SP
ART GALLERY

Powered by aws

Susanne Ferschl, Pelny Peya

Neue Fische AWS cloud-24-3

AWS re/Start

PROJECT USE CASE & TEAM

Creating an Art Gallery website in a scalable, secure, highly available and fault-tolerant way using Wordpress and AWS

Susanne Ferschl

- 30's
- Bamberg based
- Public Health scientist
- passion for data
- pursuing a career in data analytics using cloud services

Pelny Peya

- 30's
- Berlin based
- 8-year experience in IT field implementing Salesforce CRM
- pursuing a career in Cloud architecture & security

SOME CLOUD CONCEPTS

Amazon Web Services provider

- **cloud computing** platform
- a wide range of scalable & cost-effective services
- **global infrastructure** (108 availability zones)
- flexible, consistent and no low latency due to Content Delivery Network (CDN)

- Mainly **IaaS (Infrastructure as a Service) model for the Art Gallery**
  - AWS products (VPC, EC2, RDS)

Traditional topology	AWS service
Data center	Amazon VPC
Router	Route tables
Switches (subnets)	Subnets
Firewall	Security groups and network access control lists (network ACLs)
Servers and operating systems	Amazon Elastic Compute Cloud (Amazon EC2) instances
Modem	Internet gateway

THE SP GALLERY

About SP Gallery

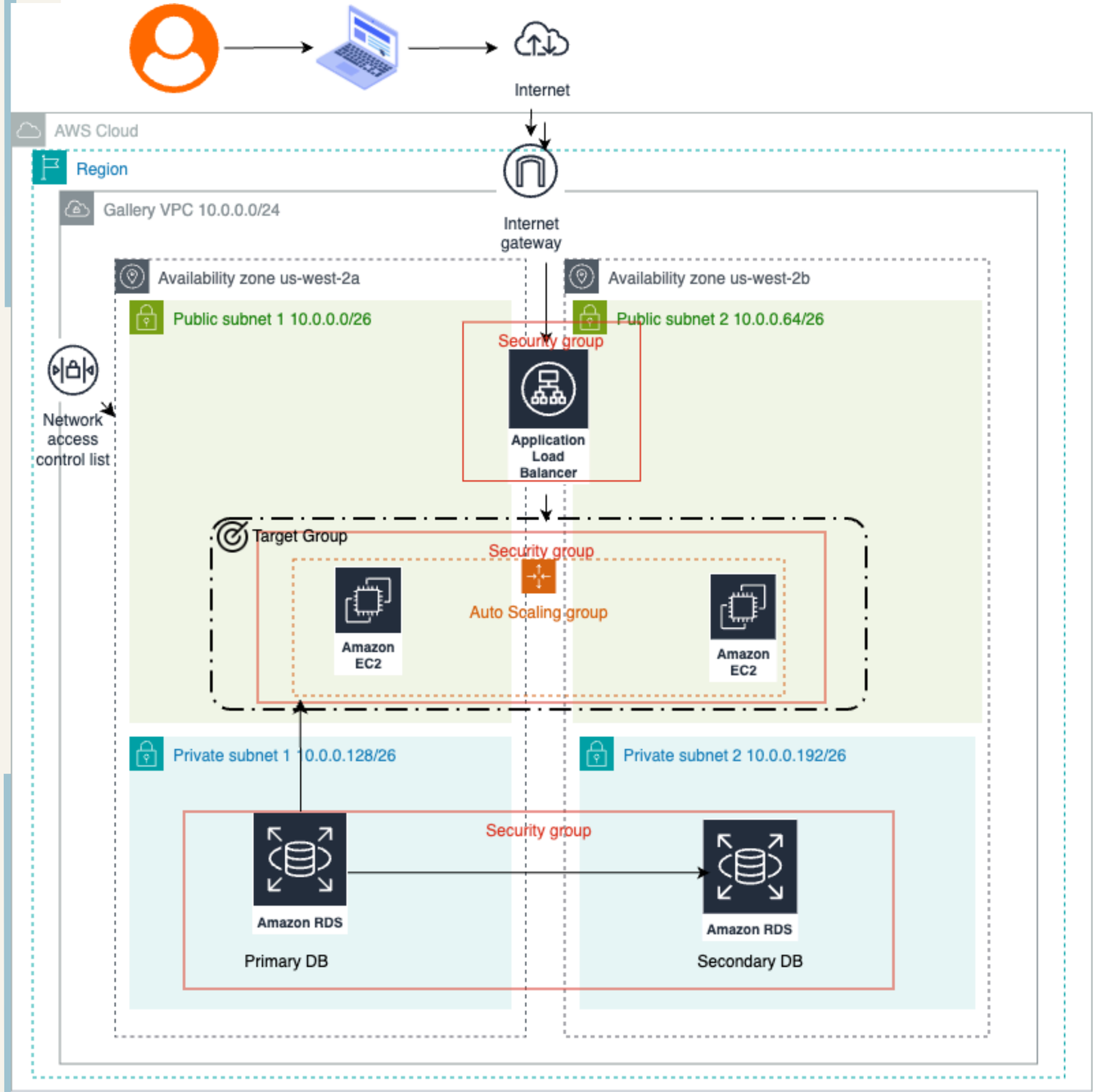
The SP Gallery present modern art from around the world for everyone to experience. Since its founding in 2016, The SP has always aspired to be more than a treasury of rare and beautiful objects. Every day, art comes alive in the gallery and through its exhibitions and events, revealing new ideas and unexpected connections across time and across cultures.

> The SP Gallery collects and presents significant works of art across time and cultures in order to connect all people to creativity, knowledge, ideas, and one another.
> The gallery is located in the iconic site —Museum island in Berlin, Germany. Millions of people also take part in The SP experience online.

- a VPC and attached Internet Gateway
- Subnets (2 public, 2 private)
- EC2 instances
- Auto Scaling
- Application Load Balancer
- RDS database for data storage

Layers of security

- Route tables for VPC
- NACL for subnets
- Security groups for EC2 instances & RDS



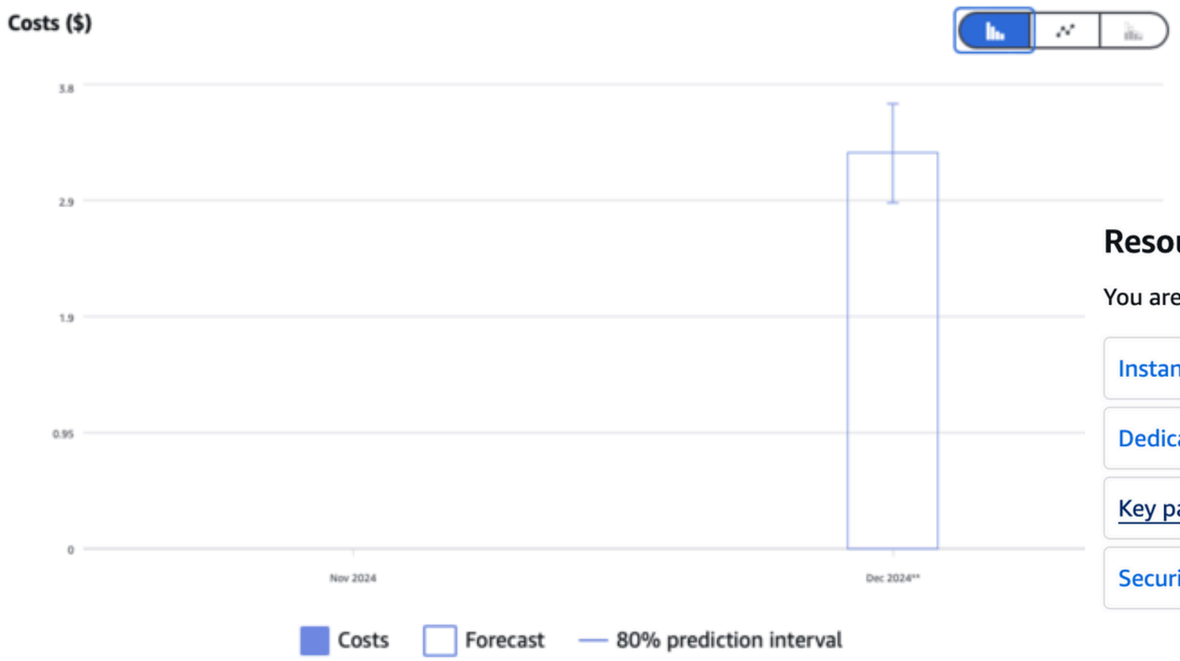
PROJECT ARCHITECTURE

COSTS

Free Tier

Cost and usage graph Info

Total cost (historical and forecasted)	Average historical cost per month	Average forecasted cost per month
$3.24	-$0.00	$3.24



Cost and usage breakdown Download as CSV

Find cost and usage data

	Accrued total	Forecast total**	November 2024	December 2024*	December 2024**
Total costs	-$0.00	$3.24	-$0.00	$0.00	$3.24

Resources EC2 Global View

You are using the following Amazon EC2 resources in the US West (Oregon) Region:

Instances (running)	3	Auto Scaling Groups	1	Capacity Reservations	0
Dedicated Hosts	0	Elastic IPs	1	Instances	6
Key pairs	1	Load balancers	1	Placement groups	0
Security groups	4	Snapshots	0	Volumes	3

ENCOUNTERED ISSUES

Sandbox set up

- S3 bucket
- SSL certificate (https)
- unable to create IAM role
- Volatile environment (sandbox)

Budget restriction

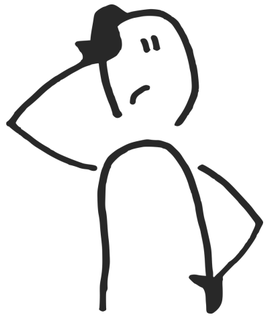
- no NAT Gateway for internet on private subnets

PHP

- Conflict with php versions from the userdata script

MySQL

- Connecting Wordpress and RDS database



PROJECT LEARNINGS

- AWS architecture
- Problem solving
- collaboration on Git/GitHub
- Cidr block calculation
- HashiCorp Config Language (HCL) for AWS resources
- Linux commands
- Perplexity AI

PROJECT STACK

Perplexity.ai

draw.io

Visual Studio Code

Amazon Web Services

Amazon Q

CodeWhisperer

Wordpress

Terraform

Canva

GitHub

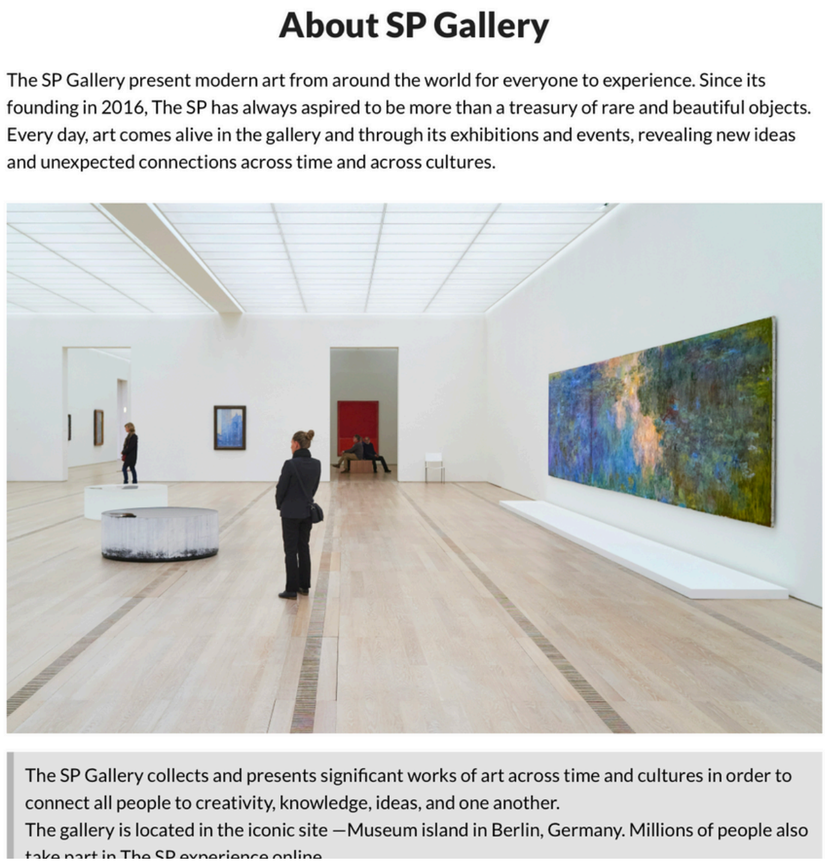
git

CONCLUSION

Launching our scalable, fault-tolerant and highly available Art gallery webapp on Wordpress.

Great team work (GitHub, Scrum methodology)

More features to add on our gallery instance and to explore in the Sandbox after the bootcamp course.



THANK YOU

Presented By : Susanne, Pelny

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