

# Troubleshoot a Docker Container when it is Unable to Access the Internet

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## Introduction

This document describes how to troubleshoot a docker container behind a proxy server when it is unable to access the Internet.

## Prerequisites

## Requirements

Cisco recommends that you have knowledge of these topics:

- Linux Interface
- Virtual Machine Environments

## Components Used

The information in this document is based on these software versions:

- CloudCenter version 4.x
- CloudCenter Orchestrator (CCO)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## Background Information

If your enterprise requires proxy to access to the Internet, you must configure the docker container.

## Problem

This is the procedure to reproduce the problem when the docker container is not able to reach the Internet.

When the root user tries to run the core\_installer.bin on the CCO:

```
[root@localhost tmp]# ./core_installer.bin centos7 vmware cco
```

This error will show up:

```
[root@localhost tmp]# ./core_installer.bin centos7 vmware cco
Verifying archive integrity... All good.
Uncompressing Core Installer V 4.5.2.....
.....
Installing Module: sysupdate
Installing Module: gateway
Installing Module: ntp
Installing Module: jdk8
Installing Module: tomcat8
Installing Module: gwtomcatapr
Installing Module: gwmongodb
Installing Module: docker
Failed in docker. Check /root/cliqr_modules.log for more info
[root@localhost tmp]#
```

## Solution

Step 1. Run the core\_installer.bin file with these arguments to create the core folder.

```
[root@localhost]# /core_installer.bin --noexec --keep
```

Step 2. Navigate to the core folder.

```
[root@localhost]# cd core
```

Step 3. From the core folder, run the setup.sh script to install docker.

```
[root@localhost core]# /setup.sh centos7 vmware docker
```

The script fails with this error "Failed in Docker".

Step 4. Modify the Dockerfile.

```
[root@localhost core]# vi docker/cliqr-container-worker/Dockerfile
```

Step 5. Add the proxy server info in the ENV section of the Dockerfile.

```
ENV JAVA_VERSION 1.7.0
ENV http_proxy http://proxy.company.com
ENV https_proxy https://proxy.company.com
```

**Note:** Replace proxy.company.com with the actual proxy server address.

Step 6. Create a systemd drop-in directory for the docker service.

```
[root@localhost core]# mkdir /etc/systemd/system/docker.service.d
```

Step 7. Create the docker http-proxy.conf file.

```
[root@localhost core]# vi /etc/systemd/system/docker.service.d/http-proxy.conf
```

## Step 8. Add the proxy server information.

```
[Service]
Environment="HTTP_PROXY=http://proxy.company.com"
Environment="HTTPS_PROXY=https://proxy.company.com"
Environment="NO_PROXY=localhost,127.0.0.1"
```

## Step 9. If you have internal Docker registries that you need to contact without proxying, add them in the NO\_PROXY environment variable:

```
Environment="HTTP_PROXY=http://proxy.company.com"
Environment="HTTPS_PROXY=https://proxy.company.com"
Environment="NO_PROXY=localhost,127.0.0.1,docker-registry.company.com"
```

**Note:** Replace proxy.company.com with the actual proxy server address.

## Step 10. Save the configuration file and reload the docker service.

```
[root@localhost]# systemctl daemon-reload
[root@localhost]# systemctl restart docker
```

## Step 11. Build worker to the latest image with the help of these commands.

```
[root@localhost]# cd /tmp/core/docker/cliqr-container-worker
[root@localhost cliqr-container-worker]# docker build -t 'cliqr/worker:latest' .
```

## Step 12. Restart the docker service.

```
[root@localhost]# systemctl restart docker
```

## Step 13. Test if the docker container is configured.

```
[root@localhost]# docker search coreos
NAME DESCRIPTION STARS OFFICIAL AUTOMATED
bhuisgen/docker-zabbix-coreos Zabbix agent for CoreOS server 11 [OK]
radial/coreos-pxe Spoke container for running dnsmasq as PXE... 7 [OK]
olalond3/coreos-bitcoind coreos bitcoind 4 [OK]
geowa4/coreos-toolbox Replace the default toolbox image on CoreO... 2 [OK]
million12/linode-coreos-api Deploy CoreOS on Linode. 2 [OK]
pablocouto/coreos-sshguard sshguard for CoreOS 1 [OK]
christianbladesch/newrelic-coreos Run newrelic's sysmond in a container on C... 1 [OK]
allen13/coreos-ansible-toolbox Control CoreOS boxes with ansible using a ... 1 [OK]
shift/coreos-ubuntu-etcd 1 [OK]
majidaldoiongithub/coreos-nvidia run privileged to install nvidia and cuda ... 0 [OK]
skopciewski/coreos-pypy Wrapper for installing pypy on coreos server 0 [OK]
yummyly/consul-coreos Consul using etcd on CoreOS for bootstrap.... 0 [OK]
shift/coreos-ubuntu-confd 0 [OK]
jwaldrip/vault-coreos Vault for CoreOS 0 [OK]
zumbrunnen/coreos-gce Google Cloud SDK for CoreOS. Useful for dy... 0 [OK]
cheungpat/coreos-toolbox CoreOS toolbox based on alpine linux 0 [OK]
bretif/coreos-marathon Launch bootstrap script to create mesos/ma... 0 [OK]
openai/coreos-bootstrap Tools for bootstrapping a coreos node. 0 [OK]
docku/pxe-coreos 0 [OK]
kciepluc/coreos-ipxe container with dnsmasq / ipxe environment ... 0 [OK]
kciepluc/coreos-ipxeweb Webserver for bootstrapping CoreOS through... 0 [OK]
evergreenitco/fluentd-kubernetes-coreos-secure Fluentd capture logs containers on Kuberne... 0 [OK]
steigr/coreos CoreOS in Docker 0 [OK]
brandfolder/vault-coreos Vault for CoreOS with an etcd backend. 0 [OK]
kciepluc/coreos-toolbox custom toolbox container for CoreOS 0 [OK]
[root@localhost yum]#
```

Once the docker container is configured, you will need to continue the installation from core\_installer.bin (if you are installing CCO).

Step 14. Modify the cliqr\_modules.conf.

```
[root@localhost core]# vi /etc/cliqr_modules.conf
```

Step 15. Add docker at the end of the file. This tells the core\_installer.bin that docker is installed.

```
sysupdate
gateway
ntp
jdk8
tomcat8
gwtomcatapr
gwmongodb
docker
```

Step 16. Re-run the core\_installer.bin to complete the installation.

```
[root@localhost tmp]# ./core_installer.bin centos7 vmware cco
Verifying archive integrity... All good.
Uncompressing Core Installer V
4.8.0.1.....
.....
.....
.....
Installing Module: sysupdate
Module already installed: sysupdate
Installing Module: gateway
Module already installed: gateway
Installing Module: ntp
Module already installed: ntp
Installing Module: jdk8
Module already installed: jdk8
Installing Module: tomcat8
Module already installed: tomcat8
Installing Module: gwtomcatapr
Module already installed: gwtomcatapr
Installing Module: gwmongodb
Module already installed: gwmongodb
Installing Module: docker
Module already installed: docker
Installing Module: usermod
Installing Module: security
[root@localhost tmp]
```