systemd-network-generator.service

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systemd-network-generator

Generate network configuration from the kernel command line

`systemd-network-generator.service`

`/usr/lib/systemd/systemd-network-generator`

Description

`systemd-network-generator.service` is a system service that translates `ip=` and related settings on the kernel command line (see below) into `systemd.network(5)`, `systemd.netdev(5)`, and `systemd.link(5)` configuration files understood by `systemd-networkd.service(8)` and `systemd-udevd.service(8)`.

Files are generated in `/run/systemd/network/`.

Note: despite the name, this generator executes as a normal systemd service and is *not* an implementation of the `systemd.generator(7)` concept.

Kernel command line options

This tool understands the following options:

`ip=`; `nameserver=`; `rd.route=`; `rd.peerdns=`
Translated into `systemd.network(5)` files.

In addition to the parameters `dracut.cmdline(7)` defines the `ip=` option accepts the special value `link-local`. If selected, the network interfaces will be configured for link-local addressing (IPv4LL, IPv6LL) only, DHCP or IPv6RA will not be enabled.

`ifname=`; `net.ifname_policy=`
Translated into `systemd.link(5)` files.

`vlan=`; `bond=`; `bridge=`; `bootdev=`
Translated into `systemd.netdev(5)` files.

`BOOTIF=`; `rd.bootif=`
When `BOOTIF` is specified in the interface field of `ip=`, it is treated as a special placeholder rather than a real interface name. Then, in combination with the MAC address provided by `BOOTIF=`, this is translated into a `systemd.network(5)` file which matches on the provided MAC address. When `rd.bootif=0` is passed, this functionality is disabled, and the `BOOTIF=` option is ignored.

See `dracut.cmdline(7)` for details on the usage of these options.

See `dracut.cmdline(7)` and `systemd-udevd.service(8)` for option syntax and details.

Credentials

`systemd-network-generator` supports the service credentials logic as implemented by `ImportCredential=`/`LoadCredential=`/`SetCredential=` (see `systemd.exec(5)` for details). The following credentials are used when passed in:

`network.conf.*`; `network.link.*`; `network.netdev.*`; `network.network.*`
These credentials should contain valid `networkd.conf(5)`, `systemd.link(5)`, `systemd.netdev(5)`, `systemd.network(5)` configuration data. From each matching credential a separate file is created. Example: a passed credential `network.link.50-foobar` will be copied into a configuration file `50-foobar.link`.

Note that the resulting files are created world-readable, it is hence recommended to not include secrets in these credentials, but to supply them via separate credentials directly to `systemd-networkd.service(8)`.

Note that by default the `systemd-networkd.service(8)` service is set up to inherit the these credentials from the service manager.

See Also

`systemd(1)`, `systemd-networkd.service(8)`, `dracut(8)`

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