OPTION 1: Jenkins backup using Bash script (MOST RELIABLE)

What this backs up

- Jobs
- Configs
- Plugins
- Credentials

👉 Everything Jenkins needs.

Step 1: Know Jenkins home directory

On most Linux systems:

```
/var/lib/jenkins
```

Confirm:

```
echo $JENKINS_HOME
```

Step 2: Create S3 bucket (one-time)

Example bucket:

```
jenkins-backup-bucket
```

Step 3: Jenkins server needs S3 access

Easiest & best:

Attach an IAM role to the EC2 with this permission:

```
AmazonS3FullAccess
```

(No keys, no secrets)

Step 4: Install AWS CLI (if not present)

```
aws --version
```

If missing:

```
sudo yum install awscli -y
# or
sudo apt install awscli -y
```

Step 5: Create backup script

Create file:

```
sudo vi /opt/jenkins-backup.sh
```

Paste this **exact script**:

```
#!/bin/bash

DATE=$(date +%F-%H-%M)
BACKUP_DIR="/tmp/jenkins-backup-$DATE"
JENKINS_HOME="/var/lib/jenkins"
S3_BUCKET="s3://jenkins-backup-bucket"

mkdir -p $BACKUP_DIR

# Stop Jenkins (safe backup)
sudo systemctl stop jenkins

# Copy Jenkins data
rsync -av --exclude='workspace' $JENKINS_HOME/ $BACKUP_DIR/
```

```
# Start Jenkins
sudo systemctl start jenkins

# Create tar file
tar -czf /tmp/jenkins-backup-$DATE.tar.gz -C /tmp jenkins-backup-$DATE

# Upload to S3
aws s3 cp /tmp/jenkins-backup-$DATE.tar.gz $S3_BUCKET/

# Cleanup
rm -rf $BACKUP_DIR
rm -f /tmp/jenkins-backup-$DATE.tar.gz
```

Save & exit.

Step 6: Make it executable

```
sudo chmod +x /opt/jenkins-backup.sh
```

Step 7: Test it NOW

```
sudo /opt/jenkins-backup.sh
```

Check S3:

```
aws s3 ls s3://jenkins-backup-bucket/
```

✅ Backup done.

(Optional) Automate daily backup

```
sudo crontab -e
```

Add:

```
0 2 * * * /opt/jenkins-backup.sh
```

Runs daily at **2 AM**.

OPTION 2: Jenkins backup using ThinBackup plugin (EASIEST)

Best if you want **GUI + no scripts**.

Step 1: Install plugin

In **Jenkins**:

- Manage Jenkins
- Plugins
- Available plugins
- Install **ThinBackup**

Restart Jenkins.

Step 2: Configure ThinBackup

- Manage Jenkins
- ThinBackup
- Settings

Set:

- **Backup directory**:

```
/var/lib/jenkins/thinbackup
```

- Check:

- ✅ Backup build results
- ✅ Backup plugin archives
- ✅ Backup job configs

Save.

Step 3: Take backup

- Manage Jenkins
- ThinBackup
- **Backup Now**

Backup created locally ✅

Step 4: Push ThinBackup to S3 (SUPER SIMPLE)

Create script:

```
sudo vi /opt/thinbackup-to-s3.sh
```

Paste:

```
#!/bin/bash
aws s3 sync /var/lib/jenkins/thinbackup s3://jenkins-backup-bucket/thinbackup/
```

Make executable:

```
sudo chmod +x /opt/thinbackup-to-s3.sh
```

Run:

```
sudo /opt/thinbackup-to-s3.sh
```

Which one should YOU use?

Situation	Best choice
Production	Bash script
Quick demo / exam	ThinBackup
No downtime allowed	ThinBackup
Full disaster recovery	Bash script

Interview one-liner (gold)

“I back up Jenkins by archiving `$JENKINS_HOME` and pushing it to S3 using IAM roles, or I use ThinBackup for quick config-level backups.”