



Component Soft

open cloud trainings and consultation

Boost your career with open cloud certifications!

Openstack, Kubernetes and a little bit of Docker

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Component Soft Intro

- We are a highly focused IT training and consulting company with 20+ years history, based in Budapest, Hungary and operating directly throughout Europe (also in the UK) as well as through partners in the USA and Australia.
- Our most exiting competencies are in open cloud training and consultation in Openstack, Docker, Kubernetes.
- We develop our own courseware in these topics (together with our American partner).
- Our main customers are telco vendors and operators (e.g. the globally largest telco vendor and the largest European telco operator) as well as IT service providers.



Component Soft Trainings for OpenStack



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The Component Soft logo, featuring a stylized icon of three overlapping circles and the text 'Component Soft' in red and black, with 'open cloud trainings and consultation' in black below it.

Component Soft
open cloud trainings and consultation

Openstack, Docker and Kubernetes skills on the job market

- <https://www.indeed.com/jobtrends/q-Openstack-q-Docker-q-Kubernetes.html>
- Shows the percentage of job postings in the USA containing these keywords
- Openstack, the oldest open cloud technology in the pack (2010) has significantly dropped since early 2016 and is at 0.039% as of mid June 2017. Reasons for decline: difficult to install, update and operate, strong competition at public clouds from AWS, MS Cloud and Google Cloud, at private clouds from Vmware Vcloud and MS Azure Stack. But popular with smaller public cloud providers in Europe and Asia and at telco NFV projects.

Openstack, Docker and Kubernetes on the job market

- Docker, the universal container standard for Linux and windows systems, appeared in 2013 and is by far the most popular one (0.136%) while also quickly growing.
- Kubernetes, originally a Google technology, now one of the most popular open source projects supported by all major cloud and IT vendors, is one of the 2 most popular container orchestration tools (besides Docker Swarm). It appeared as an independent open source software in 2015, quickly growing since then and approaching Openstack in popularity (0.032%).

Value of open source skills and certifications

- 2017 Open Source Jobs Report of the Linux Foundation:
(<https://www.linuxfoundation.org/publications/open-source-jobs-report-2017/>)
 - 67% percent of managers say the hiring of open source professionals will increase more than other areas of the business in the next 6 months
 - Cloud is the most sought after open source skill (60-70%)
 - 50% of hiring managers are more likely to hire a certified professional
 - 76% of open source pros say certifications are useful to their careers

Docker certifications: what we know/guess so far

- Created by Docker Inc.
- The first certification is under construction and in beta testing
- It will be publicly announced and available on DockerCon Europe in mid October
- It will probably be based on the content of the official Docker Fundamentals training
- Our DCK-101 Docker Administration training covers the same topics and will be modified to prepare for the exam when it appears

Certified Openstack Administrator (COA) I

- Vendor neutral Openstack certification program created by the Openstack Foundation and the Linux Foundation
- An online hands-on proctored exam available anytime from anywhere
- It tests practical day-to-day Openstack operational skills, currently with the Newton release
- Six months practical experience recommended
- Length, 2.5 hours, passing score 76%, report available within 3 business days

Certified Openstack Administrator (COA) II

- Exam voucher costs 300 USD, valid for 12 months and contains a free retake as well
- Certification is valid for 36 months
- Component Soft participated in the beta testing process during the spring of 2016
- Our OST-104 Openstack Admin. training also prepares for the certification. We offer a special priced training + exam bundle as well
- <https://www.openstack.org/coa>

Practical advice for the COA exam I

- You need an internal or external webcam so the remote proctor can check you and your room
- Only the browser may be running and only the tab related to the exam may be opened
- 2 sub tabs:
 - Command Line interface (root shell) --> all tasks can be solved
 - Horizon (OpenStack WebUI) --> around 85-90% of the tasks can be done with it except Swift ACL usage and Swift Object expiration feature

Practical advice for the COA exam II

- You must not start additional CLI shells, so you had better learn how to use tmux or screen to split the shell
- Non US keyboard layouts may not be handled well in the exam environment --> learn how to use the US keyboard layout
- useful commands:
 - # openstack complete > openstack_bash_complete.sh
 - # source openstack_bash_complete.sh

Certified Kubernetes Administrator (CKA) I

- Vendor neutral Kubernetes certification program created by the Cloud Native Computing Foundation, a Linux Foundation project which owns Kubernetes, Prometheus etc.
- Same type of exam and exam framework as at COA
- It currently runs with the 1.6 release and soon with 1.8
- Length, 4 hours, passing score 74%, report available within 3 business days
- Generally available since 11. September 2017
- It tests the “skills, knowledge and competency to perform the responsibilities of Kubernetes Administrators”

Certified Kubernetes Administrator (CKA) II

- Exam voucher costs 300 USD, valid for 12 months and contains a free retake as well
- Certification is valid for 24 months
- Component Soft participated in the beta testing process in August-September 2017
- Our KBS-101 Kubernetes Admin. And KBS-105 Docker + Kubernetes Admin. trainings also prepare for the certification. We also offer a special priced training + exam bundle
- <https://www.cncf.io/certification/expert/>

Practical advice for the CKA exam I

- Same technical requirements as COA exam: webcam, US keyboard etc
- Only the browser may be running and only tabs related to the exam may be opened
 - The terminal where you solve the questions
 - Official K8S documentation
 - Other documentation related to K8S
 - Pre-created exam specific templates are PROHIBITED

Practical advice for the CKA exam II

- Do exactly what the question tells you to do
 - Eg.: If it's a POD it's a POD not a deployment with one POD
- Use K8S on daily basis to be able to answer easy questions fast and questions with medium difficulty relatively fast
- Learn to use kubectl explain command eg. kubectl explain pod
- Use kubectl commands to solve the questions or „create” the yaml files (-o wide)

Practical advice for the CKA exam III

- Learn Kubernetes the hard way
 - Manual installation
 - How to create encrypted connection between components
 - Learn how to troubleshoot problems -> you have to know how Kubernetes components work together
- It can take 3-4 hours: drink and eat before the exam

We offer open cloud trainings in the UK! And we are hiring part time instructors!

Our offer to part time instructors:

- Openstack and especially Docker and Kubernetes training delivery
- Experience in technical instruction, Linux, networking and virtualisation required
- Successful candidates will be educated and certified for Openstack, Docker and Kubernetes for free.
- They do internal trial instructions first and get background support from us at their first trainings
- Training delivery in the UK and elsewhere in Europe