

My Docker Infrastructure

Portainer Web Interface

During the Initial Days of the setup when I was in Grade 9, I tended to use the Docker Command Line Interface on Ubuntu (Server Edition, no GUI). My strategy was simple, On servers not having docker, execute `sudo apt install docker docker-compose -y` and then (for uniformity) keep all docker (if only a container) and docker-compose (if container with dependent containers) files at `/opt/project-name`. Write the `docker-compose.yml` file and hit enter on `sudo docker-compose up -d` and obviously use `docker -it` to use the docker shell.

Anyhow, lot of intro. Now, this process started becoming real tedious when the number of containers became more than 10. Every time for checking volumes, docker internal network interfaces, running containers, etc. I had to `ssh` and use the `docker` command. The came my superhero Portainer. I setup portainer on my main server `inside.atheesh.org` by using Docker CLI for the last time. And then,

portainer.io

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portainer.io 2.14.0

Stacks list

Stacks Columns Settings

Remove Add stack

Search...

Name	Type	Control	Ownership
<input type="checkbox"/> bookstack-wiki	Compose	Total	administrators
<input type="checkbox"/> commonpool-database	Compose	Total	administrators
<input type="checkbox"/> duplicati	Compose	Total	administrators
<input type="checkbox"/> flaresolverr	Compose	Total	administrators
<input type="checkbox"/> grafana-monitoring	Compose	Total	administrators
<input type="checkbox"/> homer	Compose	Total	administrators
<input type="checkbox"/> jellyfin-media-server	Compose	Total	administrators
<input type="checkbox"/> mongodb-pool	Compose	Total	administrators
<input type="checkbox"/> nextcloud-stack	Compose	Total	administrators
<input type="checkbox"/> onlyoffice	Compose	Total	administrators
<input type="checkbox"/> openproject	Compose	Total	administrators
<input type="checkbox"/> pihole-dns	Compose	Total	administrators
<input type="checkbox"/> prometheus	Compose	Total	administrators
<input type="checkbox"/> rocket-chat	Compose	Total	administrators
<input type="checkbox"/> statuspage Inactive	Compose	Total	administrators
<input type="checkbox"/> vaultwarden	Compose	Total	administrators
<input type="checkbox"/> wordpress	Compose	Total	administrators

Items per page 100

Portainer Image attached for Reference.

Portainer is a **Universal Container Management System**. It helps you configure, monitor and secure containers across Docker, Kubernetes, Swarm and Nomad environments.

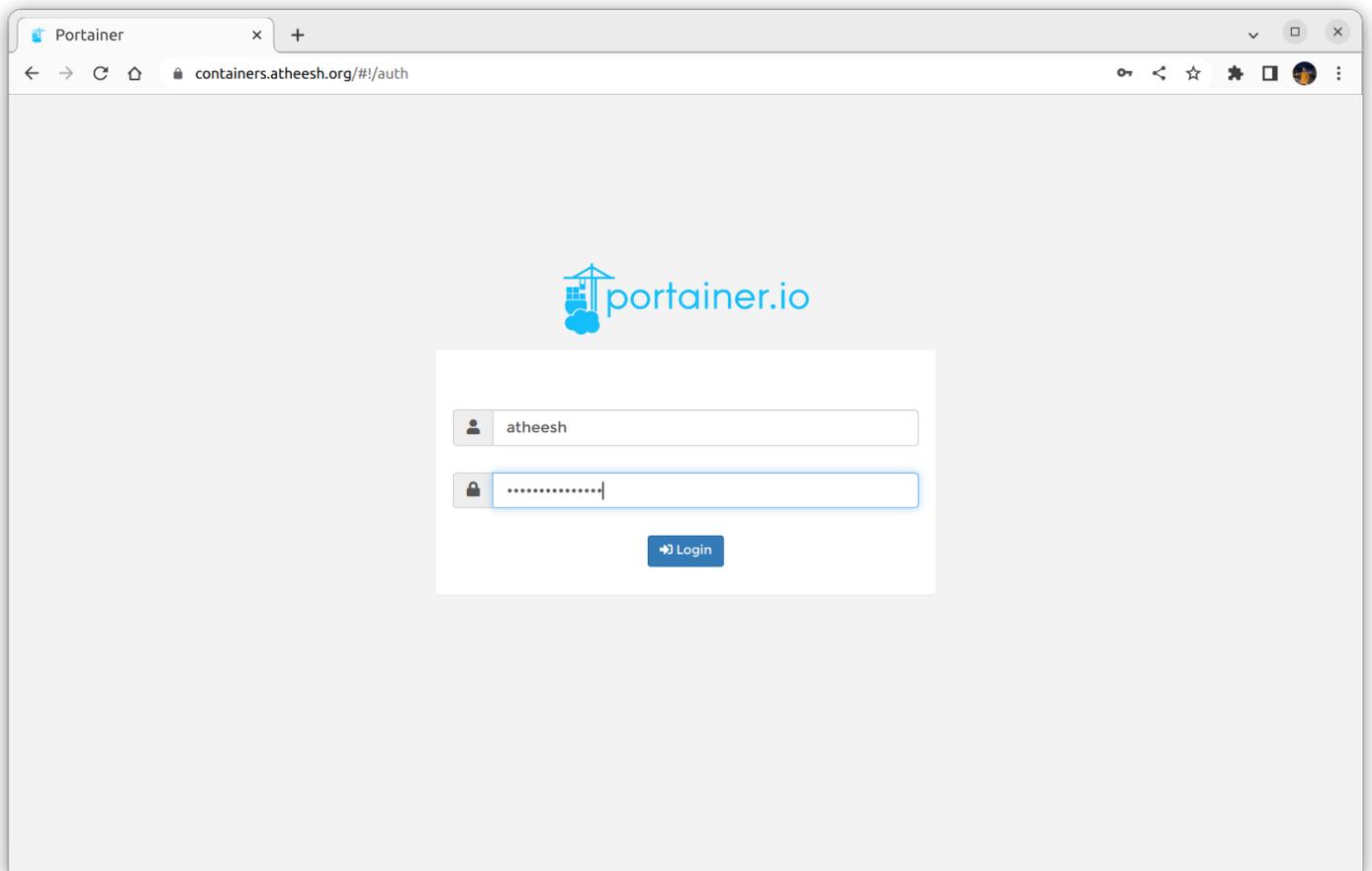
Source: <https://www.portainer.io/>

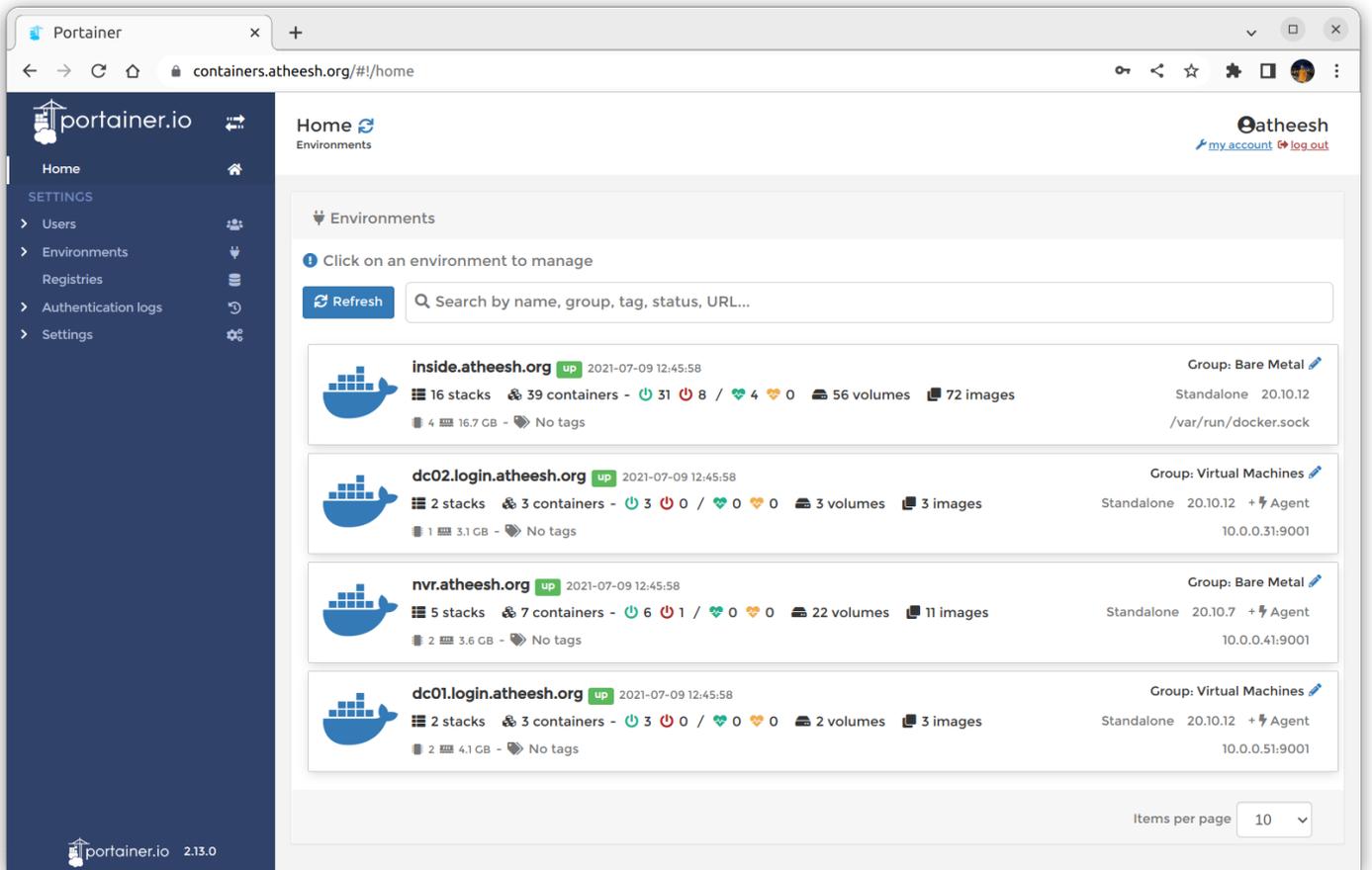
Portainer Agent

Hosting a Portainer Instance for every docker server became really tedious. Every time, i had to keep track of the containers and in which server are they running. To access a container, I either had to visit `containers.atheesh.org` or `containers.security.atheesh.org` or `containers.dc01.login.atheesh.org` or `containers.dc02.login.atheesh.org`.

Again Portainer to the Rescue. It has a feature named Portainer Agent which is a wrapper around the Official Docker API and claims to fix certain limitations of the Docker API. I deployed Portainer Agent on all the other servers using `docker run -d -p 9001:9001 --name portainer_agent --restart=always -v /var/run/docker.sock:/var/run/docker.sock -v /var/lib/docker/volumes:/var/lib/docker/volumes portainer/agent:2.9.3` and added all the other servers to the panel at `inside.atheesh.org` as in the Screenshots section.

Screenshots





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