CSCi363 Course project

Cloud management system.

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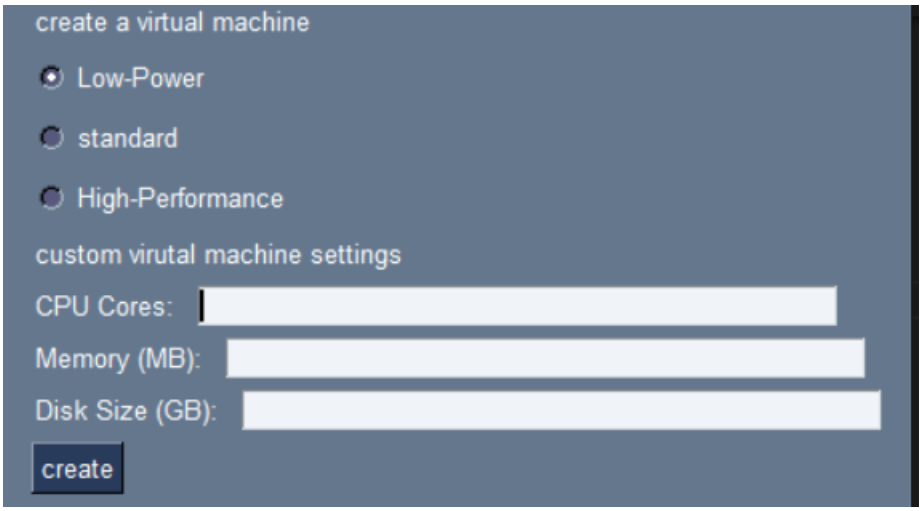
Cloud Management System User Guide

Creating Virtual Machines (VMs)



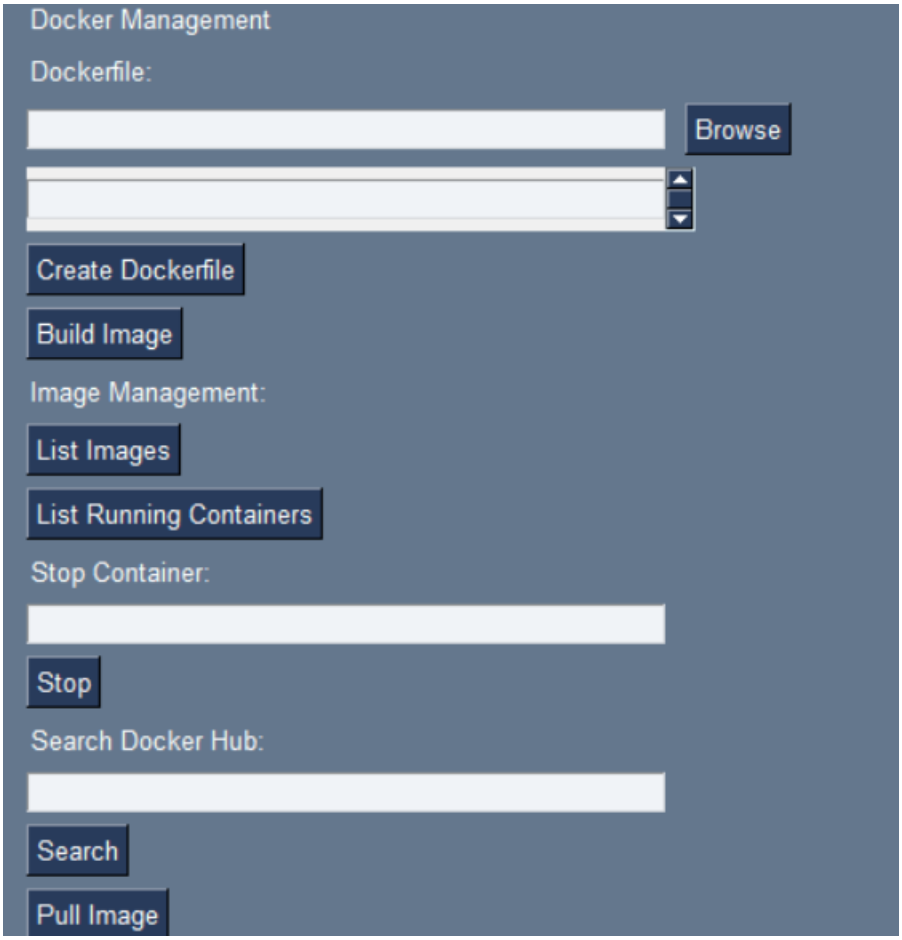
VMs allow you to run virtual computers on your system.

1. Under the **"create a virtual machine"** section, choose one of the predefined options:
    - **Low-Power:** Ideal for basic tasks with lower resource requirements.
    - **Standard:** Suitable for everyday tasks with a balanced resource allocation.

- **High-Performance:** Designed for demanding tasks requiring more CPU, memory, and disk space.

2. If you want a custom VM configuration, leave the radio buttons unselected and enter the desired values in the following fields:
    - **CPU Cores:** Number of virtual CPU cores for the VM.
    - **Memory (MB):** Amount of memory (in Megabytes) allocated to the VM.
    - **Disk Size (GB):** Storage space (in Gigabytes) allocated to the VM's hard drive.
3. Once you've chosen your VM configuration, click the **"Create"** button.

Docker Management



Docker allows you to package and run applications in containers.

Creating Dockerfiles

A Dockerfile defines how to build a Docker image.

4. Click the **"Dockerfile:"** text box and choose a location to save your Dockerfile using the **"Browse"** button.

5. In the large **"Dockerfile content"** box, type the instructions for building your Docker image. You might need some knowledge of Dockerfile syntax for this.
6. Click the **"Create Dockerfile"** button to save your Dockerfile.

Building Docker Images

7. Make sure you have a Dockerfile created (see previous section).
8. Click the **"Build Image"** button.
9. A pop-up window will ask you to enter a name for your Docker image. Type a desired name and press **"OK"**.
10. The program will build the image and notify you upon successful completion.

Managing Docker Images and Containers

- **List Images:** Click the **"List Images"** button to see a list of all available Docker images on your system.
- **List Running Containers:** Click the **"List Running Containers"** button to see a list of containers currently running on your system.
- **Stop Container:**
    a. Find the ID of the container you want to stop in the list from the previous step.
    b. Enter the container ID in the **"Container ID:"** text box.
    c. Click the **"Stop"** button.
- **Search Docker Hub:**
    d. Docker Hub is a library of public Docker images.
    e. Enter a search term for the desired image in the **"Search Docker Hub:"** text box.
    f. Click the **"Search"** button to see if the image is available on Docker Hub.
- **Pull Image:**
    g. Docker Hub allows you to download images to your system.
    h. Click the **"Pull Image"** button.
    i. A pop-up window will ask you for the image name you want to pull. Enter the name and press **"OK"**.
    j. The program will download the image from Docker Hub if available.

Exiting the Program

Click the **"Exit"** button in the bottom right corner to close the program.