Deploying Odoo 18 on AWS - Beginner Friendly Guide by Aman Raj

1. Setting up the VPC (Virtual Private Cloud)

Amazon VPC lets you define a logically isolated network in AWS where you can launch your services securely.

Steps:

- Create a custom VPC using CIDR block like 10.0.0.0/16.

- Create public and private subnets (10.0.1.0/24 and 10.0.2.0/24).

- Attach an Internet Gateway (IGW) to the VPC.

- Create a NAT Gateway in a public subnet.

- Configure route tables for public and private subnets.

- Use Security Groups to allow:

  - SSH (22), HTTP/HTTPS (80/443)

  - PostgreSQL (5432)

  - XMLRPC/JSONRPC, MQTT/s, Webhooks.

Important Notes:

- Tag resources properly.

- Use NACLs for extra security.

- Don't allow public access to private subnet resources.

2. Deploying Odoo 18 (Community Edition) on Ubuntu EC2

Option A: Single Server (App + DB)

- Launch Ubuntu EC2, SSH into it.

- Install dependencies and PostgreSQL.

- Create a DB user and clone Odoo 18 from GitHub.

- Install Python dependencies and run the server.

Option B: Multi-Server (App and DB separately)

- Setup EC2 for app and DB.

- Install PostgreSQL on DB server and allow remote connections.

- Configure Odoo on app server with DB server's private IP.

Configuration Tips:

- Use IAM roles.

- Open only necessary ports in Security Groups.

3. PyCharm Integration for Development

- Add a new SFTP configuration with EC2 IP and key.

- Set root path to /home/ubuntu/odoo18.

- Configure Remote Python Interpreter.

- Use auto-upload feature in PyCharm.

4. Auto Scaling Odoo Application

- Create a Launch Template from EC2.

- Create Auto Scaling Group (min=1, desired=2, max=3).

- Attach public subnets.

- Add scaling policy: CPU > 60% for 5 mins -> add instance.

- Use 'stress' to simulate load.

5. Backup and Restore

Options:

- Manual: Use EBS snapshots.

- Automated: Use AWS Backup with schedule and retention.

Restore:

- Create new volume from snapshot.

- Attach and mount to EC2.

6. Common Issues and Fixes

PostgreSQL connection issues:

- Check security groups and PostgreSQL config.

Odoo missing wkhtmltopdf:

- Download and install compatible version.

File issues in PyCharm:

- Adjust root path and permissions.

Module installation failed:

- Reinstall Python packages and upgrade pip.

7. Do's and Don'ts

Do's:

- Use IAM roles and keep DB private.

- Tag resources, test backups, use CloudWatch.

Don'ts:

- Don't expose DB to public.

- Avoid default VPC for production.

- Don't hardcode credentials.

- Avoid t2.micro for production.

8. Deliverables (Simulation Ready)

Use Cases:

- Reproduce deployment using blog steps.

- Test VPC restrictions (deny public DB access).

- Submit IAM credentials/keyless SSH.

- Simulate load with 'stress' for auto-scaling.