Three ways to run Drupal on AWS

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Background...

- Unix / Linux since early 1990s
  - Yggdrasil, Slackware, Debian
- Drupal starting early 2000s
  - Drupal 4
- Hosting since mid 2000s
  - Colos, VPS, Plesk, cPanel
- AWS starting 2008
  - EC2 & S3

Today...

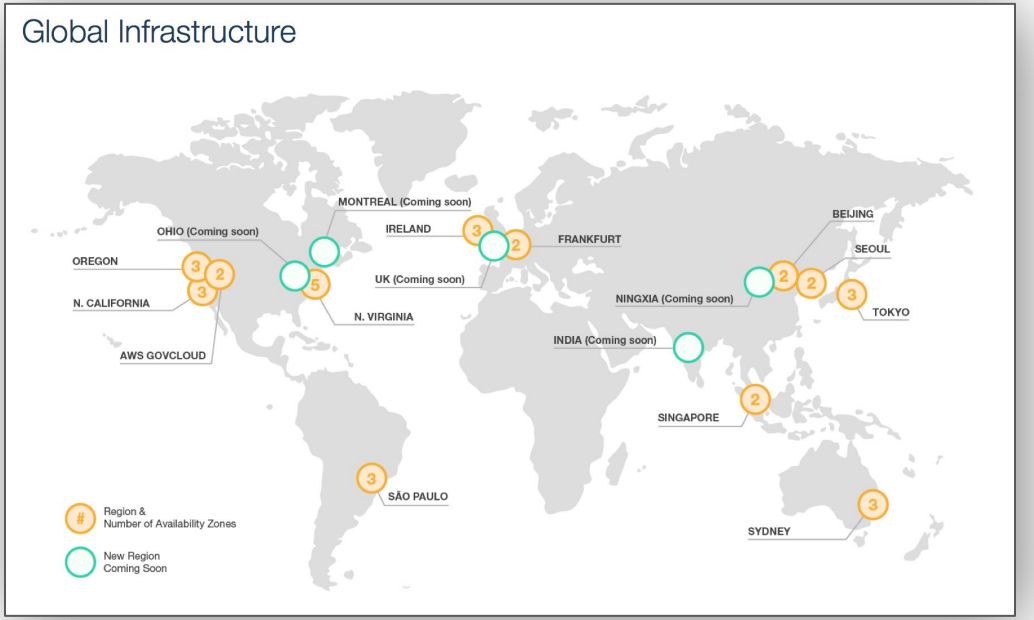
Today...

CLOUD NATIVE
COMPUTING FOUNDATION

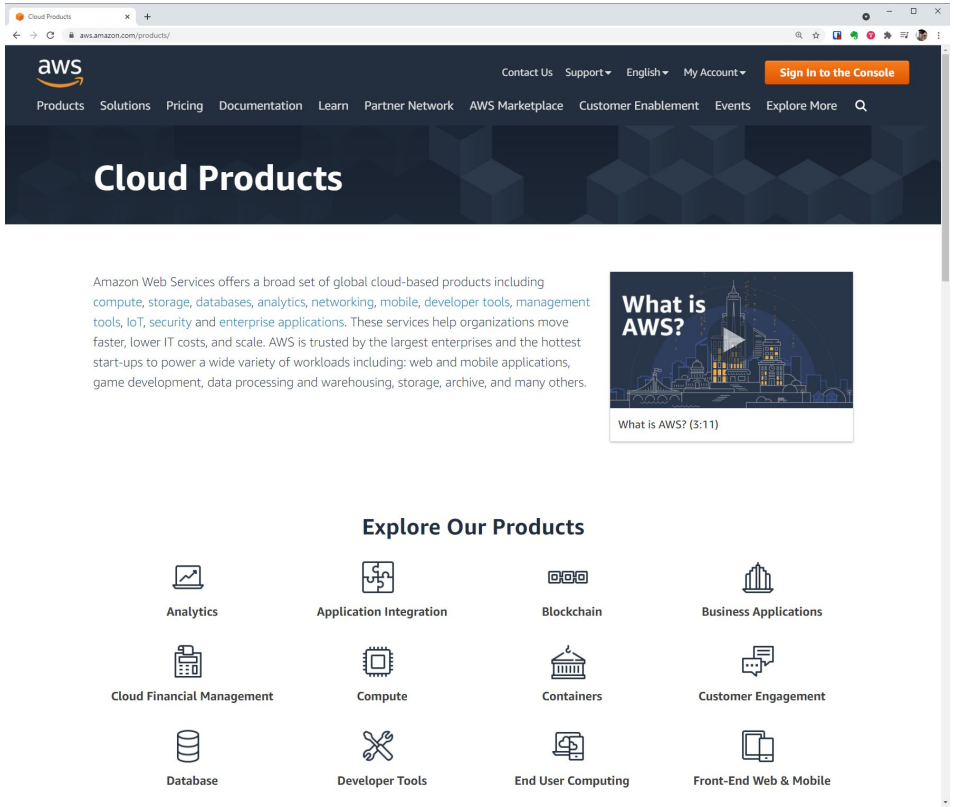
Why AWS?

Gartner Magic Quadrant for Cloud Infrastructure

https://aws.amazon.com/what-is-aws/



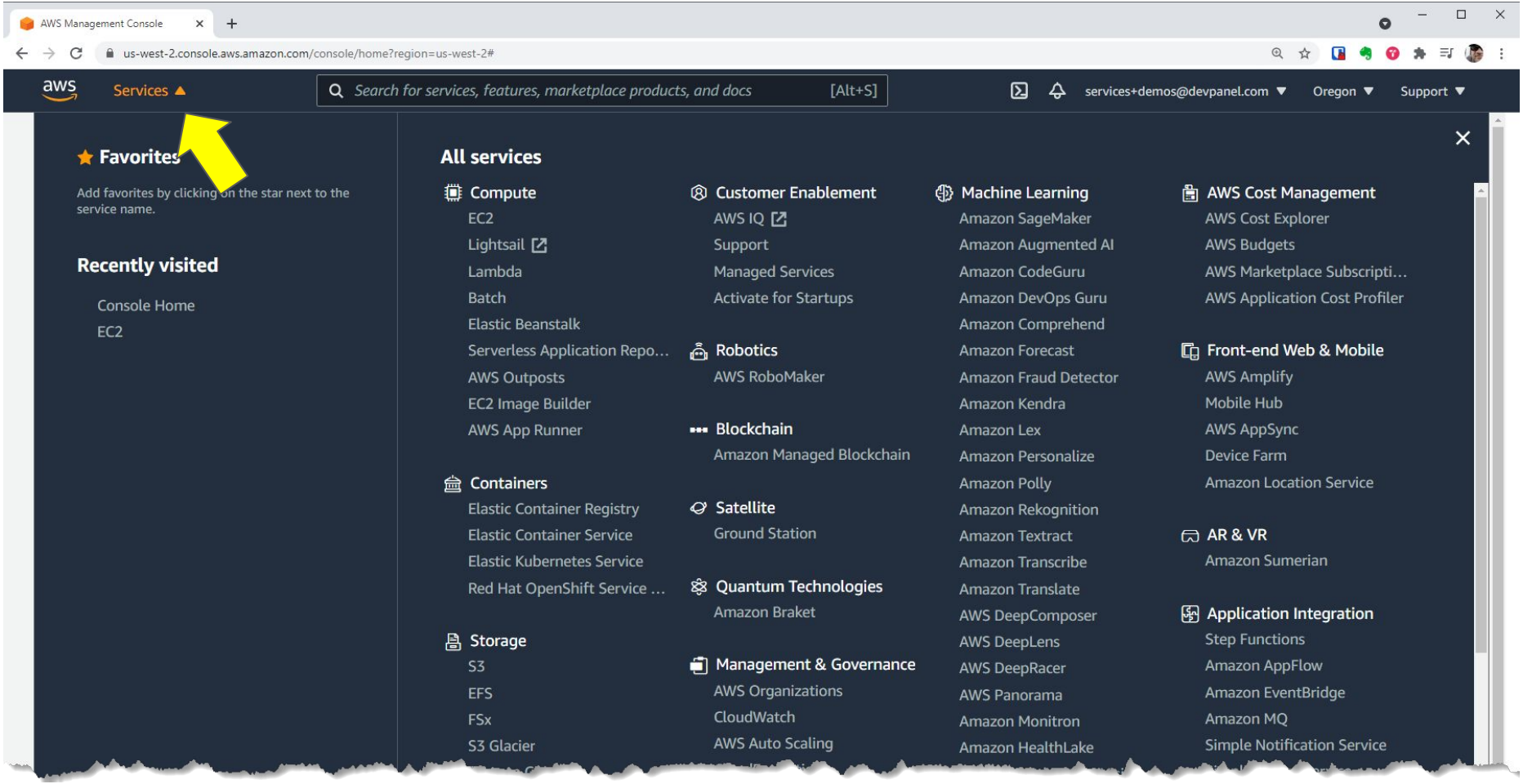
200+ Products and Services



https://aws.amazon.com/products/

Why AWS ?

- Easy to deploy
- Easy to manage
- Infinitely scalable
- Automatically secure
- Plug and play tools
- Managed services
- Affordable infrastructure
- Etc. etc.


AWS Management Console
us-west-2.console.aws.amazon.com/console/home?region=us-west-2#
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
services+demos@devpanel.com
Oregon
Support
Favorites
Add favorites by clicking on the star next to the service name.
Recently visited
Console Home
EC2
All services
Compute
EC2
Lightsail
Lambda
Batch
Elastic Beanstalk
Serverless Application Repo...
AWS Outposts
EC2 Image Builder
AWS App Runner
Containers
Elastic Container Registry
Elastic Container Service
Elastic Kubernetes Service
Red Hat OpenShift Service ...
Storage
S3
EFS
FSx
S3 Glacier
Customer Enablement
AWS IQ
Support
Managed Services
Activate for Startups
Robotics
AWS RoboMaker
Blockchain
Amazon Managed Blockchain
Satellite
Ground Station
Quantum Technologies
Amazon Braket
Management & Governance
AWS Organizations
CloudWatch
AWS Auto Scaling
Machine Learning
Amazon SageMaker
Amazon Augmented AI
Amazon CodeGuru
Amazon DevOps Guru
Amazon Comprehend
Amazon Forecast
Amazon Fraud Detector
Amazon Kendra
Amazon Lex
Amazon Personalize
Amazon Polly
Amazon Rekognition
Amazon Textract
Amazon Transcribe
Amazon Translate
AWS DeepComposer
AWS DeepLens
AWS DeepRacer
AWS Panorama
Amazon Monitron
Amazon HealthLake
AWS Cost Management
AWS Cost Explorer
AWS Budgets
AWS Marketplace Subscripti...
AWS Application Cost Profiler
Front-end Web & Mobile
AWS Amplify
Mobile Hub
AWS AppSync
Device Farm
Amazon Location Service
AR & VR
Amazon Sumerian
Application Integration
Step Functions
Amazon AppFlow
Amazon EventBridge
Amazon MQ
Simple Notification Service

Professional

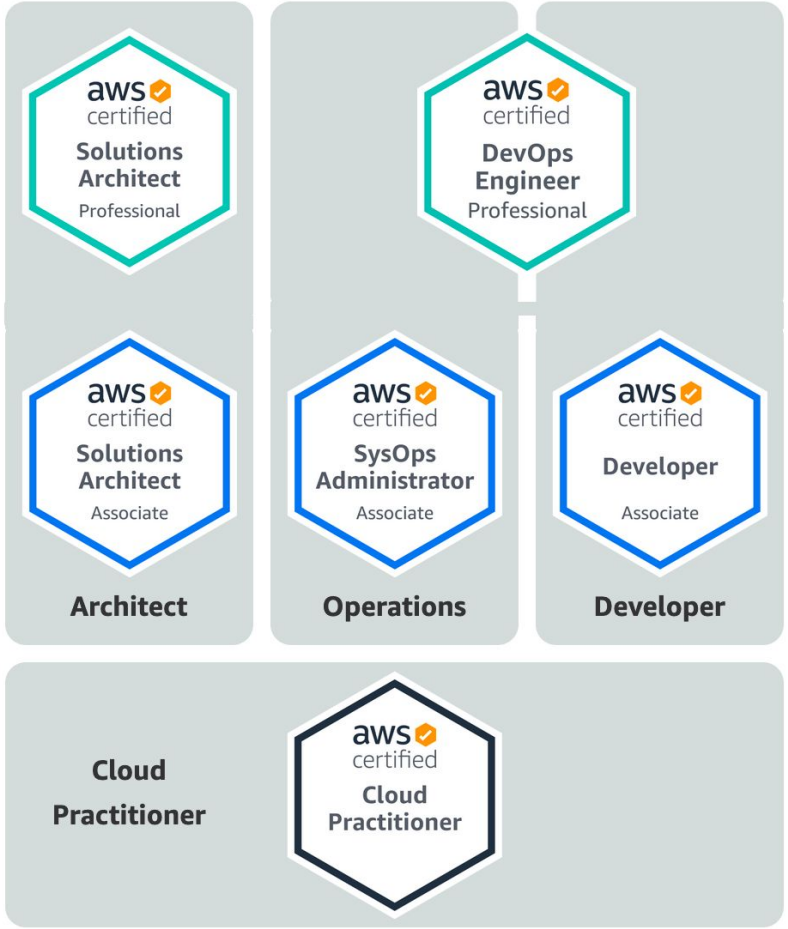
Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

Foundational

Six months of fundamental AWS Cloud and industry knowledge



Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the **exam guide**

DevPanel™
DEVOPS CONTROL PANEL

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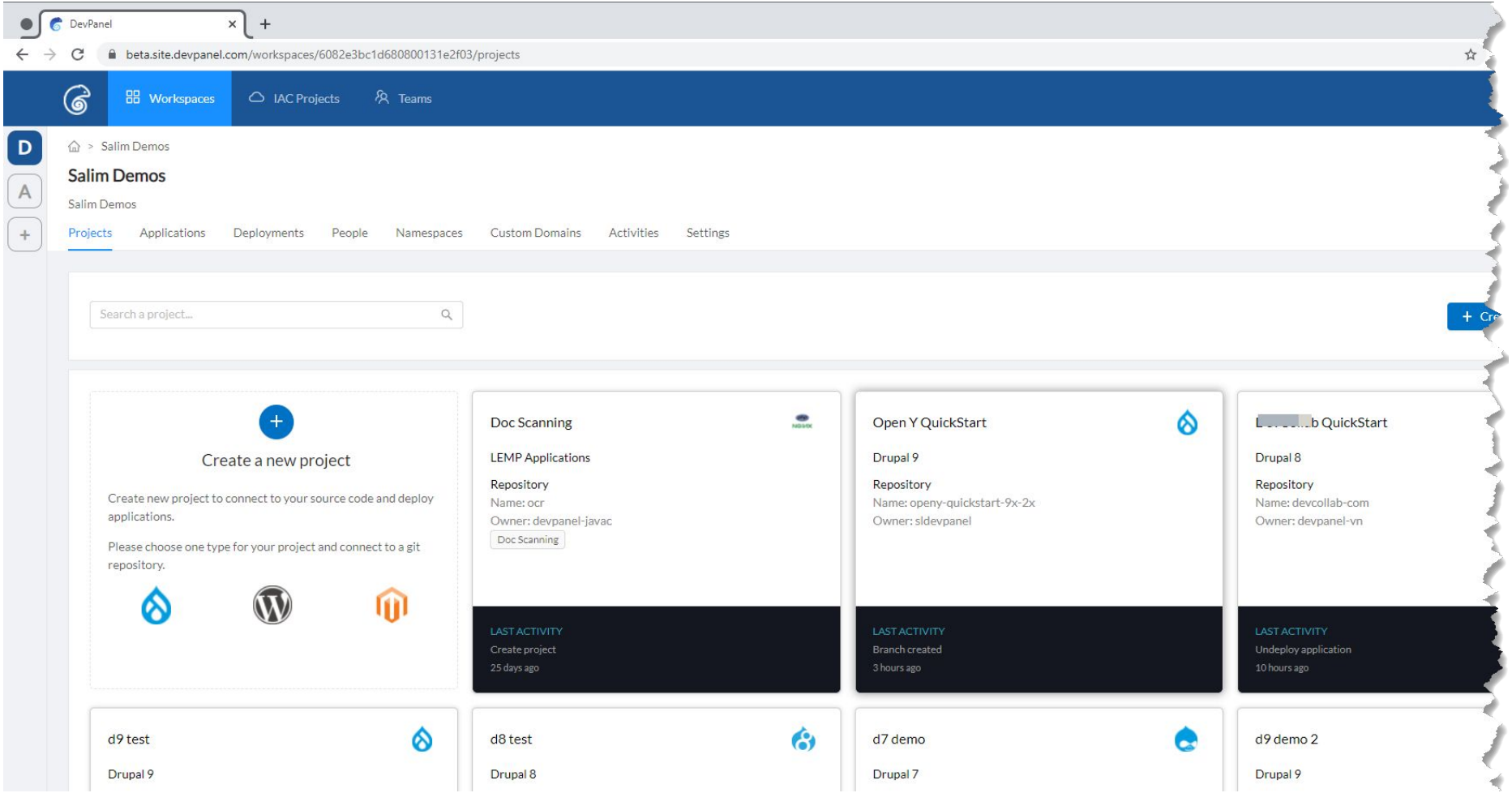
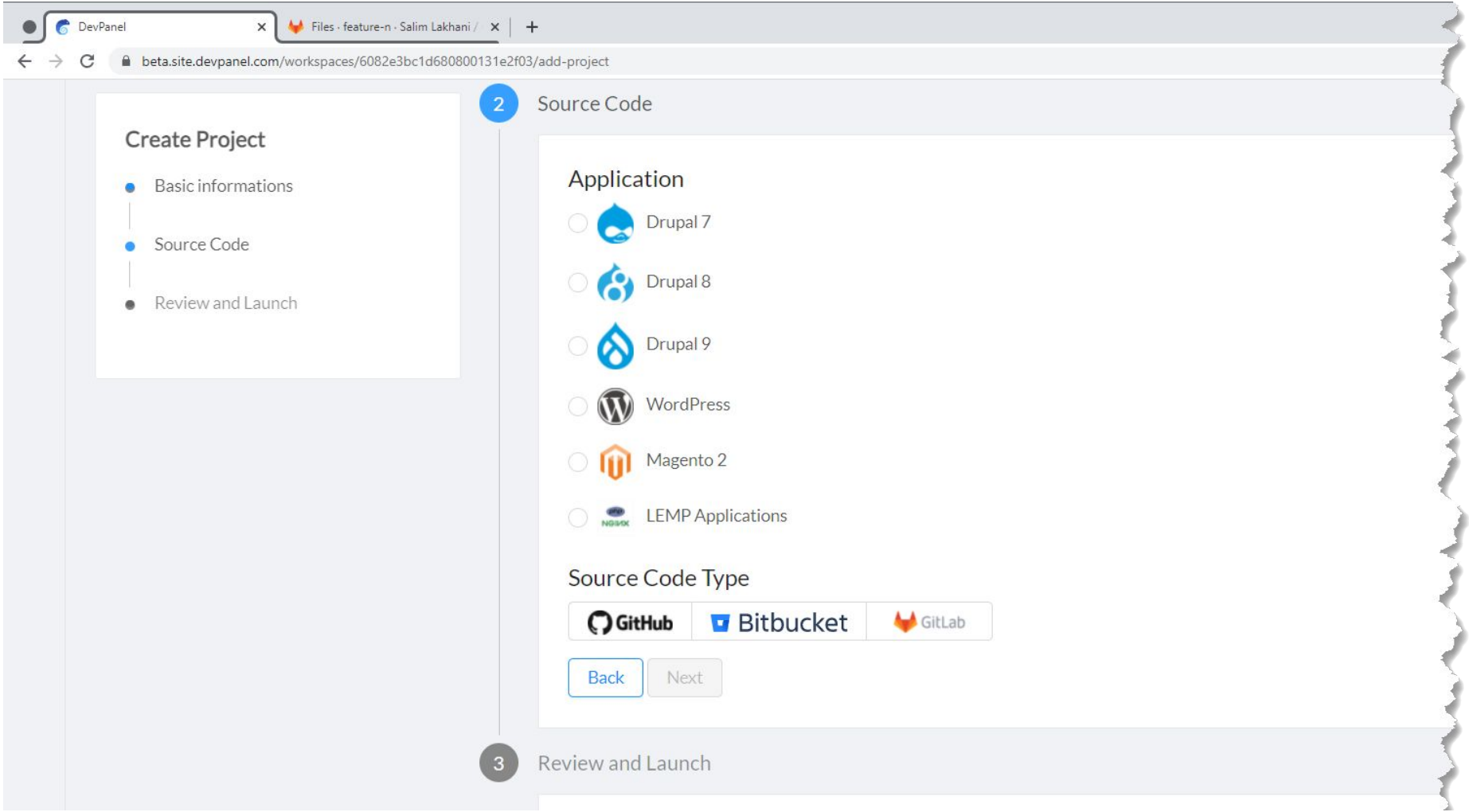
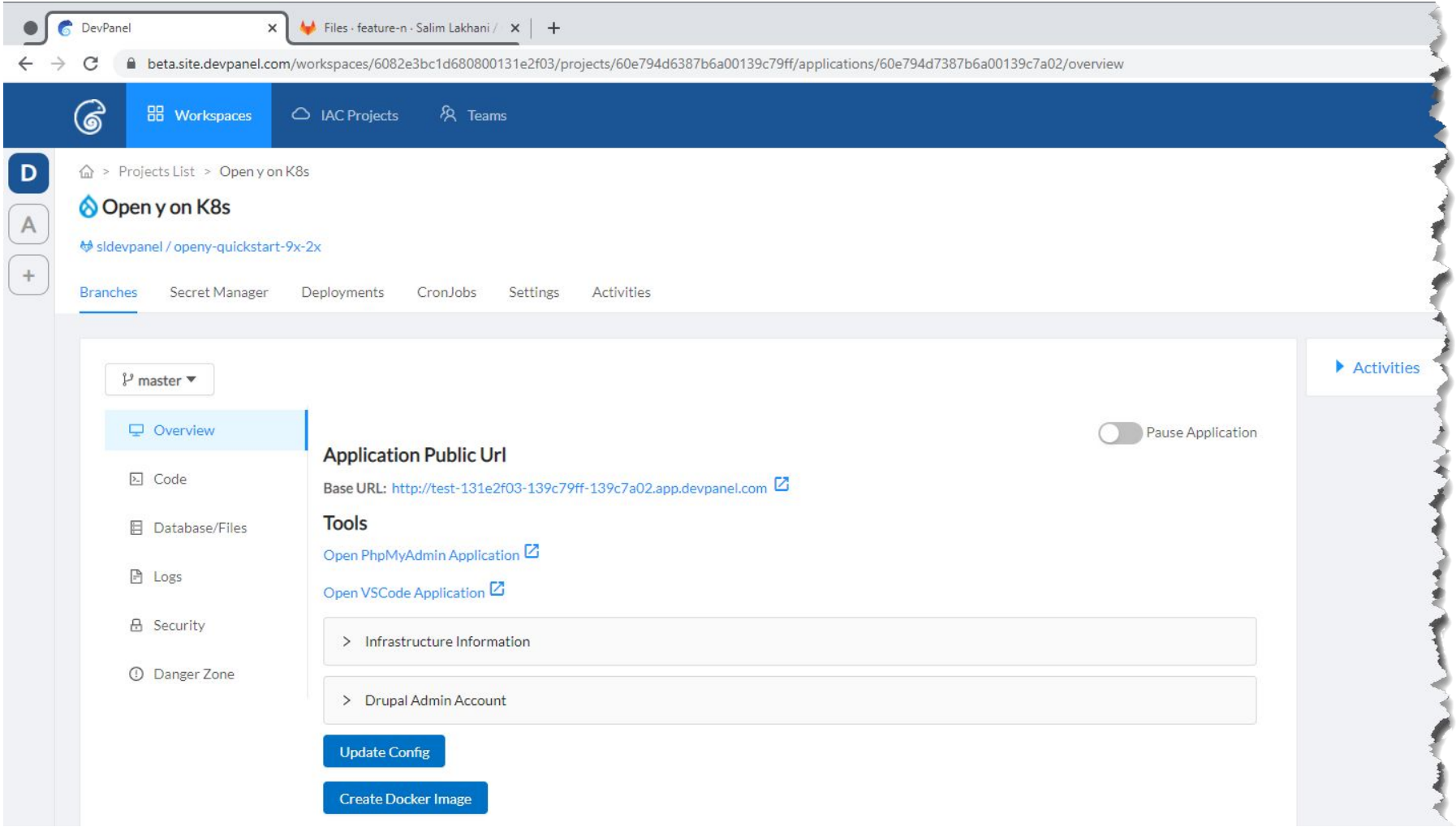
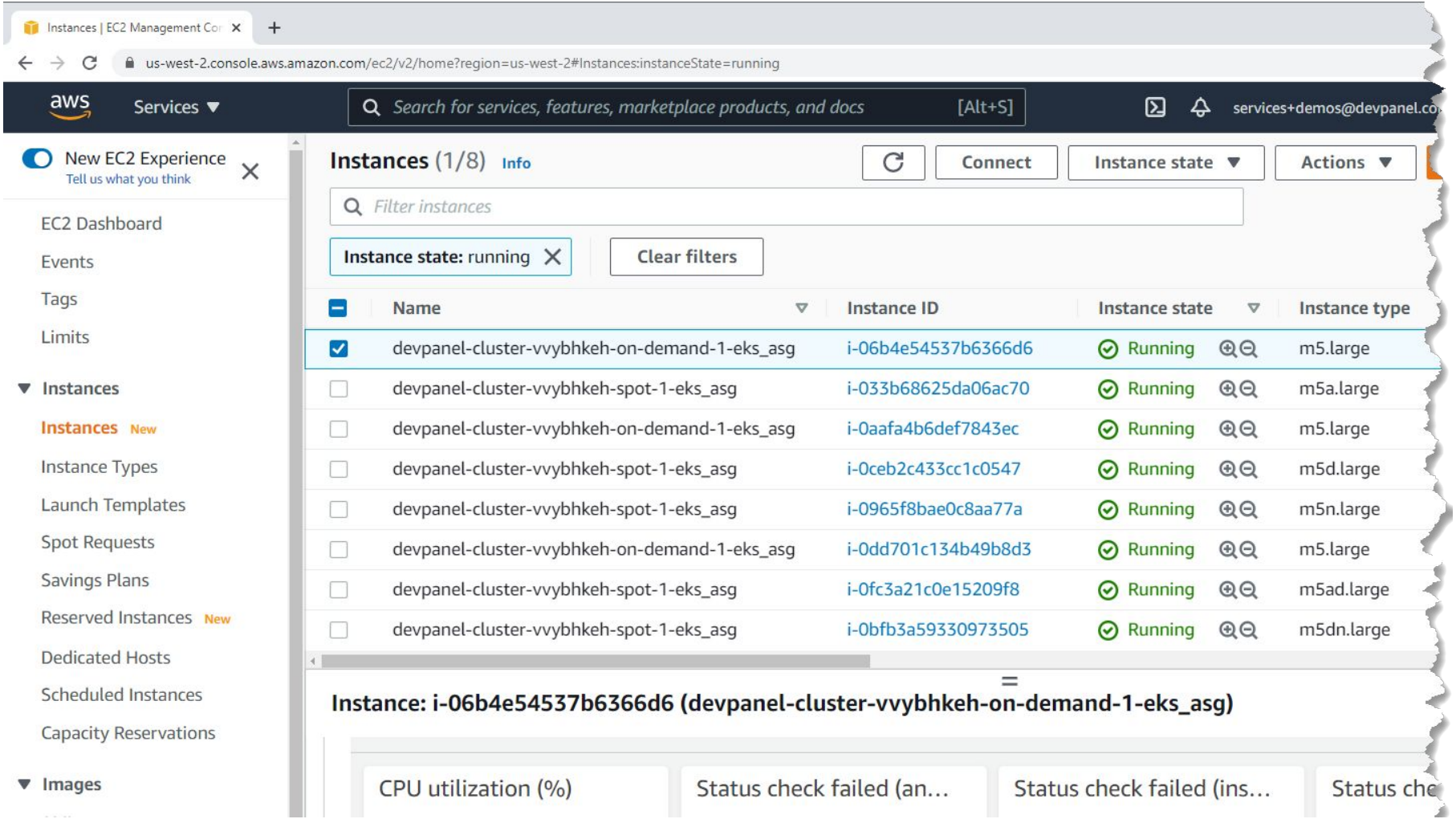
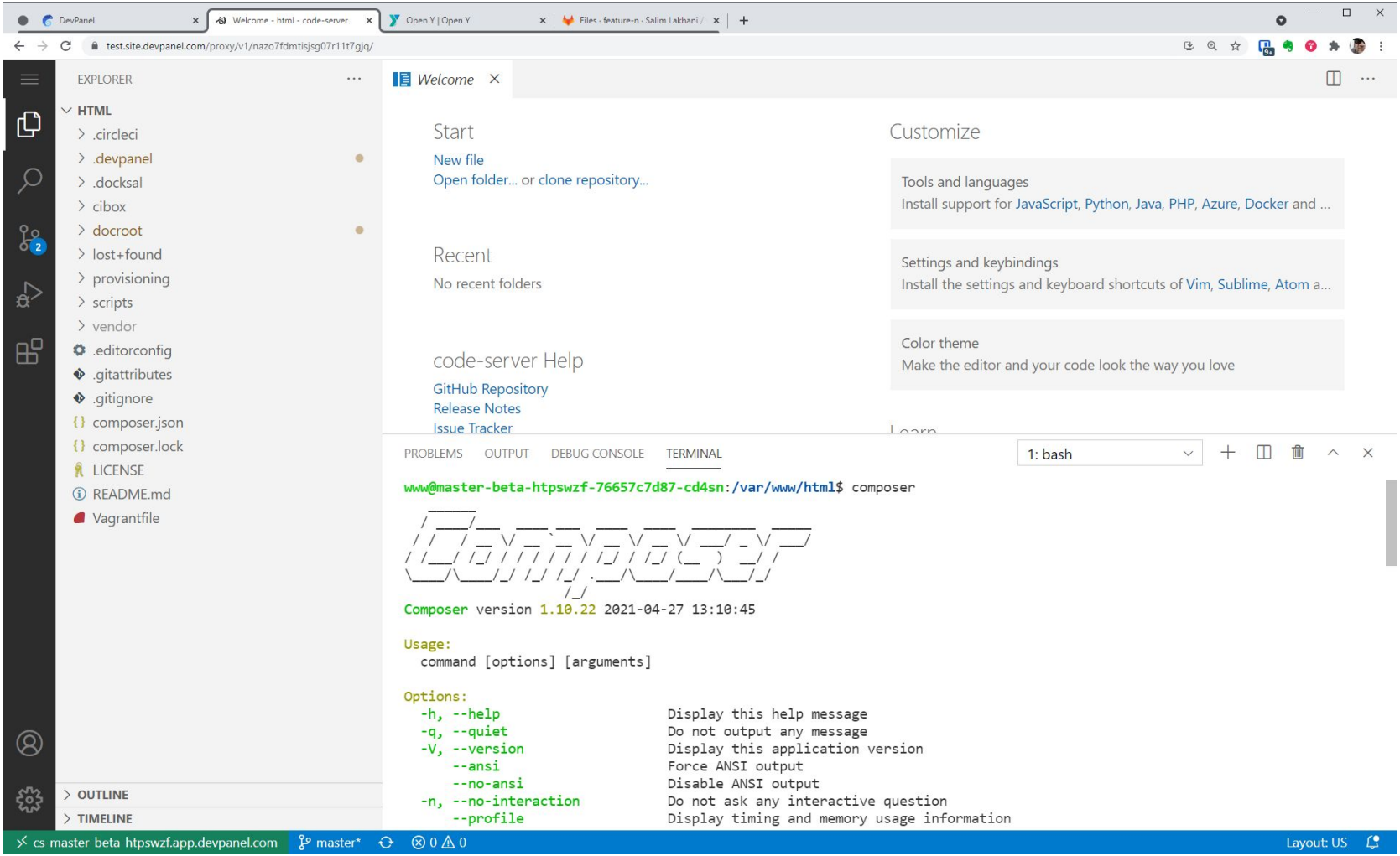

DevPanel
beta.site.devpanel.com/workspaces/6082e3bc1d680800131e2f03/projects
Workspaces
IAC Projects
Teams
Salim Demos
Salim Demos
Salim Demos
Projects
Applications
Deployments
People
Namespaces
Custom Domains
Activities
Settings
Search a project...
Create a new project
Create new project to connect to your source code and deploy applications.
Please choose one type for your project and connect to a git repository.
Doc Scanning
LEMP Applications
Repository
Name: ocr
Owner: devpanel-javac
Doc Scanning
LAST ACTIVITY
Create project
25 days ago
Open Y QuickStart
Drupal 9
Repository
Name: openy-quickstart-9x-2x
Owner: sldevpanel
LAST ACTIVITY
Branch created
3 hours ago
QuickStart
Drupal 8
Repository
Name: devcollab-com
Owner: devpanel-vn
LAST ACTIVITY
Undeploy application
10 hours ago
d9 test
Drupal 9
d8 test
Drupal 8
d7 demo
Drupal 7
d9 demo 2
Drupal 9


DevPanel
Files · feature-n · Salim Lakhani /
beta.site.devpanel.com/workspaces/6082e3bc1d680800131e2f03/add-project
Create Project
Basic informations
Source Code
Review and Launch
2
Source Code
Application
Drupal 7
Drupal 8
Drupal 9
WordPress
Magento 2
LEMP Applications
Source Code Type
GitHub
Bitbucket
GitLab
Back
Next
3
Review and Launch


DevPanel
Files · feature-n · Salim Lakhani /
beta.site.devpanel.com/workspaces/6082e3bc1d680800131e2f03/projects/60e794d6387b6a00139c79ff/applications/60e794d7387b6a00139c7a02/overview
Workspaces
IAC Projects
Teams
Projects List > Open y on K8s
Open y on K8s
sldevpanel / openy-quickstart-9x-2x
Branches
Secret Manager
Deployments
CronJobs
Settings
Activities
master
Overview
Code
Database/Files
Logs
Security
Danger Zone
Pause Application
Application Public Url
Base URL: http://test-131e2f03-139c79ff-139c7a02.app.devpanel.com
Tools
Open PhpMyAdmin Application
Open VSCode Application
Infrastructure Information
Drupal Admin Account
Update Config
Create Docker Image
Activities


Instances | EC2 Management Co
us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#Instances:instanceState=running
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
services+demos@devpanel.co
New EC2 Experience
Tell us what you think
EC2 Dashboard
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Images
Instances (1/8) Info
Connect
Instance state
Actions
Filter instances
Instance state: running
Clear filters
Name
Instance ID
Instance state
Instance type
devpanel-cluster-vvybhkeh-on-demand-1-eks_asg i-06b4e54537b6366d6 Running m5.large
devpanel-cluster-vvybhkeh-spot-1-eks_asg i-033b68625da06ac70 Running m5a.large
devpanel-cluster-vvybhkeh-on-demand-1-eks_asg i-0aafa4b6def7843ec Running m5.large
devpanel-cluster-vvybhkeh-spot-1-eks_asg i-0ceb2c433cc1c0547 Running m5d.large
devpanel-cluster-vvybhkeh-spot-1-eks_asg i-0965f8bae0c8aa77a Running m5n.large
devpanel-cluster-vvybhkeh-on-demand-1-eks_asg i-0dd701c134b49b8d3 Running m5.large
devpanel-cluster-vvybhkeh-spot-1-eks_asg i-0fc3a21c0e15209f8 Running m5ad.large
devpanel-cluster-vvybhkeh-spot-1-eks_asg i-0bfb3a59330973505 Running m5dn.large
Instance: i-06b4e54537b6366d6 (devpanel-cluster-vvybhkeh-on-demand-1-eks_asg)
CPU utilization (%)
Status check failed (an…
Status check failed (ins…
Status che


DevPanel
Welcome - html - code-server
Open Y | Open Y
Files · feature-n · Salim Lakhani /
test.site.devpanel.com/proxy/v1/nazo7fdmtisjsg07r11t7gjq/
EXPLORER
HTML
.circleci
.devpanel
.docksal
cibox
docroot
lost+found
provisioning
scripts
vendor
.editorconfig
.gitattributes
.gitignore
composer.json
composer.lock
LICENSE
README.md
Vagrantfile
OUTLINE
TIMELINE
Welcome
Start
New file
Open folder... or clone repository...
Recent
No recent folders
code-server Help
GitHub Repository
Release Notes
Issue Tracker
Customize
Tools and languages
Install support for JavaScript, Python, Java, PHP, Azure, Docker and ...
Settings and keybindings
Install the settings and keyboard shortcuts of Vim, Sublime, Atom a...
Color theme
Make the editor and your code look the way you love
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1: bash
www@master-beta-htpswzf-76657c7d87-cd4sn:/var/www/html$ composer
Composer version 1.10.22 2021-04-27 13:10:45
Usage:
command [options] [arguments]
Options:
-h, --help Display this help message
-q, --quiet Do not output any message
-V, --version Display this application version
--ansi Force ANSI output
--no-ansi Disable ANSI output
-n, --no-interaction Do not ask any interactive question
--profile Display timing and memory usage information
cs-master-beta-htpswzf.app.devpanel.com
master*
Layout: US

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Amazon EKS

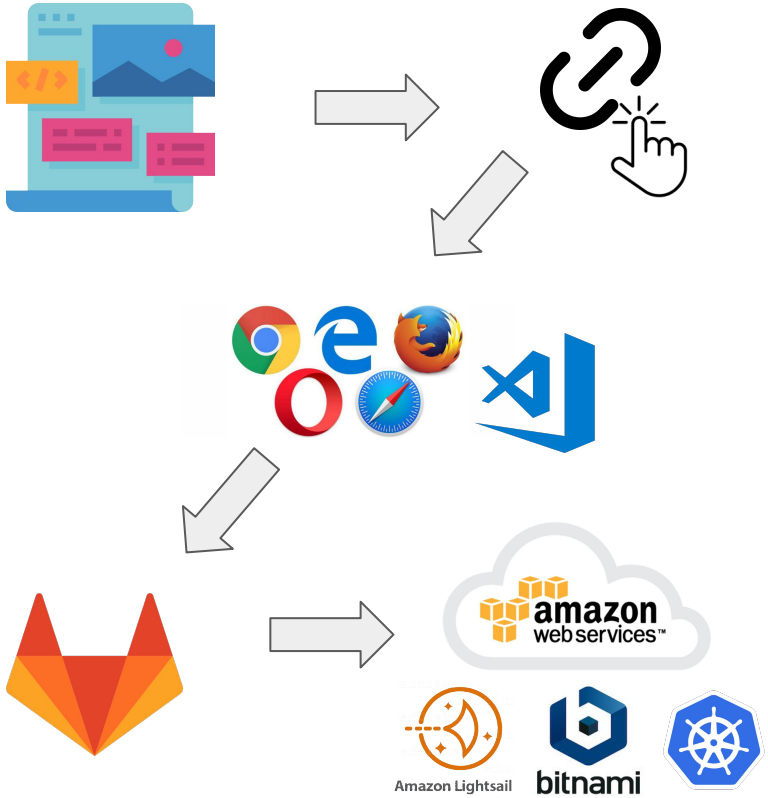
Amazon Lightsail

Community Edition: Three ways to deploy...

- **Quickstart**:
  Use Quickstarts to deploy Applications (Drupal distros), projects and templates over and over again. Once set up, you can share your Quickstarts with others and let them spin up their own copy with a few clicks.
- **AWS Lightsail**:
  The cheap and easy way: Deploy Drupal on AWS using Lightsail, a low-cost, shared server /container based solution for quick deployment of small sites.
- **AWS EKS**:
  The Cloud Native (Kubernetes) way: A container based auto-scaling fault tolerant system that can host hundreds of sites and handle all kinds of loads and spikes.

QuickStarts

- Application Templates
- One-Click Build URLs
- Build apps on the cloud
- Develop using a browser
- Save work back to repo
- Deploy to servers, containers, kubernetes



QuickStart Template for Open Y Distro

- https://beta.site.devpanel.com/quickstart?app=drupal9&branch=master&repo=https://gitlab.com/devpanel-demo/open-y/openy-quickstart-9x-2x.git

- https://beta.site.devpanel.com/quickstart
  - ?app=drupal9
  - &branch=master
  - &repo=https://gitlab.com/devpanel-demo/open-y/openy...

DevPanel | Open Y | Open Y

Not secure | site-master-pvdetaj.app.devpanel.com

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Visit the Open Y Distribution site.

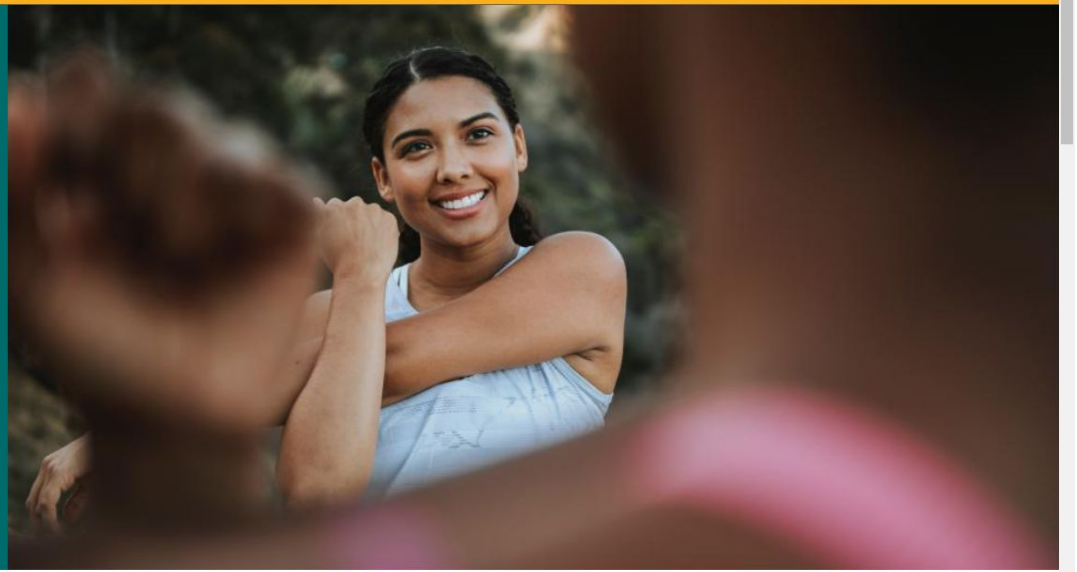
Open Y Distribution

EXPLORE THE OPEN Y!

Learn how to use the Open Y content management system to deliver brand-compliant digital experiences.

** please login as admin user*

Start guided tour



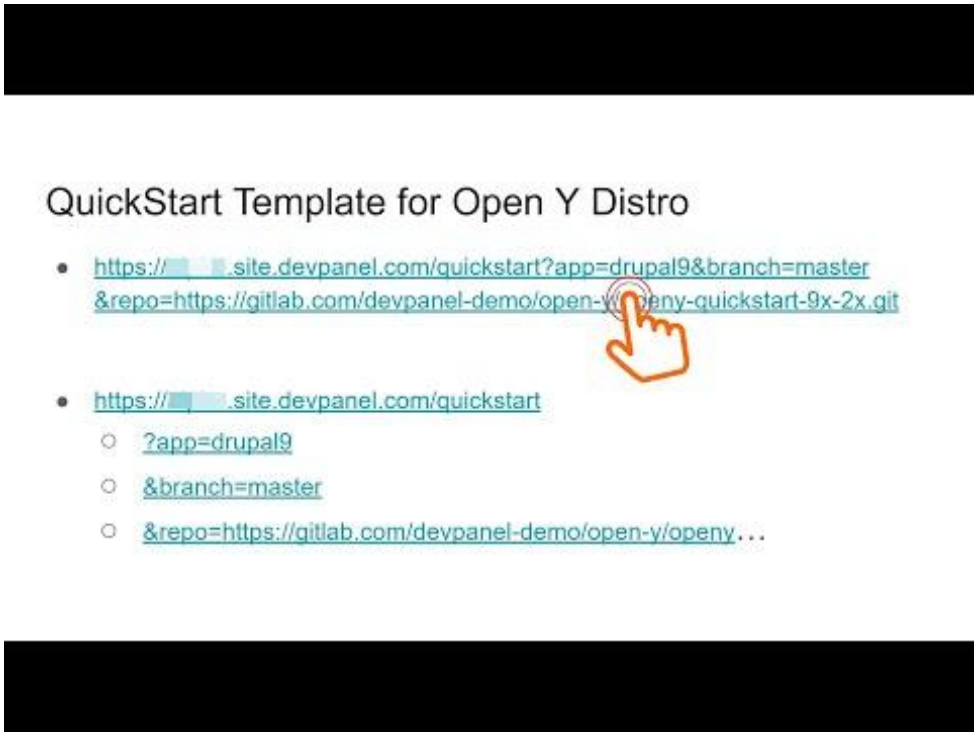
What's happening at the Y?

Love Your Heart

5 Ways To Do

Motivational

Create an Open Y application with a QuickStart Template



- GitLab Repo
  - Code
  - DB Dump
  - Files Dump
- Dev env
  - Cloud IDE
  - VS Code
  - PhpMyAdmin
- Save work
  - Back to Repo

QuickStart Templates - Pros and Cons

PROS

- Everything’s in the repo :)
- Works with any app
- Portable template
- Easy to duplicate / share
- One-click app creation
- Many ways to deploy
- Works with any hosting company

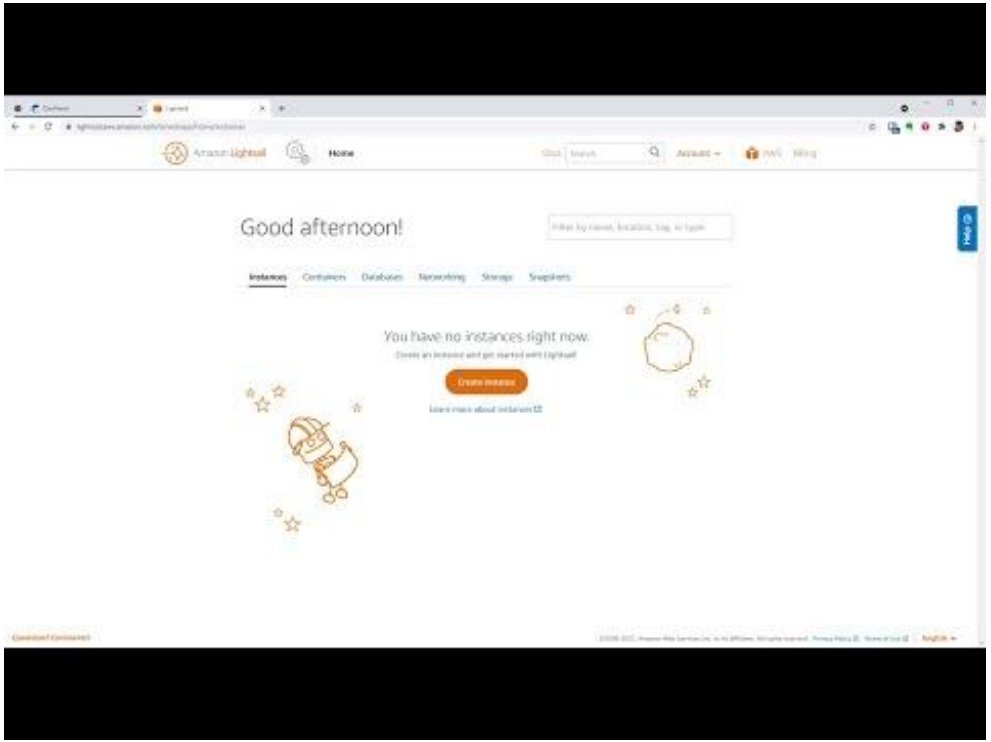
IDEAL FOR

- Site Factory / templates
- Building SaaS apps / service

CONS

- Everything’s in the repo :(
- Scripting involved
  - Setup
  - Deployment
  - Security
  - Etc.
- You have to be a developer (?)
  - Be able to debug
  - Etc.

Pull application into LightSail server



- Setup server
  - Bitnami image
  - LightSail (or DO, Linode, etc.)
- Pull, extract, install
  - Code
  - DB Dump
  - Files Dump
- Configure LightSail
  - Domain, SSL, etc.
- Enjoy!

LightSail Servers - Pros and Cons

PROS

- Easy to create
- Available from any hosting co.
- Cheap as it can be… ~$3.5/mth++
- SSH shell and FTP :-)
- Great for small sites

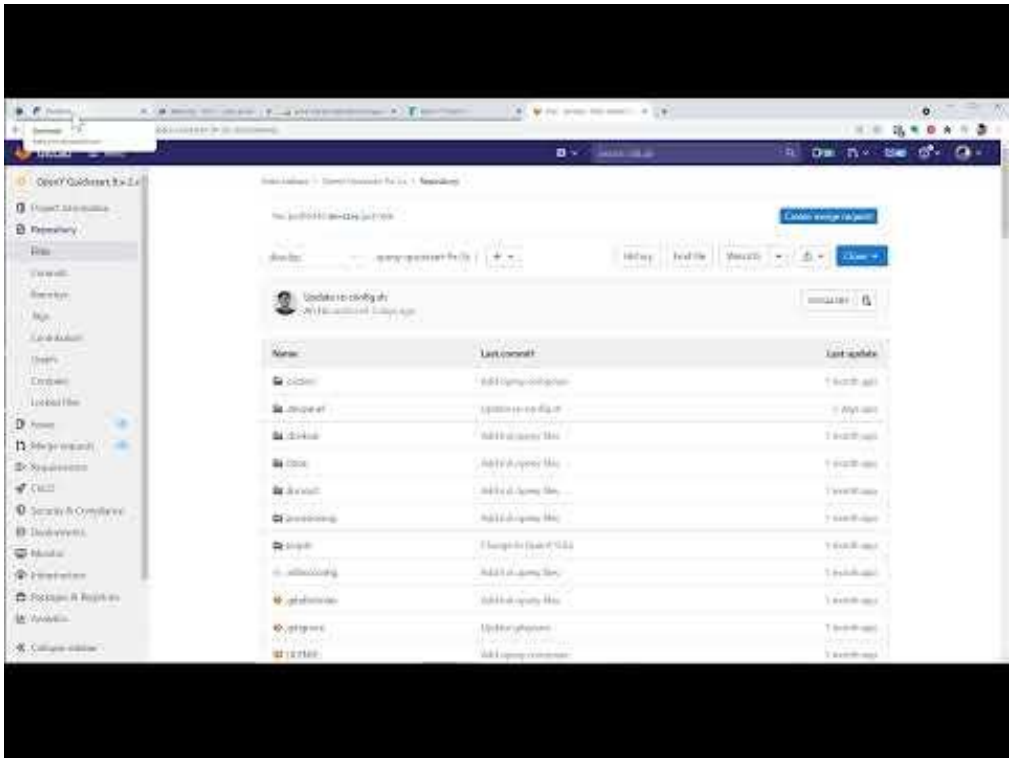
IDEAL FOR

- Personal sites
- Small “Brochure” sites
- Not mission critical sites

CONS

- Requires work to deploy, setup, manage
- No easy Dev, Test after 1st deployment
- Server to maintain
  - NOT Fault Tolerant!
  - Servers go down…
  - Need OS upgrades and patches
  - Manual PHP updates
- Pet not Cattle (?)
  - Both are cool :-)
  -

Deploy application to your own K8s Cluster



- GitLab Repo
  - Code
  - DB Dump
  - Files Dump
- Dev env (K8s)
  - Cloud IDE
  - VS Code
  - PhpMyAdmin
- Deploy to Live (K8s)
  - Domain, SSL, etc.
- Done!

K8s Clusters - Pros and Cons

PROS

- Enterprise grade infra
- Fairly automated
- Auto Scaling
- Fault Tolerant
- Container based
- Easy to update / patch
- Good Dev, Test, Live workflow
- Flexible tools and tech
-

CONS

- Not easy if anything goes wrong
- Requires expertise to manage
- Not cheap to operate

IDEAL FOR

- Building your own WebOps Service
- Managing multiple clients / projects
- Running many sites and/or large sites
- Mission critical sites
- Finely tuned sites
-

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COMMUNITY → ENTERPRISE

Amazon Lightsail

Amazon EKS

Community Edition

- In Beta - under development
- Free to use - but...
  - You will help test new features
  - Need input on UI/UX
- Develop on DevPanel servers
- Deploy to your own servers / clusters
- Contact Us

DevPanel.com

Fin

Questions?

Salim Lakhani

SL@DevPanel.com

@salim on Drupal Slack