Using SD Cards on Donyx X Series Routers

Donyx routers support the use of an external SD card as storage for the overlay file system. When configured, part of the data that is normally stored in the router's internal flash memory is moved to the external storage device.

This allows you to:

- increase the available storage space for installing additional packages;
- store large configuration files;
- allocate more space for user data and logs.

The configuration is performed in the **system** → **block-dev** section using the **Overlay_dev** parameter. Depending on the router configuration, the corresponding package may need to be installed before this section becomes available.

Supported File Systems

The following file systems are supported for SD cards:

- FAT32
- EXT2
- EXT3
- EXT4
- F2FS
- JFFS2
- NTFS

The following file systems are not supported:

- exFAT
- BFS

Before using an SD card, make sure it is formatted with one of the supported file systems.

Limitations

Before moving the overlay file system to external storage, consider the following limitations.

Formatting the Storage Device

When an external storage device is selected as the overlay storage, it is formatted automatically. All data stored on the device is permanently erased.

Using Only the First Partition

If the storage device contains multiple partitions, only the first partition is used for the overlay file system.

Make sure that the first partition is large enough to accommodate the expected workload and data storage requirements.

Switching Back to Internal Storage

If the overlay file system is moved back to the router's internal storage, any packages previously installed on the external storage become unavailable and must be installed again.

Removing the Storage Device

If the external storage device is being used for the overlay file system, removing it while the router is running causes the device to reboot and may result in the loss of unsaved data.

Recommendations

- Use high-quality industrial-grade or high-endurance SD cards.
- For long-term operation, EXT4 or F2FS file systems are recommended.
- Back up important data before changing the overlay storage configuration.
- Do not remove the SD card while it is being used as overlay storage.