

Quick Start Guide

This guide helps you get started with DataPower Gateway Virtual Edition on Docker.

Product overview

A Dockerfile and two installation package files are required for a Docker container. Packages for Ubuntu are Debian files, and packages for Red Hat Enterprise Linux (RHEL) are RPM files. The nonproduction and developers edition are for test and development purposes only.

A Dockerfile must be in the directory where the Docker image is built. Sample Dockerfile content is available in this document. To make a functional Dockerfile, you can copy the provided sample content into a file named Dockerfile without a file extension.

1 Step 1: Access the software



Download your package from IBM® Passport Advantage® (PPA). Packages include the following components:

- The Debian and RPM packages for the DataPower® Gateway on Docker.
 - xxx.common_xxx.deb (or .rpm)
 - xxx.image_xxx.deb (or .rpm)
- This PDF document that contains installation instructions and sample Dockerfile content.
- The Resource Kit.

2 Step 2: Configuration



To run the DataPower Gateway in Docker, certain resource requirements must be met.

- The operating system is running a supported version of Docker engine.
- There are at least two unused loop mount devices available to each DataPower Gateway running on the host.
- One extra loop mount device must be available if you configure a file to use for DataPower RAID functions.
- 5 GiB of free storage must be available.
- Two virtual processors (vCPU) and 4 GB RAM is the absolute minimum for each running instance.

By default, a DataPower Gateway container instance uses all available CPUs and memory on the host system. To restrict resource usage by the container, specify **DataPowerCpuCount** and **DataPowerMemoryLimit** in the installation `opt/ibm/datapower/datapower.conf` file. The sample Dockerfile content shows how to set these options when the image is built.

3 Step 3: Build the Docker image



1. Place your Dockerfile, the common file, and the image file into a directory such as `~/datapower-docker/`.
2. Rename the image files to `ibm-datapower-common.deb` (or `.rpm`) and `ibm-datapower-image.deb` (or `.rpm`).
3. Run the command. Notice that the trailing period is part of the command.

```
docker build -t ibm-datapower-factory .
```

4 Step 4: Create a Docker container



Provide the Docker container with the name `datapower`, run it with elevated privileges, and open port 9090 when you enter the command.

```
docker run -d --name datapower --privileged -p 9090:9090 ibm-datapower-factory
```

Note: The running container needs to have the license accepted and initial questions answered when you log in to the GUI at `https://Docker_IP:9090` with user name `admin` and password `admin`.

Sample Dockerfile content



Content for an Ubuntu-based Docker image

```
FROM ubuntu:trusty
COPY ibm-datapower-common.deb ibm-datapower-image.deb /tmp/
ENV DEBIAN_FRONTEND noninteractive
RUN \
  && apt-get update \
  && apt-get -y install \
    kpartx \
    schroot \
    telnet \
  && dpkg -i /tmp/ibm-datapower-common.deb /tmp/ibm-datapower-image.deb \
  && sed -i \
    -e '/^web-mgmt/,/^exit/s/admin-state.*/admin-state "enabled"/g' \
    /opt/ibm/datapower/datapower-external.cfg \
  && rm /tmp/ibm-datapower-common.deb /tmp/ibm-datapower-image.deb \
  && /opt/ibm/datapower/datapower-docker-build.sh \
  && mkdir -p /datapower/config /datapower/local \
  && echo "DataPowerConfigDir=/datapower/config" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerLocalDir=/datapower/local" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerCpuCount=4" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerMemoryLimit=8000" >> /opt/ibm/datapower/datapower.conf
EXPOSE 9090
CMD ["/opt/ibm/datapower/datapower-launch"]
```

Content for an RHEL-based Docker image

```
FROM rhel7.2
COPY ibm-datapower-common.rpm ibm-datapower-image.rpm /tmp/
RUN \
  && yum -y update \
  && yum -y install ftp://ftp.muug.mb.ca/mirror/fedora/epel/7/x86_64/s/schroot-1.6.5-5.e17.x86_64.rpm \
  && yum -y install \
    kpartx \
    telnet \
  && yum -y install /tmp/ibm-datapower-image.rpm \
  && yum -y install /tmp/ibm-datapower-common.rpm \
  && sed -i \
    -e '/^web-mgmt/,/^exit/s/admin-state.*/admin-state "enabled"/g' \
    /opt/ibm/datapower/datapower-external.cfg \
  && rm /tmp/ibm-datapower-common.rpm /tmp/ibm-datapower-image.rpm \
  && /opt/ibm/datapower/datapower-docker-build.sh \
  && mkdir -p /datapower/config /datapower/local \
  && echo "DataPowerConfigDir=/datapower/config" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerLocalDir=/datapower/local" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerCpuCount=4" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerCpuCount=4" >> /opt/ibm/datapower/datapower.conf \
  && echo "DataPowerMemoryLimit=8000" >> /opt/ibm/datapower/datapower.conf
EXPOSE 9090
CMD ["/opt/ibm/datapower/datapower-launch"]
```

For more information, see the IBM DataPower Gateway documentation in IBM Knowledge Center at <http://ibm.com/support/knowledgecenter/SS9H2Y>.

To access code examples or to communicate and interact with the developer community, see the IBM DataPower GitHub community at <https://github.com/ibm-datapower>

