RedHat OpenShift Code Ready Containers

Version	Datum	Änderung	Durchgeführt von
0.10	2022-11-10	einige Fehler ausgebessert	gweep
0.02	2022-11-10	Festplattenpartitionierung hinzugefügt	gweep
0.01	2022-11-09	Dokument erstellt;	gweep

Vorwort

Installationsanleitung für Red Hat OpenShift CRC (Code Ready Containers) auf VMware Workstation bzw. VMware Player. Im BIOS des Computers (Notebook, Workstation, Server etc.) muss sich eine CPU befinden, die Virtualisierung unterstützt. In den meisten Fällen muss diese im BIOS bei den CPU-Einstellungen erst aktiviert werden (Bei AMD SVM Mode oder AMD-V bei Intel VT-x oder früher VT).

Bei Fragen eine Mail an: <u>gweep@gweep.eu</u> Quelle: <u>https://gweep.eu</u>

Installation CentOS Server

Download des ISO-Image von der CentOS-Homepage. Empfohlen wird die Version CentOS Stream 8 (<u>https://www.centos.org/download/</u>).

Anlegen einer VM mit folgenden minimalen Spezifikationen (meine Angaben):

- 4 vCPUs
- 12 GB Ram
- 60 GB Diskspace

Meine Erfahrungen läuft es am besten mit:

- 8 vCPUs
- 16 GB Ram
- 100 GB Diskspace (oder mehr)

WICHTIG Virtualization muss im BIOS der VM aktiviert sein. VMware - auf der VM rechte Maustaste > Settings > Processors > CheckBox *Virtualize Intel VT-x/EPT or AMD-V/RVI* aktivieren.



KEYBOARD LAYOUT	CENTOS STREAM 8-STREAM INSTALLATION 땐 de Help!
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	NG			CENTOS ST	REAM 8-STREAM	INSTALLATION Help!
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SYSTEM	74	GiB	nt Point:	1	Device(s): VMware, VMware	e Virtual S
/boot	1024	MiB Desi	red Capacit	ty:	(sda) Modify	
swap cs_rhoscrc-swap	5 Gi	B 5 (GiB	J		
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+ - C					swap	
AVAILABLE SPACE TOT 1023 KiB 80	TAL SPACE) GIB					
1 storage device select	<u>ted</u>					Reset All
- New CentOS Strea	m 8-stream Installat	ion cs_	rhoscrc-	swap		
SUMMARY OF CHANGE	S					
Your customizations will	result in the following cha	anges taking ef	fect after y	ou return to	the main menu and	begin installation:
Order Action	Туре	Device		ſ	Mount point	
1 destroy format	Unknown	VMware, VMv	/are Virtual	S (sda)		
2 create format	partition table (MSDOS)	VMware, VMv	/are Virtual	S (sda)		
3 create device	partition	sda1 on VMw	are VMwar	e Virtual S		

3	create device	partition	sda1 on VMware, VMware Virtual S
4	create device	partition	sda2 on VMware, VMware Virtual S
5	create format	physical volume (LVM)	sda2 on VMware, VMware Virtual S
6	create device	lvmvg	cs_rhoscrc
7	create device	lvmlv	cs_rhoscrc-root
8	create format	xfs	cs_rhoscrc-root /
9	create device	lvmlv	cs_rhoscrc-swap
10	create format	swap	cs_rhoscrc-swap
11	create format	xfs	sda1 on VMware, VMware Virtual S /boot
			Cancel & Return to Custom Partitioning

ROOT PASSWO	RD	CENTOS STREAM	8-STREAM INSTALLATION
Done		🖽 de	Help!
	The root account is used for administering	ng the system. Enter a password for the	e root user.
	Root Password:		Ś
			Weak
	Confirm:		®
A The password	fails the dictionary check - it is too simplis	tic/systematic. You will have to press D o	one twice to confirm it.
🋞 CentOS	INSTALLATION SUMMARY	CENTOS STREAM 8	3-STREAM INSTALLATION
		de de	Tep:
		SOETWARE	SVSTEM
	LOCALIZATION	SOFTWARE	STSTEM
	Keyboard German	Installation Source Local media	Automatic partitioning sele
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	CentOS 8 Linux EULA	
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SCREENSHOTS EINFÜGEN

CRC (Code Ready Containers) installieren

Unter folgenden Link auf **Install OpenShift on your laptop** klicken, mit dem Red Hat Account anmelden:

https://developers.redhat.com/products/openshift-local/overview

Log In Red Hat IDP × ■ Firefox Privacy Notice - ▷× +							
$\leftarrow \rightarrow \mathbb{C} \qquad \bigcirc \mathbb{A} \ \ \ \text{or} \ \ \text{https://sso.redhat.com/auth/realms/redhat-external/protocol/openid-connect/auth?client_id=cloud-services} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$							
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Bei Clusters oben im Menü auf Local klicken.



Getting Started Guide: <u>https://access.redhat.com/documentation/en-</u> us/red_hat_openshift_local/2.10/html/getting_started_guide/index

sudo dnf install libvirt sudo dnf install NetworkManager # Network Manager ist in der Regel schon installiert cd ~/Downloads tar xvf crc-linux-amd64.tar.xz mkdir -p ~/bin cp ~/Downloads/crc-linux-*-amd64/crc ~/bin export PATH=\$PATH:\$HOME/bin echo 'export PATH=\$PATH:\$HOME/bin' >> ~/.bashrc # Telemetry Daten aktivieren oder nicht crc config set consent-telemetry yes crc version # Ausgabe: # CRC version: 2.10.2+1bc2e5a # OpenShift version: 4.11.7 # Podman version: 4.2.0

Nun muss man per ssh auf die VM, mit dem Befehl ip a findest du die IP-Adresse der VM.

Windows Terminal (oder Putty) verwenden:

```
ssh root@192.168.203.146
sudo usermod -aG wheel koarl
sudo gpasswd -a koarl wheel
```

Du kannst aber auch per Tastenkombination *Strg*+*Alt*+*F3* auf die TTY wechseln und dich dort als *root* anmelden um den usermod bzw. den gpasswd Befehl abzusetzen. Mit *Strg*+*Alt*+*F2* wechselst du wieder zurück auf die GUI.

Ggf. wird ein Reboot der VM notwendig, ein Login/Logout hat nicht gereicht, ein Reboot war aber auch nicht in jedem Fall notwendig.

```
crc setup
 # dauert einige Zeit, wenn er fertig ist
 crc start
 # Secret wird verlang, dieses Einfügen, dauert seine Zeit bis der OpenShift
 CRC läuft
INFO Adding crc-admin and crc-developer contexts to kubeconfig...
Started the OpenShift cluster.
The server is accessible via web console at:
 https://console-openshift-console.apps-crc.testing
Log in as administrator:
 Username: kubeadmin
 Password:
Log in as user:
 Username: developer
 Password: developer
Use the 'oc' command line interface:
 $ eval $(crc oc-env)
 $ oc login -u developer https://api.crc.testing:6443
               bin]$
```

Danach die WebConsole (GUI) starten, der Browser wir danach automatisch geöffnet. Es kommen Sicherheitswarnungen wegen dem fehlenden Zertifikat, hier muss man das Risiko auf sich nehmen :)

crc console

oc Command

Das oc-File nach /home/koarl/bin kopieren, Verzeichnis koarl natürlich durch deinen angegebenen Benutzernamen ersetzen.

Das oc -File bekommt man über die WebConsole (GU) von OpenShift. Rechts oben im Menü bei ? ? auf *Command line tools* klicken.

g purposes. DON'T use it for production.			
		⊕ ?	developer 🗸
		Quick Starts	
		Documentation 🛛	Create Project
		Command line tools	
		About	
Requester 1	Created 1	Learning Portal 🖉	
developer	� Nov 8, 2022, 11:17 PN	OpenShift Blog 🛛 🖉	8 9

Dann auf *Download oc for Linux for x86_64* klicken. Unter Downloads doppelt auf die Datei oc.tar klicken, oc anklicken und auf *Extract* klicken, den Ordner

/home/koarl/bin auswählen.

ator	•	Command Line Tools
	>	
	>	Copy login command 🗗
	>	oc - OpenShift Command Line Interface (CLI)
	、 、	With the OpenShift command line interface, you can create applications and manage Ope
	· ·	The oc binary offers the same capabilities as the kubectl binary, but it is further extended
		 Download oc for Linux for x86_64 2*
	,	Download oc for Mac for x86_64
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		LICENSE
'n	>	
		helm - Helm 3 CLI
		Helm 3 is a package manager for Kubernetes applications which enables defining, installir

Download Helm 🗹

Extract +		oc.tar		Q = ×
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oc		123.3 MB	unknown	20 September 2022,



Helm installieren

Go installieren

```
# curl und wget sind meist schon installiert
sudo yum -y install curl
sudo yum -y install wget
curl -0 https://storage.googleapis.com/golang/getgo/installer_linux
wget https://storage.googleapis.com/golang/getgo/installer_linux
chmod +x installer linux
./installer_linux
source .bash_profile
./installer_linux --help
# Version merlen
./installer_linux -v 1.18.3
echo $GOPATH
# Ausgabe: /home/USER/go
go version
# Ausgabe:
go version go1.19.3 linux/amd64
```

Helm

```
sudo curl -L https://mirror.openshift.com/pub/openshift-
v4/clients/helm/latest/helm-linux-amd64 -o /usr/local/bin/helm
```

```
sudo chmod +x /usr/local/bin/helm
helm version
helm repo add bitname https://charts.bitnami.com/bitnami # Helm Repo
helm repo list
```

Quelle

- Go Installation: https://computingforgeeks.com/install-go-golang-on-centos-rhel/
- Helm Installation: <u>https://docs.openshift.com/container-</u> <u>platform/4.9/applications/working_with_helm_charts/installing-helm.html</u>

Tags

<u>Howto</u>