# Documentation: Launching CloudPi CloudFormation Template

## Overview

This AWS CloudFormation template deploys a **CloudPi** instance with a VPC, public subnets, and optional Route 53 subdomain configuration. It includes an EC2 instance running a specified AMI, security groups, and networking components.

## Prerequisites

1. AWS Account with appropriate permissions
2. EC2 Key Pair created in the target region
3. (Optional) Route 53 Hosted Zone if enabling subdomains
4. Valid AMI ID for your CloudPi application

### 🔐 If you don't have a key pair:

1. Open the **AWS EC2 Console** → **Key Pairs**
2. Click **Create key pair**
3. Name it (e.g., cloudpi\_private\_key)
4. Choose format: .pem
5. Click **Create key pair** – it downloads the file automatically

## ⚠️ Keep your .pem file safe! You'll need it to SSH into the instance. 📥 Download the CloudFormation Template

The CloudFormation template is hosted on GitHub.

👉 Download the file directly from:

git clone <https://github.com/PurpleDataInc-TX/cloudpi.git>

## 🔧 Template Parameters

| **Parameter** | **Required** | **Type** | **Example** | **Description** |
| --- | --- | --- | --- | --- |
| AMIID | Yes | String | ami-xxxxxxxxxxxxxxx | AMI ID for the EC2 instance |
| InstanceType | Yes | String | t2.2xlarge (recommended) | EC2 instance type |
| KeyName | Yes | String | cloudpi\_private\_key | EC2 key pair name for SSH access |
| HTTPSEnabled | Yes | String | 'True' or 'False' | Set to 'False' for manual HTTPS setup |
| HostedZoneId | No | String |  | Route 53 Hosted Zone ID |
| DomainName | No | String |  | Base domain name |

## 🚀 Deployment Steps

### 1. Save the Template

Copy the CloudFormation template into a file named cloudpi-template.yaml.

### 2. (Optional) Upload to S3

aws s3 cp cloudpi-template.yaml s3://your-bucket-name/

### 3. Launch via AWS Console

* Navigate to **CloudFormation > Create Stack > With new resources**
* Choose "Upload a template file" or use the S3 URL
* Click **Next**

### 4. Specify Stack Details

Provide:

**1.**Stack Name (e.g., CloudPi-Stack)

**2.**Fill in parameters:

* AMIID: 📧 *Refer to the email you received*
* InstanceType: t2.2xlarge(recommended)
* KeyName: Your existing EC2 key
* HTTPSEnabled: 'False'
* HostedZoneId and DomainName: Leave empty unless using subdomains

**3.**Click **Next**

### 5. Configure Stack Options

* Add tags (optional)
* Leave other settings as default
* Click **Next**

### 6. Review and Create

* Verify settings
* Click **Create Stack**

### 7. Monitor Deployment

* Wait until status is **CREATE\_COMPLETE**
* Note the EC2InstancePublicIP in the **Outputs** tab

### 8. Access the Instance

ssh -i cloudpi\_private\_key.pem ec2-user@<Public-IP>

## 📤 Outputs

* **EC2InstancePublicIP**: Public IP address of the deployed EC2 instance

## 🔒 Enabling HTTPS Manually

1. **Connect via SSH**

ssh -i cloudpi\_private\_key.pem ec2-user@<Public-IP>

1. **Upload your SSL certificates**

scp -i cloudpi\_private\_key.pem cert.crt ec2-user@<Public-IP>:/home/ec2-user/certs/

1. **Edit the script new.sh**

nano new.sh

* Set https=true
* Set subdomain="your.domain.name"
* Save and close the file

1. **Run the script**

chmod +x new.sh

./new.sh

1. **Access the instance securely**

https://your.domain.name

## 🌐 Creating a Hosted Zone and Subdomain Manually

### A. Create a Hosted Zone (One-time setup per domain)

1. Go to **Route 53 > Hosted Zones**
2. Click **Create hosted zone**
3. Enter your domain name (e.g., cloudpie.ai)
4. Choose **Public hosted zone**
5. Click **Create hosted zone**

⚠️ If your domain is registered outside AWS, update the registrar’s NS records with the ones provided by Route 53

### B. Create a Subdomain (Per client or deployment)

1. Go to your domain’s Hosted Zone
2. Click **Create Record**
3. Enter subdomain name (e.g., client1) → will map to client1.cloudpie.ai
4. Record type: **A**
5. Value: Enter **EC2InstancePublicIP**
6. TTL: Default (300 seconds)
7. Click **Create records**

## 🔁 Important: Reconfigure new.sh for the New Subdomain

Every time you create a new subdomain (e.g., client2.cloudpie.ai), you **must update and rerun the new.sh script**:

1. SSH into the EC2 instance
2. Open new.sh

nano new.sh

1. Set:
   * https=true
   * eg:subdomain="client2.cloudpie.ai"
2. Save and close
3. Run it again:

./new.sh

Once complete, access the app securely at:

https://client2.cloudpie.ai