

# GRACE HOPPER

CELEBRATION OF WOMEN IN COMPUTING

## Docker 101: Run Your First Docker Container Today

**Carolyn Van Slyck**

Rackspace

me@carolynvanslyck.com

847-271-8662

**Anne Gentle**

Cisco

annegentle@justwroteclick.com

512-535-1044

**Sara Safavi**

Rackspace

sara@sarasafavi.com

512-693-7272

### ABSTRACT

Docker helps you package an application with its dependencies, develop and deploy it anywhere. Learn about this up-and-coming technology and why you would want to use it.

Suitable for beginners and seasoned developers, we'll cover the fundamentals you need to understand Docker and then jump right into working with Docker containers.

This is an interactive workshop, so bring your laptop.

### AUDIENCE

This workshop is targeted towards anyone who is new to Docker and is appropriate for software developers of all skill levels. There is no limitation on the workshop size. Participants are required to bring a laptop.

### WORKSHOP FORMAT

Before the workshop begins, we ask that participants create a free Carina account and use it to log into howtowhale.com, in preparation for the interactive portion of the workshop.

First we will introduce Docker, and the concepts behind containers, ensuring that everyone is on the same page. No assumptions are made about prior experience with containers or any particular technology. The rest of the workshop, participants will use an online interactive programming environment, [howtowhale.com](http://howtowhale.com), to run Docker containers directly from their web browser.

### OUTLINE

#### What is Docker (20 minutes)

- Level set everyone's understanding of what a typical software deployment looks like today, without Docker.
- Review the evolution of isolating the application from the server on which it runs.
- Introduce Docker as the latest step in that evolution.
- Touch upon the technology that makes it tick at a high level.
- Discuss why Docker is worth learning and what you can do with it.

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### Interactive Walkthrough of Docker (30 minutes)

- Cover the basic Docker commands and deploy a demo application.
- Customize the application.
- Show how to store data with data volume containers.
- Log into the running container, poke around and learn how to troubleshoot.
- Connect two containers with a network so that they can communicate.
- Create a personal profile page for Grace Hopper incorporating everything learned so far.

### Wrap-up (10 minutes)

- Q & A
- Link to additional tutorials with more things to try out with Docker.

## OUTCOMES

The key takeaway from this workshop is an understanding of what Docker is, and when you may want to use it. Participants will gain real experience working with containers and leave with ideas for how they can use Docker, whether just for fun, a side-project, or in the workplace.

The workshop materials and user accounts will be available after the workshop. Participants can review what they created and use the platform to continue learning Docker with the additional tutorials linked to at the end of the workshop.

## PARTICIPATION STATEMENT

All facilitators will attend GHC if selected.

## BIO

Carolyn is a software developer from Chicago, though one day she hopes to escape to the Pacific Northwest in search of faster internet, free-range kittens and respite from snow blowers. She loves all things automation, developer tools and enjoys helping others learn new technologies. She develops tools for OpenStack and Docker, such as the Docker Version Manager, and writes Docker tutorials to get people started working with Docker and Carina, Rackspace's Container as a Service platform. Inspired by her experiences teaching Docker, she created [howtowhale.com](http://howtowhale.com), where you can learn Docker in your web browser.

Anne Gentle advocates for end-users consuming infrastructure systems such as OpenStack and cloud solutions including containers. Anne worked on the Carina project at Rackspace, providing tutorials for consuming the Docker Swarm system managed on Rackspace infrastructure. She is responsible for ensuring the [developer.openstack.org](http://developer.openstack.org) site contains relevant and accurate documentation for 20 projects written in Python across 130 git repositories. Anne shares her experiences often, and at last year's GHC she gave presentations about using GitHub for open source documentation as well as a lightning talk about open source solutions to health data using fitness and medical data sensors such as a continuous glucose monitor.

Sara Safavi is a software engineer living in Austin, TX. Outside of her work, Sara is a leader in the Austin tech community, and is a strong advocate for community as an integral part of professional

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education and growth. She is deeply passionate about promoting the idea that computer programming is something that should be fundamentally accessible to all interested people. In her work as a speaker and instructor, Sara works to slay the dragons – from impostor syndrome to gender bias, and beyond – that contribute to obstacles and limitations many women face.