Ballerina can be used for cloud deployment of various network applications

Prerequisites:

1. Docker Desktop (Windows)
2. Docker compose (Linux)
3. Docker (Linux)
4. Ballerina (support for Mac, Windows and Linux distros)

Setup:

1. If using windows, any container can work i.e. Windows/ Linux, make sure that in Docker settings the setting “Expose daemon on tcp://localhost:2375 without TLS” is checked. This ensures the http is connectable.
2. Open any coding environment, preferable *VS code,* and type in the following code:
   1. import ballerina/http;
   2. import ballerina/log;
   3. import ballerina/docker; //importing docker for connection
   4. @docker:Expose {}
   5. listener http:Listener helloWorldEP = new(9090);
   6. @docker:Config {
   7. name: "helloworld",
   8. tag: "v1.0"
   9. }
   10. @http:ServiceConfig {
   11. basePath: "/helloWorld"
   12. }
   13. service helloWorld on helloWorldEP {
   14. resource function sayHello(http:Caller outboundEP, http:Request request) {
   15. http:Response response = new;
   16. response.setTextPayload("Hello World from Docker ! \n");
   17. var responseResult = outboundEP->respond(response);
   18. if (responseResult is error) {
   19. error err = responseResult;
   20. log:printError("Error sending response", err);
   21. }
   22. }
   23. }

Lines 6-9 provide us the config for docker container setup, mainly including name and version of the docker container.

Line 11 provides the base URL which will be connected

Line 13 onwards, we can define functions which act as URL extensions, for example, sayHello can be called in browser via the URL *“/helloWorld/sayHello”.*

Line 16 has an inbuild response function which sets the message to be sent when the URL for sayHello is called via curl or browser.

1. Save the file with an extension *“.bal”*; e.g. Helloworld.bal
2. While docker is running, open terminal and type “ballerina build <filename>.bal”
3. To run the image on port 9090, type in terminal “docker run -d -p 9090:9090 <name>:<tag>”, where name and tag are same as in docker config on line 7-8.
4. After completion, to check if image is created, type “docker images”
5. If its running, go to the following page in browser if on Windows/Linux: <http://localhost:9090/helloWorld/sayHello>

If on Linux, you can use curl too, type in “curl <http://localhost:9090/helloWorld/sayHello>”

Known Issues:

* While installing docker desktop, make sure virtualization is enabled in BIOS.
* While installing ballerina, give it access to network when it is asked, else connection to docker will fail.