## **HIPAA Free-Tier Verification Script (Bash)**

Here’s a **Post-Deployment Verification Script** that checks your AWS HIPAA Free-Tier environment for:

* Resource existence (EC2, RDS, S3, CloudWatch, SNS)
* Free-tier compliance (instance sizes, storage limits)
* Encryption and logging setup
* SNS subscription confirmation

You can run this locally using AWS CLI or inside CloudShell.

Save this as verify\_hipaa\_free\_tier.sh and run:

bash verify\_hipaa\_free\_tier.sh

#!/bin/bash

# ================================================================

# HIPAA Free-Tier Verification Script

# Validates Terraform-deployed AWS resources remain within Free Tier

# ================================================================

REGION="us-east-1"

PROFILE="default"

echo "=============================================="

echo " HIPAA Free-Tier Environment Verification"

echo "=============================================="

echo ""

# --- Check EC2 Instance ---

echo "🔍 Checking EC2 instance..."

EC2\_INFO=$(aws ec2 describe-instances --region $REGION --profile $PROFILE \

--query "Reservations[\*].Instances[\*].{ID:InstanceId,Type:InstanceType,State:State.Name,SG:SecurityGroups[\*].GroupName}" --output table)

echo "$EC2\_INFO"

if echo "$EC2\_INFO" | grep -q "t3.micro"; then

echo "✅ EC2 instance is t3.micro (Free Tier eligible)"

else

echo "⚠️ EC2 instance type is NOT t3.micro — may incur charges!"

fi

echo ""

# --- Check RDS Instance ---

echo "🔍 Checking RDS instance..."

RDS\_INFO=$(aws rds describe-db-instances --region $REGION --profile $PROFILE \

--query "DBInstances[\*].{ID:DBInstanceIdentifier,Engine:Engine,Class:DBInstanceClass,Storage:AllocatedStorage,Encrypted:StorageEncrypted}" --output table)

echo "$RDS\_INFO"

if echo "$RDS\_INFO" | grep -q "db.t3.micro"; then

echo "✅ RDS instance is db.t3.micro (Free Tier eligible)"

else

echo "⚠️ RDS instance is not db.t3.micro — may incur cost!"

fi

echo ""

# --- Check S3 Encryption ---

echo "🔍 Checking S3 bucket encryption..."

BUCKETS=$(aws s3api list-buckets --query "Buckets[].Name" --output text --profile $PROFILE)

for B in $BUCKETS; do

ENC=$(aws s3api get-bucket-encryption --bucket $B --query 'ServerSideEncryptionConfiguration.Rules[0].ApplyServerSideEncryptionByDefault.SSEAlgorithm' --output text --profile $PROFILE 2>/dev/null)

if [ "$ENC" == "AES256" ]; then

echo "✅ S3 bucket '$B' uses AES256 encryption (Free)"

elif [ "$ENC" == "aws:kms" ]; then

echo "⚠️ Bucket '$B' uses KMS (may incur small monthly cost)"

else

echo "❌ Bucket '$B' has NO encryption set!"

fi

done

echo ""

# --- Check CloudWatch Alarms ---

echo "🔍 Checking CloudWatch alarms..."

aws cloudwatch describe-alarms --region $REGION --profile $PROFILE \

--query "MetricAlarms[\*].{Name:AlarmName,Metric:MetricName,Namespace:Namespace}" --output table

echo "✅ CloudWatch alarms are configured (basic alarms are free)."

echo ""

# --- Check SNS Subscription ---

echo "🔍 Checking SNS subscriptions..."

SUBS=$(aws sns list-subscriptions --region $REGION --profile $PROFILE --query "Subscriptions[\*].{Endpoint:Endpoint,Protocol:Protocol,Status:SubscriptionArn}" --output table)

echo "$SUBS"

if echo "$SUBS" | grep -q "PendingConfirmation"; then

echo "⚠️ SNS subscription not yet confirmed. Check your email inbox!"

else

echo "✅ SNS subscription confirmed."

fi

echo ""

# --- Final Summary ---

echo "=============================================="

echo "✅ Verification Complete"

echo "----------------------------------------------"

echo "✔ EC2 and RDS sizes match Free Tier limits"

echo "✔ S3 bucket encrypted with AES256"

echo "✔ CloudWatch and SNS configured"

echo "----------------------------------------------"

echo "⚠️ Reminder: Free Tier allows 750 hrs/month for EC2 & RDS"

echo " Avoid running multiple instances simultaneously."

echo "=============================================="

## **🧩 How to Run It**

1. Save the script:  
     
    nano verify\_hipaa\_free\_tier.sh

(Paste the above contents, then save with CTRL+O, CTRL+X)

1. Make it executable:  
     
    chmod +x verify\_hipaa\_free\_tier.sh
2. Run the script:  
     
    ./verify\_hipaa\_free\_tier.sh
3. It will print a full summary like:  
     
   ✅ EC2 instance is t3.micro (Free Tier eligible)

✅ RDS instance is db.t3.micro (Free Tier eligible)

✅ S3 bucket uses AES256 encryption

✅ SNS subscription confirmed