with an excellent chance of gaining additional knowledge for your future career.



The email which has been used to distribute this document to all the candidates contains further information about this training offer as well as a survey for further planning. Please refer to the email and fill out the survey accordingly.

5 Contact

Do you have any other questions? Are you facing any issues during training related to the platform itself? Would you like to share some feedback? Please feel free to reach out to us at any time.

Get in touch with us via email: info@skills53.ch