



# Red Hat build of MicroShift 4.15

## Backup and restore

Backup and restore the Red Hat build of MicroShift database



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## Abstract

Learn how to backup and restore the Red Hat build of MicroShift database.

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# CHAPTER 1. BACKING UP AND RESTORING MICROSHIFT DATA

You can manually back up and restore the MicroShift database on all supported systems. Greenboot health checks must be completed and you must stop the MicroShift service prior to any backups.



## NOTE

Only MicroShift data is backed up with the following procedures. Application data is not included.

- On **rpm-ostree** systems, MicroShift automatically creates a backup on every start. These automatic backups are deleted and replaced with the latest backup each time the system restarts.
- If you are using an **rpm-ostree** system, the data is automatically restored after Greenboot rolls the system back. This data restoration ensures that the database matches the software running on the host after the rollback is completed.
- On other system types, you must back up and restore data manually.

## 1.1. STOPPING THE MICROSHIFT SERVICE

Use the following procedure to stop the MicroShift service.

### Prerequisites

- The MicroShift service is running.

### Procedure

1. Enter the following command to stop the MicroShift service:

```
$ sudo systemctl stop microshift
```

2. Workloads deployed on MicroShift might continue running even after the MicroShift service has been stopped. Enter the following command to display running workloads:

```
$ sudo crictl ps -a
```

3. Enter the following commands to stop the deployed workloads:

```
$ sudo systemctl stop kubepods.slice
```

## 1.2. BACKING UP MICROSHIFT DATA MANUALLY

You can back up MicroShift data manually at any time. Back up your data before system updates to preserve it for use if an update fails or for other system trouble. Automated backups are created in the **/var/lib/microshift-backups** directory. You can use this directory for manually backing up and restoring data by specifying it in each command. When you create a backup, you must use the entire file path for the output file.

## Prerequisites

- You have root access to the host.
- MicroShift is stopped.

## Procedure

1. Manually create a backup by using the parent directory and specifying a name, such as `/var/lib/microshift-backups/<my_manual_backup>`, by running the following command:

```
$ sudo microshift backup /var/lib/microshift-backups/<my_manual_backup>
```

Replace `<my_manual_backup>` with the backup name that you want to use.

## Example output

```
??? I1017 07:38:16.770506 5900 data_manager.go:92] "Copying data to backup directory"
storage="/var/lib/microshift-backups" name="test" data="/var/lib/microshift"
??? I1017 07:38:16.770713 5900 data_manager.go:227] "Starting copy" cmd="/bin/cp --
verbose --recursive --preserve --reflink=auto /var/lib/microshift /var/lib/microshift-
backups/test"
??? I1017 07:38:16.776162 5900 data_manager.go:241] "Finished copy" cmd="/bin/cp --
verbose --recursive --preserve --reflink=auto /var/lib/microshift /var/lib/microshift-
backups/test"
??? I1017 07:38:16.776256 5900 data_manager.go:125] "Copied data to backup directory"
backup="/var/lib/microshift-backups/test" data="/var/lib/microshift"
```

2. Optional: Manually create a backup in a specific parent directory with a custom name by running the following command:

```
$ sudo microshift backup /mnt/<other_backups_location>/<another_manual_backup>
```

Replace `<other_backups_location>` with the directory you want to use and `<my_manual_backup>` with the backup name you want to use.

## Verification

- You can verify that the backup exists by viewing the data in the directory you chose. For example, `/var/lib/microshift-backups/<my_manual_backup>/` or `/mnt/<other_backups_location>/<another_manual_backup>`.

## Additional resources

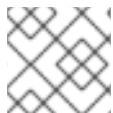
- [Stopping the MicroShift service](#)
- [Starting the MicroShift service](#)

## 1.3. RESTORING MICROSHIFT DATA BACKUPS MANUALLY

You can restore MicroShift data from a backup manually. Backups can be restored after updates, or after other system events that remove or damage required data. Automated backups are in the `/var/lib/microshift-backups` directory by default. You can use this directory for manually backing up



and restoring data by specifying it in each command. When you restore a backup, you must use the entire file path.



## NOTE

On an **rpm-ostree** system, MicroShift backs up and restores data automatically.

## Prerequisites

- Root access to the host.
- Full path of the data backup file.
- MicroShift is stopped.

## Procedure

1. Manually restore MicroShift data by using the full file path of the backup you want to restore by running the following command:

```
$ sudo microshift restore /var/lib/microshift-backups/<my_manual_backup>
```

Replace **<my\_manual\_backup>** with the backup name that you used. Optional: You can also restore automatic **ostree** backups using the full file path.

## Example output

```
??? I1017 07:39:52.055165 6007 data_manager.go:131] "Copying backup to data
directory" storage="/var/lib/microshift-backups" name="test" data="/var/lib/microshift"
??? I1017 07:39:52.055243 6007 data_manager.go:154] "Renaming existing data dir"
data="/var/lib/microshift" renamedTo="/var/lib/microshift.saved"
??? I1017 07:39:52.055326 6007 data_manager.go:227] "Starting copy" cmd="/bin/cp --
verbose --recursive --preserve --reflink=auto /var/lib/microshift-backups/test
/var/lib/microshift"
??? I1017 07:39:52.061363 6007 data_manager.go:241] "Finished copy" cmd="/bin/cp --
verbose --recursive --preserve --reflink=auto /var/lib/microshift-backups/test
/var/lib/microshift"
??? I1017 07:39:52.061404 6007 data_manager.go:175] "Removing temporary data
directory" path="/var/lib/microshift.saved"
??? I1017 07:39:52.063745 6007 data_manager.go:180] "Copied backup to data directory"
name="test" data="/var/lib/microshift"
```

2. Optional. Manually restore data from a customized directory by using the full file path of the backup. Run the following command:

```
$ sudo microshift restore /<mnt>/<other_backups_location>/<another_manual_backup>
```

Replace **<other\_backups\_location>** with the directory you used and **<my\_manual\_backup>** with the backup name you used when creating the backup you are restoring.

## Verification

- Verify that your backup is restored by restarting MicroShift and checking the data.

## 1.4. STARTING THE MICROSHIFT SERVICE

Use the following procedure to start the MicroShift service.

### Prerequisites

- You have installed MicroShift from an RPM package.

### Procedure

1. As a root user, start the MicroShift service by entering the following command:

```
$ sudo systemctl start microshift
```

2. Optional: To configure your RHEL machine to start MicroShift when your machine starts, enter the following command:

```
$ sudo systemctl enable microshift
```

3. Optional: To disable MicroShift from automatically starting when your machine starts, enter the following command:

```
$ sudo systemctl disable microshift
```



### NOTE

The first time that the MicroShift service starts, it downloads and initializes the container images for MicroShift. As a result, it can take several minutes for MicroShift to start the first time that the service is deployed. Boot time is reduced for subsequent starts of the MicroShift service.

### Additional resources

- [Stopping the MicroShift service](#)
- [Starting the MicroShift service](#)