plotly

Star 23,447

Dash Python > ***Deploy Your Dash App***

Deploying Dash Apps

By default, Dash apps run on `localhost`—you can only access them on your own machine. To share a Dash app, you need to *deploy* it to a server.

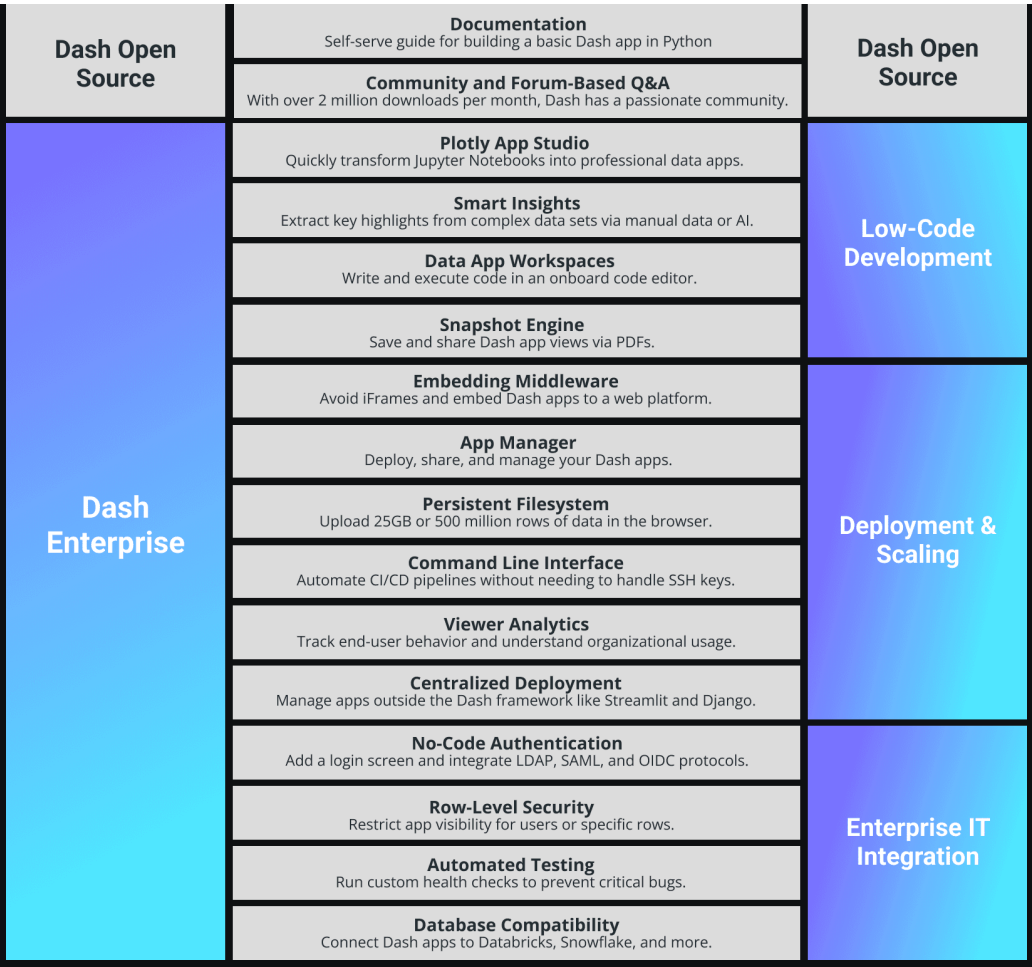
Our recommend method for securely deploying Dash apps is **Dash Enterprise**.

> Dash Enterprise can be installed on the cloud services of **AWS**, **Azure**, or **Google**.
>
> **Find out if your company is using Dash Enterprise**.

Dash Enterprise Deployment

Dash Enterprise is Plotly's commercial product for developing and deploying Dash apps. In addition to **proven, Git-based deployment**, the Dash Enterprise platform provides a complete Analytical App Stack. This includes:

- **LDAP and SAML Authentication Middleware**
- **Data App Workspaces**
- **Job Queue Support**
- **Enterprise-Wide Dash App Portal**
- **Design Kit**
- **Reporting, Alerting, Saved Views, and PDF Reports**
- **Dashboard Toolkit**
- **Embedding Dash apps in Existing websites or Salesforce**
- **AI App Catalog**
- **Big Data Best Practices**



Heroku for Sharing Public Dash Apps

Heroku is one of the most trusted platforms for deploying and managing public Flask applications. The Git and buildpack-based deployment of Heroku and Dash Enterprise are nearly identical, enabling a smooth transition to Dash Enterprise if you are already using Heroku. **View the official Heroku guide to Python**.

> **Sign up for Dash Club** → Two free cheat sheets plus updates from Chris Parmer and Adam Schroeder delivered to your inbox every two months. Includes tips and tricks, community apps, and deep dives into the Dash architecture. **Join now**.

Here is a simple example for deploying a Dash app to Heroku. This example requires a Heroku account, `git`, and `virtualenv`.

Step 1. Create a new folder for your project:

```
$ mkdir dash_app_example
$ cd dash_app_example
```

Step 2. Initialize the folder with `git` and a `virtualenv`

```
$ git init        # initializes an empty git repo
$ virtualenv venv # creates a virtualenv called "venv"
$ source venv/bin/activate # uses the virtualenv
```

`virtualenv` creates a fresh Python instance. You will need to reinstall your app's dependencies with this virtualenv:

```
$ pip install dash
$ pip install plotly
```

You will also need a new dependency, `gunicorn`, for deploying the app:

```
$ pip install gunicorn
```

Step 3. Initialize the folder with a sample app (`app.py`), a `.gitignore` file, `requirements.txt`, and a `Procfile` for deployment

Create the following files in your project folder:

`app.py`

```
from dash import Dash, dcc, html, Input, Output, callback
import os


external_stylesheets = ['https://codepen.io/chriddyp/pen/bWLwgP.css']

app = Dash(__name__, external_stylesheets=external_stylesheets)

server = app.server

app.layout = html.Div([
    html.H1('Hello World'),
    dcc.Dropdown(['LA', 'NYC', 'MTL'],
        'LA',
        id='dropdown'
    ),
    html.Div(id='display-value')
])

@callback(Output('display-value', 'children'), Input('dropdown', 'value'))
def display_value(value):
    return f'You have selected {value}'

if __name__ == '__main__':
    app.run(debug=True)
```

`.gitignore`

```
venv
*.pyc
.DS_Store
.env
```

`Procfile`

```
web: gunicorn app:server
```

(Note that `app` refers to the filename `app.py`. `server` refers to the variable `server` inside that file).

`requirements.txt`

`requirements.txt` describes your Python dependencies. You can fill this file in automatically with:

```
$ pip freeze > requirements.txt
```

Step 4. Initialize Heroku, add files to Git, and deploy

```
$ heroku create my-dash-app # change my-dash-app to a unique name
$ git add . # add all files to git
$ git commit -m 'Initial app boilerplate'
$ git push heroku master # deploy code to heroku
$ heroku ps:scale web=1  # run the app with a 1 heroku "dyno"
```

You should be able to view your app at `https://my-dash-app.herokuapp.com` (changing `my-dash-app` to the name of your app).

Step 5. Update the code and redeploy

When you modify `app.py` with your own code, you will need to add the changes to Git and push those changes to Heroku.

```
$ git status # view the changes
$ git add .  # add all the changes
$ git commit -m 'a description of the changes'
$ git push heroku master
```

This workflow for deploying apps on Heroku is very similar to how deployment works with Plotly's Dash Enterprise.

Dash Enterprise 5.2.X further simplifies deployment by providing a CLI that handles these Git operations with a single `de deploy` command.

Learn more or **get in touch**.

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