

VII-2.12. Stoppen, starten & Fehlersuche

VII-2.12.1. Allgemeines

Diese ECS-CE Lösung basiert auf *Docker* - vereinfacht ausgedrückt ist das eine Virtualisierung innerhalb des Rechners, die etwas anders arbeitet als die gängige Virtualisierung, z.B. mit VMware. Vor allem verwendet ein Docker 'Container' wesentlich weniger Ressourcen als eine 'herkömmliche VM'.

In diesem Fall kann man ganz grob davon reden, daß die ECS Software quasi als 'VM innerhalb einer VM' arbeitet. Und besondere Situationen erfordern besondere Maßnahmen, auf die ich hier kurz hinweisen muß.



Generell ist es nicht ratsam, das System öfter als unbedingt nötig zu starten. Wegen der internen Aufräumarbeiten kann es sein, daß seine Kapazität sonst rapide abnimmt.

VII-2.12.2. Herausfinden des ECS Containers

Dies ist wichtig, damit Sie ihn später wieder richtig starten können. Sie sollten diesen Schritt also sofort nach der Installation durchführen.

Die *Container ID* ist eindeutig.

VII-2.12.3. Richtiges Stoppen des ECS Servers

Die Docker ECS Software läuft völlig unabhängig innerhalb der virtuellen CentOS VM. Stoppen Sie also CentOS, wird die ECS Software unkontrolliert beendet. Dies wird zu Problemen führen.



Deshalb ist es wichtig, daß Sie die richtige Reihenfolge einhalten:

- Stoppen Sie erst den Docker Service.
- Fahren Sie erst danach das Betriebssystem CentOS herunter.

- Zum manuellen Starten & Stoppen wenden Sie die entsprechenden Befehle auf den `docker.service` an:

```

admin@luna:~$ sudo systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
   Active: active (running) since Tue 2022-07-05 12:43:17 GMT; 2 days ago
     Docs: https://docs.docker.com
   Main PID: 1278 (dockerd)
    Tasks: 11
   Memory: 18.6M
   CGroup: /system.slice/docker.service
           └─1278 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Jul 05 18:24:09 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:09.020480393Z" level=info msg="ignoring event" container=b543e130efd38d3af7c...kDelete"
Jul 05 18:24:11 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:11.522886318Z" level=info msg="ignoring event" container=22faf3f03b7fd94b50...kDelete"
Jul 05 18:24:13 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:13.667001931Z" level=info msg="ignoring event" container=4effb9513311714137...kDelete"
Jul 05 18:24:15 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:15.632093354Z" level=info msg="ignoring event" container=6ae52dc45136897448a...kDelete"
Jul 05 18:24:17 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:17.714004127Z" level=info msg="ignoring event" container=9a0a40235d18a531ac...kDelete"
Jul 05 18:24:19 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:19.961888387Z" level=info msg="ignoring event" container=35857836b16d5e7929d...kDelete"
Jul 05 18:24:22 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:22.056166874Z" level=info msg="ignoring event" container=5b1b376ace7e28fd0ec...kDelete"
Jul 05 18:25:56 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:56.103448000Z" level=info msg="ignoring event" container=1da73f1dbf7479a4c85...kDelete"
Jul 05 18:25:58 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:58.230119999Z" level=info msg="ignoring event" container=248a5003f56e99337e6...kDelete"
Jul 05 18:26:00 luna.eval.local dockerd[1278]: time="2022-07-05T18:26:00.554242484Z" level=info msg="ignoring event" container=e663e4815e609d5499...kDelete"
Jul 05 18:26:00 luna.eval.local dockerd[1278]: time="2022-07-05T18:26:00.554242484Z" level=info msg="ignoring event" container=e663e4815e609d5499...kDelete"
Hint: Some lines were ellipsized, use -l to show in full.
admin@luna:~$ sudo systemctl stop docker.service
Warning: Stopping docker.service, but it can still be activated by:
  docker.socket
admin@luna:~$ sudo systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
   Active: inactive (dead) since Fri 2022-07-08 10:14:02 GMT; 5min ago
     Docs: https://docs.docker.com
   Process: 1278 ExecStart=/usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock (code=exited, status=0/SUCCESS)
   Main PID: 1278 (code=exited, status=0/SUCCESS)

Jul 05 18:24:22 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:22.056166874Z" level=info msg="ignoring event" container=5b1b376ace7e28fd0ec...kDelete"
Jul 05 18:25:56 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:56.103448000Z" level=info msg="ignoring event" container=1da73f1dbf7479a4c85...kDelete"
Jul 05 18:25:58 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:58.230119999Z" level=info msg="ignoring event" container=248a5003f56e99337e6...kDelete"
Jul 05 18:26:00 luna.eval.local dockerd[1278]: time="2022-07-05T18:26:00.554242484Z" level=info msg="ignoring event" container=e663e4815e609d5499...kDelete"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.114236386Z" level=info msg="ignoring event" container=68ba4bfc8dad77e105...kDelete"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.280225266Z" level=info msg="Processing signal 'terminated'"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.313725760Z" level=info msg="stopping event stream following graceful shut...ace=moby"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.317876071Z" level=info msg="Daemon shutdown complete"
Jul 05 10:14:02 luna.eval.local systemd[1]: Stopped Docker Application Container Engine.
Hint: Some lines were ellipsized, use -l to show in full.
admin@luna:~$
  
```

- Wenn Sie also das System manuell stoppen, sollten Sie zuerst den Docker Service beenden:

```

admin@luna:~$ sudo systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
   Active: inactive (dead) since Fri 2022-07-08 10:14:02 GMT; 7min ago
     Docs: https://docs.docker.com
   Process: 1278 ExecStart=/usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock (code=exited, status=0/SUCCESS)
   Main PID: 1278 (code=exited, status=0/SUCCESS)

Jul 05 18:24:22 luna.eval.local dockerd[1278]: time="2022-07-05T18:24:22.056166874Z" level=info msg="ignoring event" container=5b1b376ace7e28fd0ec...kDelete"
Jul 05 18:25:56 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:56.103448000Z" level=info msg="ignoring event" container=1da73f1dbf7479a4c85...kDelete"
Jul 05 18:25:58 luna.eval.local dockerd[1278]: time="2022-07-05T18:25:58.230119999Z" level=info msg="ignoring event" container=248a5003f56e99337e6...kDelete"
Jul 05 18:26:00 luna.eval.local dockerd[1278]: time="2022-07-05T18:26:00.554242484Z" level=info msg="ignoring event" container=e663e4815e609d5499...kDelete"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.114236386Z" level=info msg="ignoring event" container=68ba4bfc8dad77e105...kDelete"
Jul 05 10:14:02 luna.eval.local systemd[1]: Stopping Docker Application Container Engine...
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.280225266Z" level=info msg="Processing signal 'terminated'"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.313725760Z" level=info msg="stopping event stream following graceful shut...ace=moby"
Jul 05 10:14:02 luna.eval.local dockerd[1278]: time="2022-07-08T10:14:02.317876071Z" level=info msg="Daemon shutdown complete"
Jul 05 10:14:02 luna.eval.local systemd[1]: Stopped Docker Application Container Engine.
Hint: Some lines were ellipsized, use -l to show in full.
admin@luna:~$
admin@luna:~$
admin@luna:~$
admin@luna:~$
admin@luna:~$ sudo shutdown -h
Shutdown scheduled for Fri 2022-07-08 10:22:40 GMT, use 'shutdown -c' to cancel.
admin@luna:~$
Broadcast message from root@luna.eval.local (Fri 2022-07-08 10:21:40 GMT):

The system is going down for power-off at Fri 2022-07-08 10:22:40 GMT!
  
```

- Und so starten Sie den Docker Service:

```

admin@luna:~$ sudo systemctl status docker.service
admin@luna ~$
admin@luna ~$ sudo systemctl status docker.service
• docker.service - Docker Application Container Engine
  Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
  Active: inactive (dead) since Fri 2022-07-08 10:25:51 GMT; 16s ago
  Docs: https://docs.docker.com
  Process: 1504 ExecStart=/usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock (code=exited, status=0/SUCCESS)
  Main PID: 1504 (code=exited, status=0/SUCCESS)

Jul 08 10:24:06 luna.eval.local dockerd[1504]: time="2022-07-08T10:24:06.030078367Z" level=info msg="Daemon has completed initialization"
Jul 08 10:24:06 luna.eval.local systemd[1]: Started Docker Application Container Engine.
Jul 08 10:24:06 luna.eval.local dockerd[1504]: time="2022-07-08T10:24:06.063116371Z" level=info msg="API listen on /var/run/docker.sock"
Jul 08 10:25:50 luna.eval.local dockerd[1504]: time="2022-07-08T10:25:50.869924347Z" level=info msg="Container failed to exit within 1m0s of signa...c16227d
Jul 08 10:25:51 luna.eval.local dockerd[1504]: time="2022-07-08T10:25:51.150624478Z" level=info msg="ignoring event" container=68ba5bfc8d4d77e105...kDelete
Jul 08 10:25:51 luna.eval.local systemd[1]: Stopping Docker Application Container Engine...
Jul 08 10:25:51 luna.eval.local dockerd[1504]: time="2022-07-08T10:25:51.233226958Z" level=info msg="Processing signal 'terminated'"
Jul 08 10:25:51 luna.eval.local dockerd[1504]: time="2022-07-08T10:25:51.23565699Z" level=info msg="stopping event stream following graceful shut...ace=moby
Jul 08 10:25:51 luna.eval.local dockerd[1504]: time="2022-07-08T10:25:51.235938325Z" level=info msg="Daemon shutdown complete"
Jul 08 10:25:51 luna.eval.local systemd[1]: Stopped Docker Application Container Engine.
Hint: Some lines were ellipsized, use -l to show in full.
admin@luna ~$
admin@luna ~$
admin@luna ~$ sudo systemctl start docker.service
admin@luna ~$
admin@luna ~$ sudo systemctl status docker.service
• docker.service - Docker Application Container Engine
  Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
  Active: active (running) since Fri 2022-07-08 10:26:20 GMT; 5s ago
  Docs: https://docs.docker.com
  Main PID: 23751 (dockerd)
  Tasks: 9
  Memory: 38.5M
  CGroup: /system.slice/docker.service
          └─23751 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Jul 08 10:26:19 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:19.924762658Z" level=info msg="Firewall: docker zone already exists, returning"
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.196396836Z" level=info msg="Firewall: interface docker0 already part of...turning"
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.230376175Z" level=info msg="Firewall: interface docker0 already part of...turning"
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.493648506Z" level=info msg="Default bridge (docker0) is assigned with an...address"
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.624649732Z" level=info msg="Firewall: interface docker0 already part of...turning"
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.756786974Z" level=info msg="Loading containers: done."
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.788817727Z" level=info msg="Docker daemon" commit=a89b842 graphdriver(s)...20.10.17
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.788937552Z" level=info msg="Daemon has completed initialization"
Jul 08 10:26:20 luna.eval.local systemd[1]: Started Docker Application Container Engine.
Jul 08 10:26:20 luna.eval.local dockerd[23751]: time="2022-07-08T10:26:20.818528789Z" level=info msg="API listen on /var/run/docker.sock"
Hint: Some lines were ellipsized, use -l to show in full.
admin@luna ~$

```

Schließlich gibt es noch den Befehl `docker` - hier seine Optionen:

```

admin@luna:~$
admin@luna:~$
admin@luna:~$ sudo docker --help
Usage: docker [OPTIONS] COMMAND

A self-sufficient runtime for containers

Options:
  --config string      Location of client config files (default "/root/.docker")
  -c, --context string Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker context use")
  -D, --debug          Enable debug mode
  -H, --host list      Daemon socket(s) to connect to
  -l, --log-level string Set the logging level ("debug"|"info"|"warn"|"error"|"fatal") (default "info")
  --tls               Use TLS; implied by --tlsverify
  --tlscacert string  Trust certs signed only by this CA (default "/root/.docker/ca.pem")
  --tlscert string    Path to TLS certificate file (default "/root/.docker/cert.pem")
  --tlskey string     Path to TLS key file (default "/root/.docker/key.pem")
  --tlsverify         Use TLS and verify the remote
  -v, --version       Print version information and quit

Management Commands:
  app*      Docker App (Docker Inc., v0.9.1-beta3)
  builder   Manage builds
  buildx*   Docker Buildx (Docker Inc., v0.8.2-docker)
  config    Manage Docker configs
  container Manage containers
  context   Manage contexts
  image     Manage images
  manifest  Manage Docker image manifests and manifest lists
  network   Manage networks
  node      Manage Swarm nodes
  plugin    Manage plugins
  scan*     Docker Scan (Docker Inc., v0.17.0)
  secret    Manage Docker secrets
  service   Manage services
  stack     Manage Docker stacks
  swarm     Manage Swarm
  system    Manage Docker
  trust     Manage trust on Docker images
  volume    Manage volumes

Commands:
  attach    Attach local standard input, output, and error streams to a running container
  build     Build an image from a Dockerfile
  commit    Create a new image from a container's changes
  cp        Copy files/folders between a container and the local filesystem
  
```

```

volume    Manage volumes

Commands:
  attach    Attach local standard input, output, and error streams to a running container
  build     Build an image from a Dockerfile
  commit    Create a new image from a container's changes
  cp        Copy files/folders between a container and the local filesystem
  create    Create a new container
  diff      Inspect changes to files or directories on a container's filesystem
  events    Get real time events from the server
  exec      Run a command in a running container
  export    Export a container's filesystem as a tar archive
  history   Show the history of an image
  images    List images
  import    Import the contents from a tarball to create a filesystem image
  info      Display system-wide information
  inspect   Return low-level information on Docker objects
  kill      Kill one or more running containers
  load      Load an image from a tar archive or STDIN
  login     Log in to a Docker registry
  logout    Log out from a Docker registry
  logs     Fetch the logs of a container
  pause    Pause all processes within one or more containers
  port     List port mappings or a specific mapping for the container
  ps       List containers
  pull     Pull an image or a repository from a registry
  push     Push an image or a repository to a registry
  rename    Rename a container
  restart   Restart one or more containers
  rm        Remove one or more containers
  rmi       Remove one or more images
  run       Run a command in a new container
  save     Save one or more images to a tar archive (streamed to STDOUT by default)
  search    Search the Docker Hub for images
  start     Start one or more stopped containers
  stats     Display a live stream of container(s) resource usage statistics
  stop     Stop one or more running containers
  tag       Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
  top      Display the running processes of a container
  unpause  Unpause all processes within one or more containers
  update    Update configuration of one or more containers
  version   Show the Docker version information
  wait     Block until one or more containers stop, then print their exit codes

Run 'docker COMMAND --help' for more information on a command.

admin@luna:~$

```