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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'NetworkManager-wait-online.service.8' command

$ man NetworkManager-wait-online.service.8

NETWORKMANAGER-WAIT-ONLINENetwork management daemNETWORKMANAGER-WAIT-ONLINE(8)

NAME

NetworkManager-wait-online.service - Wait for the network to come online

DESCRIPTION

The NetworkManager-wait-online service is a oneshot systemd service that delays reaching the network-online target until NetworkManager reports that the startup is completed on the D-Bus.

When the system boots, for example, remote mounts defined in /etc/fstab, require that the network is up. For this, these systemd units contain the After=network-online.target setting to order themselves after this target. NetworkManager-wait-online ensures that the network-online target is reached only after the network is available.

Optimally, all services on the host react dynamically to network changes and systemd services do not need to be configured to start after reaching the network-online target. In this case, NetworkManager-wait-online.service has no effect and does not delay the boot time. On the other hand, if you encounter a long boot time due to the delay of NetworkManager-wait-online, investigate the services that require network access and fix them.

Except for the time out value in the NetworkManager-wait-online.service unit, you cannot configure this service. Instead, settings in

NetworkManager and the connection profiles affect the behavior:

? Startup is not complete as long as NetworkManager profiles are in an activating state. During boot, NetworkManager starts profiles with the connection.autoconnect=yes setting. If activation fails, NetworkManager retries the activation depending on the value of the connection.autoconnect-retries setting.
NetworkManager reports startup complete when all profiles and devices are either activated or in a disconnect state and no further events are expected.

? When a device reaches the activate state depends on its configuration. For example, with a profile that has both IPv4 and IPv6 enabled, by default, NetworkManager considers the device as fully activated already when only one of the address families is ready.
The ipv4.may-fail and ipv6.may-fail settings control this behavior. Additionally, the following settings influence when the two address families complete: ipv4.required-timeout, ipv6.required-timeout, ipv4.dhcp-timeout, and ipv6.ra-timeout. For details, see nm-settings-nmcli(5).

? NetworkManager cannot set IP addresses on bridge and bond devices that have ports that do not auto-activate. Because of this configuration error, NetworkManager-wait-online blocks until the service reaches its timeout value.

? Dispatcher scripts for the pre-up event run at a late stage during activation of a profile. These scripts block the activation for when NetworkManager considers the profile fully activated. For details, see NetworkManager-dispatcher(8).

? The property connection.wait-activation-delay adds an additional delay during activation and delays startup complete. This setting works around certain cases where a device is known to not be ready for a certain amount of time.

? The property connection.wait-device-timeout in the connection profiles cause a delay until the waiting devices appear. This is

useful if the driver takes a longer time to detect the networking interfaces. This setting is similar to the connection.gateway-ping-timeout property.

- With Wi-Fi devices, NetworkManager needs to wait for the first scan result to know which networks are available. That adds a delay.
- With Ethernet devices, NetworkManager waits for the carrier until the value in [device*].carrier-timeout is reached. This is because some devices take a long time to detect the carrier. Consequently, booting with cable unplugged, unnecessarily delays NetworkManager-wait-online.service.

BUGS

Please report any bugs in NetworkManager at the NetworkManager issue tracker[1].

SEE ALSO

NetworkManager home page[2], NetworkManager(8), nm-online(1), the network-online.target description in systemd.special(7)

NOTES

1. NetworkManager issue tracker
   https://gitlab.freedesktop.org/NetworkManager/NetworkManager/-/issues
2. NetworkManager home page
   https://networkmanager.dev