

BucStop Data Persistence and Rollback Plan

Persistent vs. Rollback Data

Path / Type	Service	Keep (Persist)	Delete on Rollback	Why
/app/Snapshots (JSON files)	bucstop	Yes	No	Contains user scores, profiles, or saved states.
/app/Logs	bucstop	Yes (optional)	No	Useful for debugging and tracking issues. Can be rotated if needed.
Containers and images	All	No	Yes	These rebuild automatically when redeploying.
Cache or temporary data	Games, API	No	Yes	Resets safely each restart.

Backup Commands

To back up your saved snapshots and logs:

Backup Snapshots:

```
docker run --rm -v snapshots-data:/data -v "$PWD":/backup busybox sh -c 'tar czf /backup/snapshots-backup.tar.gz -C /data .'
```

Backup Logs:

```
docker run --rm -v logs-data:/data -v "$PWD":/backup busybox sh -c 'tar czf /backup/logs-backup.tar.gz -C /data .'
```

Rollback Steps

1. Backup your volumes before rolling back.
2. Change your Docker image tag to a stable version.
3. Restart services with 'docker compose up -d'.
4. Verify your data still exists in /app/Snapshots.

Fast App Rollback (Images Only)

Use this when a deployment introduces bugs, but data format hasn't changed.

1. Backup volumes quickly using these commands:

```
docker run --rm -v snapshots-data:/data -v "$PWD/backups":/backup busybox \
  sh -c 'tar czf /backup/snapshots-$(date +%F_%H%M).tar.gz -C /data .'
docker run --rm -v logs-data:/data -v "$PWD/backups":/backup busybox \
  sh -c 'tar czf /backup/logs-$(date +%F_%H%M).tar.gz -C /data .'
```

2. Redeploy the last working images (pin to the previous tag):

```
docker compose up -d
```

3. Restart containers and clear ephemeral state:

```
docker compose restart api-gateway snake pong tetris bucstop
```

4. Verify the services and check logs:

```
docker compose logs --tail=200 bucstop
```

Config/Environment Rollback

Use when environment variables or configuration updates caused issues.

1. Revert .env or docker-compose environment settings to last known working versions.

2. Redeploy containers:

```
docker compose up -d
```

3. Run smoke tests to verify configuration consistency.

Data-Shape Rollback (Snapshots Schema Changed)

Use when the new app writes snapshots with a structure older code can't read.

Always back up before updates. Keep backups per deployment for safety.

Restore a backup version using:

```
docker compose stop bucstop
docker run --rm -v snapshots-data:/data -v "$PWD/backups":/backup busybox \
  sh -c 'rm -rf /data/* && tar xzf /backup/snapshots-<timestamp>.tar.gz -C /data'
docker compose up -d bucstop
```

Infrastructure Rollback (Network or Compose Changes)

Use when Docker network or compose configuration broke things.

1. Revert docker-compose.yml to the last good commit.

2. Bring services back up cleanly:

```
docker compose down
```

```
docker compose up -d
```

Avoid using '-v' unless you intend to remove volumes.

Windows (Docker Desktop) Notes

Docker volumes are stored internally. Access paths:

```
\\wsl$\docker-desktop-data\data\docker\volumes\logs-data\_data
```

```
\\wsl$\docker-desktop-data\data\docker\volumes\snapshots-data\_data
```

To inspect mounts:

```
docker inspect buctest | jq '[0].Mounts'
```

Rollback Checklist

- Confirm if the issue is in code, config, or data shape.
- Backup snapshots-data and logs-data.
- Redeploy the previous image tags.
- Restore backups if needed.
- Restart services and clear temporary state.
- Verify functionality and document results.