



# From Curiosity to Cloud:

# A Hands-On Python Workshop with Linda Lee



**Story Time:**

**How I Got Involved  
With Defang**

# Workshop Agenda

- **Deployment** Basics
- **Intro** to Defang
- **Activity:** Deployment with Defang
  - Create a Python LLM Application
  - Run It Locally (Optional)
  - Deploy to the Cloud with Defang

# Activity Pre-requisites

## **GitHub Account**

For authentication with Defang

## **IDE of your choice (Optional)**

E.g. VS Code, Windsurf, Cursor, etc.

## **Docker Desktop (Optional)**

[docs.docker.com/get-started/get-docker/](https://docs.docker.com/get-started/get-docker/)



# Deployment Basics

# What is deployment?

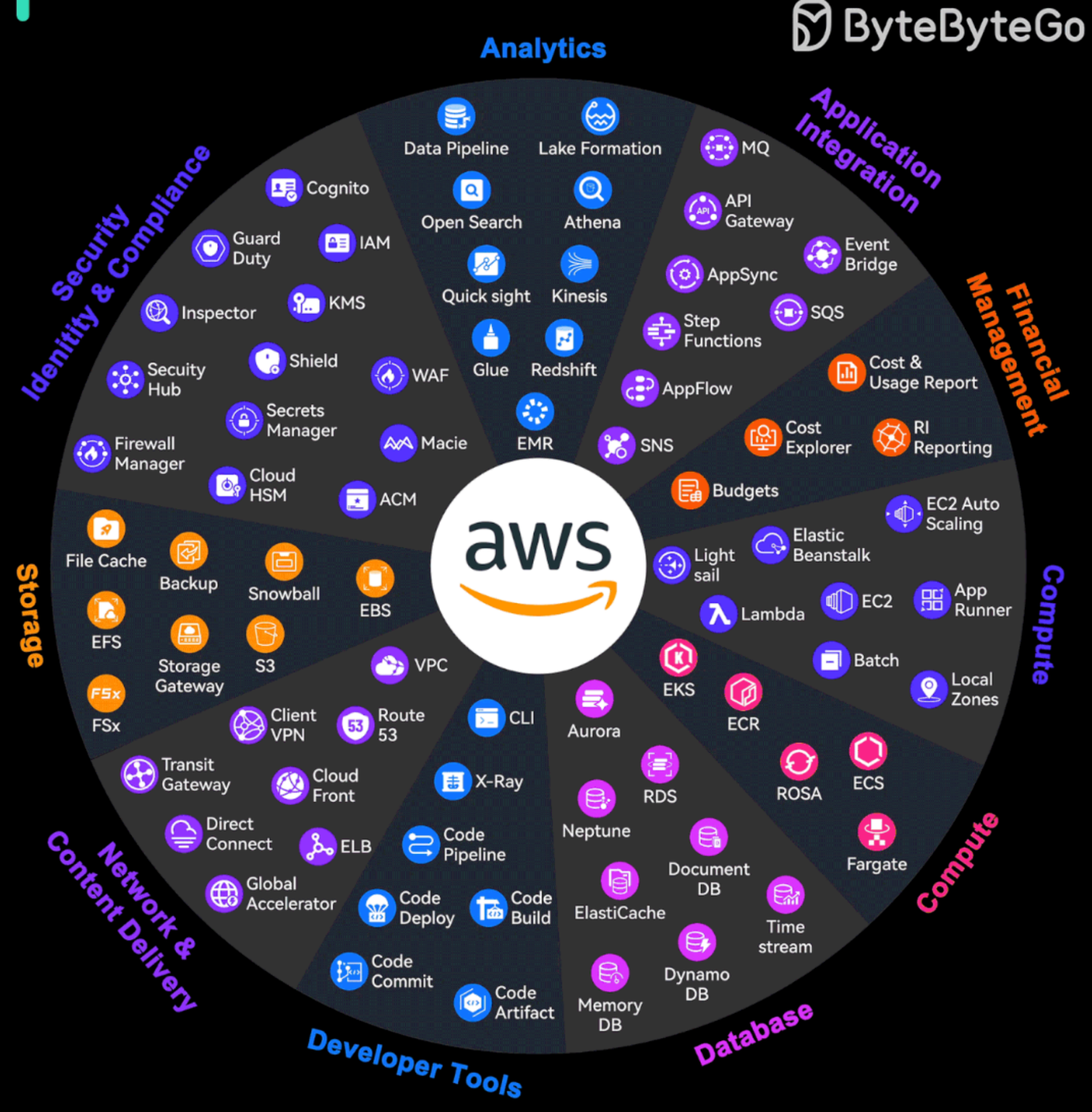
**Your  
Laptop** → **Cloud**

## Why you should deploy?

1. You can **show off** your app to anyone on the internet
2. All good apps eventually get on the internet - **why not give it a shot?**
3. You can add **custom domains** (coolexample.com)

# Deploying is hard...

- Clicking **100+** buttons for a single task
- Endless menus
- Miss one step out of **40+** steps? Uh oh.



**Thankfully, there's an easier way...**



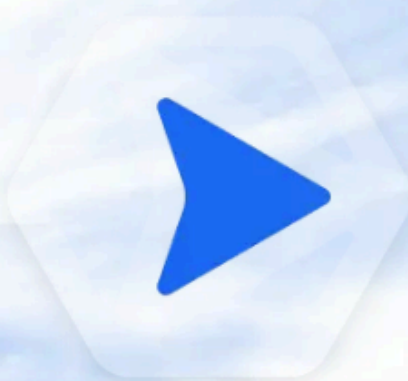
# Intro to Defang

# Develop Anything Deploy Anywhere

▶ Any App   ▶ Any Stack   ▶ Any Cloud

Take your app from Docker Compose to a secure and scalable deployment on your favorite cloud in minutes.

Deploy Now



# Defang is a **Tool** that Deploys **Any App\*** to Your **Favorite Cloud** with a **Single Command**.

```
services:
  web:
    build
    ports:
      - "8000:5000"
  redis:
    image: "redis:alpine"
```

compose.yaml



AWS



Google Cloud



Digital Ocean

```
~/User ▶ defang compose up
```

\*Compatible w/  docker

# Knowledge Check

What is the primary purpose of Defang?

- a) Build user interfaces with AI
- b) Deploy Docker Compose apps to the cloud
- c) Host only static websites
- d) Set up Kubernetes clusters from scratch

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- a) AWS and Azure only
- b) GCP and Heroku
- c) AWS, GCP, and DigitalOcean
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- c) Data engineers
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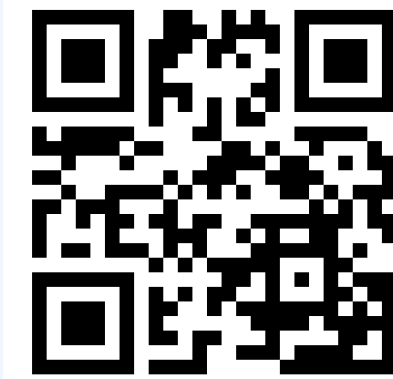
# Create a Python LLM Application

# 1-Click Deploy

Visit our homepage and find the

Deploy Now

defang.io



## Choose Your Deployment Method

Select how you want to deploy your application



### 1-Click Deploy

Choose from over 50 pre-configured templates



### Generate with AI

Our AI agent will help you get started



### Existing App

Deploy any existing Docker Compose project

Cancel

Next

# 1-Click Deploy

Step 2. Search for your desired sample and deploy in one-click

managed Language ▾

**Managed LLM**  
An app using Managed LLMs with Defang's OpenAI Access Gateway.  
[1-Click Deploy!](#) [Source](#)

**Managed LLM with Docker Model Provider**  
An app using Managed LLMs with Docker Model Provider deployed with Defang.  
[1-Click Deploy!](#) [Source](#)

# 1-Click Deploy

The screenshot shows a GitHub repository page for 'defang-managed-llm-provider'. The repository is public and was generated from a template. It has 1 branch (main), 0 tags, and 0 stars. The commit history shows an initial commit by 'commit111' 1 hour ago. The file list includes folders for '.devcontainer', '.github/workflows', and 'app', and files for '.gitignore', 'README.md', 'compose.local.yaml', and 'compose.yaml'. The README content is titled 'Managed LLM with Docker Model Provider' and features a 'Deploy With Defang' button. The repository also shows 2 deployments, with the most recent one named 'playground' deployed 32 minutes ago. The language statistics show Python at 40.2% and CSS at 29.3%.

**defang-managed-llm-provider** Public  
generated from [DefangSamples/sample-managed-llm-provider-template](#)

main 1 Branch 0 Tags

Go to file Add file Code

**commit111** Initial commit ✓ 158b317 · 1 hour ago 1 Commit

File	Initial commit	1 hour ago
.devcontainer	Initial commit	1 hour ago
.github/workflows	Initial commit	1 hour ago
app	Initial commit	1 hour ago
.gitignore	Initial commit	1 hour ago
README.md	Initial commit	1 hour ago
compose.local.yaml	Initial commit	1 hour ago
compose.yaml	Initial commit	1 hour ago

**README**

## Managed LLM with Docker Model Provider

[Deploy With Defang](#)

This sample application demonstrates using Managed LLMs with a Docker Model Provider, deployed with Defang.

**About**  
No description, website, or topics provided.

Readme  
Activity  
0 stars  
0 watching  
0 forks

**Releases**  
No releases published  
[Create a new release](#)

**Packages**  
No packages published  
[Publish your first package](#)

**Deployments** 2  
playground 32 minutes ago

**Languages**

- Python 40.2%
- CSS 29.3%

# Compose File of a Python LLM Application

compose.yaml

```
services:
  app:
    build:
      context: ./app
      dockerfile: Dockerfile
    ports:
      - "8000:8000"
    environment:
      - LLM_MODEL=default
    depends_on:
      - llm

  llm:
    provider:
      type: model
      options:
        model: ai/smollm2
    x-defang-llm: true
```





# Deploy to the Cloud (Defang Playground)

# Install the Defang CLI

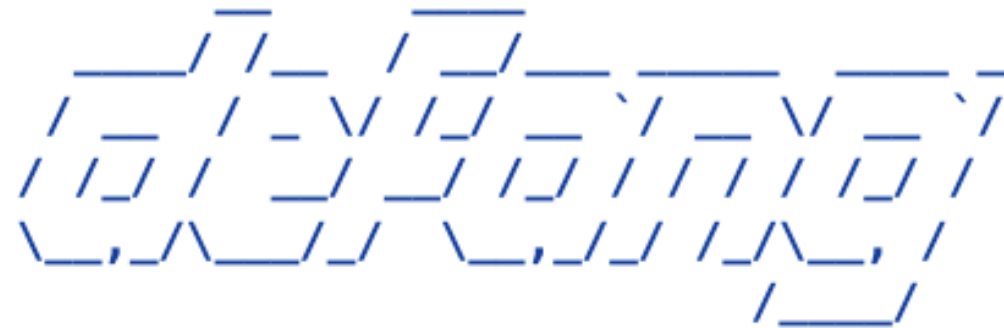
For installation instructions

```
s.defang.io/start
```



Below shows the CLI being installed...

```
~/demo ➤ . <(curl -sL s.defang.io/install)
```



```
Fetching the latest release information...  
Installation completed. You can now use defang by typing 'defang' in the terminal.
```

# Run the Application Locally (Optional)

Run the LLM application locally with the Docker Model Runner

```
> docker compose up --build
```

Open the application in your browser

```
http://localhost:8000/
```

Additional models available at <https://hub.docker.com/u/ai>

# Deploy to Defang Playground

Deploy using Defang

```
> defang compose up
```

Open the portal in your browser

```
https://portal.defang.io
```



# Bring Your Own Cloud (Defang BYOC)

# Defang Bring Your Own Cloud (BYOC)

Using AWS Provider for BYOC

```
defang compose up --provider=aws
```

Using GCP Provider for BYOC

```
defang compose up --provider=gcp
```

Using DigitalOcean Provider for BYOC

```
defang compose up --provider=digitalocean
```



# Thank you

Chat with us

[s.defang.io/discord](https://s.defang.io/discord)

