

```
#!/bin/bash
```

```
# Script to apply Terraform configuration with enhanced logging and error handling
```

```
# Define the directory where your Terraform scripts are located
```

```
TERRAFORM_DIR="/swarms-cloud/scripts/terraform_scripts/multi_cloud_consul/main.tf"
```

```
# Define the log file path
```

```
LOG_FILE="/var/log/terraform_apply.log"
```

```
# Function to log messages with timestamps
```

```
log() {
```

```
    echo "[$(date +"%Y-%m-%d %T")] $1" >> "$LOG_FILE"
```

```
}
```

```
# Ensure the Terraform directory exists
```

```
if [ ! -d "$TERRAFORM_DIR" ]; then
```

```
    log "The specified Terraform directory does not exist: $TERRAFORM_DIR"
```

```
    exit 1
```

```
fi
```

```
# Navigate to the Terraform directory
```

```
cd "$TERRAFORM_DIR" || exit
```

```
# Begin Terraform process
```

```
log "Starting Terraform apply..."
```

```
# Initialize Terraform
```

```
terraform init >> "$LOG_FILE" 2>&1
```

```
if [ $? -ne 0 ]; then
```

```
    log "Terraform init failed."
```

```
    exit 1
```

```
else
```

```
    log "Terraform init succeeded."
```

```
fi
```

```
# Apply Terraform configuration
```

```
terraform apply -auto-approve >> "$LOG_FILE" 2>&1
```

```
if [ $? -ne 0 ]; then
```

```
    log "Terraform apply failed."
```

```
    exit 1
```

```
else
```

```
    log "Terraform apply succeeded."
```

```
fi
```

```
log "Terraform apply completed successfully."
```

```
# Add cron job if it doesn't exist
```

```
CRON_JOB="0 3 * * * /path/to/terraform_apply.sh"
```

```
( crontab -l | grep -Fv terraform_apply.sh ; echo "$CRON_JOB" ) | crontab -
```

```
log "Cron job for Terraform apply script ensured."
```