

如何将FND OVA Docker容器升级到更新版本？

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简介

本文档介绍如何将Field Network Director(FND)Open Virtualization Appliance(OVA)docker容器升级到更新版本。

将FND OVA分发与PostgreSQL配合使用时，FND和Fog Director实例在Docker容器中运行。容器映像不包含存储在主机本身并与容器共享的永久信息。

问题

缺少用于升级FND/Fog Director容器的文档和分步指南。

解决方案

以下是升级容器的步骤。

先决条件

- 确保OVA部署的计算机是基于PostgreSQL的FND OVA部署。
从CLI运行以下命令：

```
[root@iot-fnd ~]# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
7c32830fa5d9 fogd-image:active "/bin/sh -c '/var/ci..." 5 months ago Up 18 hours fogd-
container
5251f66ef0cc fnd-image:active "/bin/sh -c /opt/fnd..." 5 months ago Up 18 hours 0.0.0.0:80-
>80/tcp, 0.0.0.0:162->162/udp, 0.0.0.0:443->443/tcp, 0.0.0.0:9120-9121->9120-9121/tcp,
0.0.0.0:5683->5683/udp, 0.0.0.0:61624-61626->61624-61626/udp, 0.0.0.0:9124-9125->9124-
9125/tcp, 0.0.0.0:61628->61628/udp fnd-container
```

如上输出所示，两个容器正在使用fogd和fnd映像运行，这确认您有正确的OVA部署来使用此升级路径。

- 确保计算机具有互联网访问权限且已配置DNS。
为了测试此项，请对公共主机名执行ping操作。

```
[root@iot-fnd ~]# ping cisco.com -c1
PING cisco.com (72.163.4.161) 56(84) bytes of data.
64 bytes from www1.cisco.com (72.163.4.161): icmp_seq=1 ttl=239 time=152 ms
--- cisco.com ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 152.709/152.709/152.709/0.000 ms
```

如果此操作失败，很可能/etc/resolv.conf中未配置DNS。

- 如果需要代理来允许HTTPS流量（如思科实验），可将其添加到以下文件：

```
[root@iot-fnd ~]# vi /etc/systemd/system/docker.service.d/http-proxy.conf
You have mail in /var/spool/mail/root
[root@iot-fnd ~]# cat /etc/systemd/system/docker.service.d/http-proxy.conf
[Service]
Environment="HTTPS_PROXY=http://proxy.esl.cisco.com:80"
```

添加此配置后，请刷新systemd-services并重新启动Docker:

```
[root@iot-fnd ~]# systemctl daemon-reload
[root@iot-fnd ~]# systemctl restart docker
```

查找版本映像标签

要选择要升级到的版本，最简单的方法是检查FND的CCO下载页

: <https://software.cisco.com/download/home/286287993/type/286320249/>

Software Download

Downloads Home / Cloud and Systems Management / IoT Management and Automation / IoT Field Network Director / Field Network Director for Virtual Machine Installation- 4.7.0

File Information	Release Date	Size
This OVA includes Postgres / Influx for gateway management (IR8xx, IR1101, IC3K) use case. CISCO-IOTFND-VPI-K9-4.7.0-101.zip	17-Nov-2020	4462.78 MB
This OVA includes Postgres / Influx for gateway management (IR8xx, IR1101, IC3K) use case. CISCO-IOTFND-VPI-K9-UPGRADE-SCRIPTS-4.7.0-101.zip	17-Nov-2020	90.43 MB

如您所见，文件名包含版本号。

例如，对于写入时的最新文件CISCO-IOTFND-VPI-K9-4.7.0-101.zip，版本号为：4.7.0-101

这是下一步需要提供的映像标签。

执行升级

要升级，在满足先决条件后，您只需在以下位置运行该脚本：`/opt/fnd/scripts/upgrade.sh`

运行脚本时，首先选择选项1)加载容器映像

作为devhub-docker.cisco.com的凭据，您可以使用以下：

username : fnd-upgrade.gen

密码 (令牌

) : AKCp5fUYZxwj7geWcaEbyKShGtyNxzA3ijWzzXdhuWY7GoR5RVYru2zcAta81fcV4Jndbjq31

作为映像标签，请使用前面介绍的版本号 (例如4.7.0-101)。

下载映像后，使用选项2)容器重新加载加载映像

示例输出：

```
[root@iot-fnd ~]# /opt/fnd/scripts/upgrade.sh
This script must be run with root privileges.
Usage: Load container images: No resource required
For container reload: No resource required

1) Load container images
2) Container reload
3) Quit
Enter your choice: 1
Do you want to download docker image from registry (y/n)?y
Enter docker registry [devhub-docker.cisco.com]:

For FND Docker image upgrade you will need access to Cisco CCO docker registry.

Username: fnd-upgrade.gen
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
Enter docker image tag: 4.7.0-101
Downloading FND docker image...
4.7.0-101: Pulling from field-network-director-docker/fnd-image
f34b00c7da20: Already exists
9c542cd3c18f: Pull complete
b0929d67d1de: Pull complete
e82d75ddb5ee: Pull complete
95df7d16861d: Pull complete
184d612a5ba6: Pull complete
90d6558240a2: Pull complete
81a31ac85436: Pull complete
Digest: sha256:b7ef566386d318a2e186350077970a9b4f0019d455521c053cdd75c139f5627c
Status: Downloaded newer image for devhub-docker.cisco.com/field-network-director-docker/fnd-
image:4.7.0-101
Downloading Fog Director docker image...
4.7.0-101: Pulling from fog-director-docker/fogd-image
ed6e0ec6b337: Pull complete
2c42dd52f029: Pull complete
6b4fd7880141: Pull complete
7d56b7ff004c: Pull complete
c719de3d527a: Pull complete
ccca86184ecc: Pull complete
```

```
b45dc2906bcc: Pull complete
e4f23b432923: Pull complete
Digest: sha256:39f3a30c63a06f0909337ffb9fa503d642e6c567343a04edb8f58b3a6962eced
Status: Downloaded newer image for devhub-docker.cisco.com/fog-director-docker/fogd-image:4.7.0-101
```

```
1) Load container images
2) Container reload
3) Quit
Enter your choice: 2
Stopping FND container...
fnd-container
Remove FND container...
fnd-container
Prune Docker container...
Starting FND container...
75c7d97e775d6345114ad940652ff80cbaf5dabbbf9e23e549202d6fe5e96b11
Stopping Fog Director container...
fogd-container
Remove Fog Director container...
fogd-container
Prune Docker container...
Starting Fog Director container...
1ca848a1b14155c8358eb0ff70fc7b0a55810743c531c4770f6e471e343f91ad
```

```
1) Load container images
2) Container reload
3) Quit
Enter your choice: 3
```

完成后，您可以使用以下命令检查升级是否成功：

```
[root@iot-fnd ~]# docker exec -it fnd-container cat /opt/cgms/bin/version
4.7.0-101
```