POC Task 10

Task 10: Compress & Archive Automation

1. Executive Summary

This PoC demonstrates automated log management by identifying, compressing, and archiving large log files (>10MB) with proper timestamping and storage organization.

2. Objectives

- Identify log files exceeding 10MB
- Create timestamped compressed archive
- Organize backups in dedicated directory
- Maintain file permissions and ownership

3. Implementation

3.1 Script Creation

```
┌──(llamafart@ jaivanti)-[~]
└─$ sudo -u studentuser tee /home/studentuser/projectX/scripts/log_archiver.sh << 'EOF'
#!/bin/bash

LOG_DIR="/home/studentuser/projectX/logs"
BACKUP_DIR="/home/studentuser/projectX/backup"
DATE=$(date +%Y%m%d)
ARCHIVE="archive_${DATE}.tar.gz"
MIN_SIZE="10M"

# Create backup directory if missing
mkdir -p "$BACKUP_DIR"

# Find and archive large log files
find "$LOG_DIR" -type f -name "*.log" -size +"$MIN_SIZE" -print0 | \
  tar -czvf "$BACKUP_DIR/$ARCHIVE" --null -T - 2>/dev/null

# Report results
if [ -f "$BACKUP_DIR/$ARCHIVE" ]; then
    echo "Created archive: $BACKUP_DIR/$ARCHIVE"
    echo "Contents:"
    tar -tzvf "$BACKUP_DIR/$ARCHIVE"
else
    echo "No log files >10MB found to archive"
fi
```

3.2 Permission Configuration

```
┌──(llamafart@ jaivanti)-[~]
└─$ sudo chown studentuser:studentuser /home/studentuser/projectX/scripts/log_archiver.sh

┌──(llamafart@ jaivanti)-[~]
└─$ sudo chmod +x /home/studentuser/projectX/scripts/log_archiver.sh

┌──(llamafart@ jaivanti)-[~]
└─$ sudo -u studentuser mkdir -p /home/studentuser/projectX/{logs,backup}
```

3.3 Execution

```
┌──(llamafart@jaivanti)-[~]
└─$ sudo -u studentuser bash -c 'dd if=/dev/zero of=/home/studentuser/projectX/logs/large1.log bs=11M count=1'
1+0 records in
1+0 records out
11534336 bytes (12 MB, 11 MiB) copied, 0.0125665 s, 918 MB/s

┌──(llamafart@jaivanti)-[~]
└─$ sudo -u studentuser bash -c 'dd if=/dev/zero of=/home/studentuser/projectX/logs/large2.log bs=12M count=1'
1+0 records in
1+0 records out
12582912 bytes (13 MB, 12 MiB) copied, 0.0140661 s, 895 MB/s
```

4. Conclusion

The log archiver successfully automates compression of large log files into dated backups while maintaining directory structure and permissions. The solution efficiently manages disk space through size-based file selection and standard tar/gzip compression.