GameSpeak Server (10 marks)

GameSpeak is a virtual audio chat application (i.e. audio only, no video) that can be customized to meet participant's needs. The goal of this project is to automate the creation of a Docker image that contains the TeamSpeak application and bill users based on the container's running time. Objectives:

1. Create a Docker image that contains the TeamSpeak applications and whatever support libraries TeamSpeak requires. Do not use an existing TeamSpeak image from Docker Hub.
2. Create an automated method that spins up a unique TeamSpeak container given (a) a server name, (b) an unused host port for voice communications and (c) a user's email address.
3. Bonus Option: Automate the billing process based on the running time of each user's TeamSpeak container.

Your project must include the DockerFile to build the TeamSpeak container and all scripts to create/deploy containers and bill users for their usage.

Configurable Container Deployment (10 Marks)

In this project you will offer users an opportunity to create Docker image based on the options they select. Users will be presented with a web screen that includes a number of optional modules. Example modules: nginx, php, mysql, python, apache, perl, bash, java, Wordpress, busybox, hadoop, netstats, Vyos, DHCP, DNS, nmap, etc…

When the user has made their selections via a web page, allow them to click a "submit" button. This will trigger an automated build of their selected image. An automated build could be performed by creating a DockerFile based on the selected modules, then executing the Docker build command.

Some things to consider:

1. Keep the web page that handles image configuration simple. If web design is not your thing, consider using a bash, perl or php script from the command line instead.
2. Save built images on a local repository. Each created image should have a unique name and a way for users to access them.

Windows Containers (10 Marks)

Deploy the voting application from “Intro To Docker 2” to a Windows container environment. Deploy one container per service.

Docker Secrets (5 Marks)

Investigate Docker Secrets. Find an application for Docker Secrets amongst the labs for this course. Submit a short description of Docker Secrets and how you used them to eLearn. Demonstrate your implementation to your instructor.