Running DerbyNet as a Docker Image

Preliminary

Running a DerbyNet Docker image on Your Laptop or Desktop

As an alternative to natively installing DerbyNet on a Windows or Mac machine, you can instead run DerbyNet as a docker container. Docker is a technology for isolating an application in a self-contained bundle. For an application like DerbyNet, built around a web server, docker technology is a good fit, and can be significantly easier to use than the native web server. There are just these steps:

1. From your Windows or Mac machine, visit https://www.docker.com/get-started to download and install the Docker Desktop application. (You can sign up or not for a Docker Hub account; you don't need one for our purposes.)

2. Start the DerbyNet server with one of the following methods:

   ◦ On **Windows**, open a CMD window and enter the following commands:

   a) Identify or create a directory in which to store data. Any directory will do; we'll use 'path\to\derbynet':

   ```
   mkdir path\to\derbynet\data
   ```

   b) Start the docker image:

   ```
   docker run -d -p 80:80 -p 443:443 \
        -v path\to\derbynet\data:/var/lib/derbynet \
        -v /etc/localtime:/etc/localtime:ro \
        jeffpiazza/derbynet_server
   ```

   ◦ On **macOS,** open Terminal, and enter the following commands:

   a) If Apache web server is running, it needs to be stopped so as not to compete for ports 80 and 443:

   ```
   sudo apachectl graceful-stop
   ```

   b) If necessary, create a directory in which to store data:

   ```
   mkdir ~/Public/DerbyNet
   ```

   c) Start the docker image:

   ```
   docker run -d -p 80:80 -p 443:443 \
        -v ~/Public/DerbyNet:/var/lib/derbynet \
        -v /etc/localtime:/etc/localtime:ro \
        jeffpiazza/derbynet_server
   ```

3. To stop the DerbyNet server, open the Docker Desktop application, find the running container, and delete it. Alternatively, you can use this command from the command line:

```
docker stop `docker ps --filter ancestor=derbynet_server --
format "{{.ID}}"`
```

Deploying Docker Container With An Existing Web Site

If your organization already has a web site and you wish to use a docker image to add DerbyNet access as part of that web site, follow these steps:

1. Run the docker container so that the container port 80 is exposed only on local loopback interface, on port 8000, for example:

```
mkdir /var/lib/derbynet
docker run -p 127.0.0.1:8000:80 \
     -v /var/lib/derbynet:/var/lib/derbynet \
     -v /etc/localtime:/etc/localtime:ro \
     jeffpiazza/derbynet_server
```

It's not necessary or useful to expose the container's port 443 in this configuration.

2. Configure your web server to forward DerbyNet requests to the container port. Here's an (untested) nginx example:

```
location /my-derbynet {
    proxy_pass  http://127.0.0.1:8000/;
}
```

Acknowledgement

Kudos to Mitchell Riley for breaking ground on a DerbyNet server docker image!

(https://hub.docker.com/u/mitchellriley)